

*Exhibit No.:*  
*Issue:* *Rate of Return*  
*Witness:* *David Murray*  
*Sponsoring Party:* *MoPSC Staff*  
*Type of Exhibit:* *Rebuttal Testimony*  
*Case No.:* *ER-2014-0258*  
*Date Testimony Prepared:* *January 16, 2015*

**MISSOURI PUBLIC SERVICE COMMISSION**  
**REGULATORY REVIEW DIVISION**  
**UTILITY SERVICES – FINANCIAL ANALYSIS**

**REBUTTAL TESTIMONY**

**OF**

**DAVID MURRAY**

**UNION ELECTRIC COMPANY,  
d/b/a Ameren Missouri**

**CASE NO. ER-2014-0258**

**Jefferson City, Missouri**  
*January 2015*

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**DAVID MURRAY**  
**UNION ELECTRIC COMPANY,**  
**d/b/a Ameren Missouri**  
**CASE NO. ER-2014-0258**

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1           A.     The COE has declined since Ameren Missouri's last rate case in 2012, Case  
2 No. ER-2012-0166. The COE has declined so much that even customer witnesses are uneasy  
3 with some of their lower COE estimates. Each witness has made certain adjustments to their  
4 analysis that causes their recommended ROE to be higher than the COE implied by reliable  
5 methodologies used to estimate the COE. The witnesses seem to believe the current lower  
6 COE environment is a temporary phenomenon so they project what they think the COE will  
7 be in the future rather than accepting the indications of the present. This type of speculation  
8 has proved to be erroneous over the last several years. Many ROR witnesses have  
9 consistently used projected higher long-term interest rates as inputs into their COE estimates  
10 since after the U.S. economy emerged from the recession in 2009. It just hasn't happened and  
11 it isn't fair to rate payers to keep an artificial floor on the allowed ROE because of this  
12 continued speculation. The cost of capital for utilities has been low for the last several years  
13 and it is possible that it will continue to be low for several more years. If it should increase,  
14 then the allowed ROE can be increased in a future proceeding at that time. In the meantime,  
15 the allowed ROE should reflect the current capital market environment. Although the  
16 evidence shows that utility companies' COE are easily in the 6 to 8 percent range, Staff  
17 recommends the Commission set the ROE at 9.25%. This is not the COE, but it is fair and  
18 reasonable considering this Commission's past allowed ROE decision of 9.80%, which also  
19 took into consideration average allowed ROEs in other jurisdictions.

20           Q.     What is the implication of the various ROR witnesses making adjustments to  
21 their COE estimates because they believe utility stock prices are currently causing lower  
22 dividend yields than those that were typical in the past?

1           A.     If the witnesses believe that current lower dividend yields are not sustainable  
2 and will revert back to higher levels in the future, then utility company stock prices will have  
3 to contract, meaning investors in utility stocks either believe they will be able to time the  
4 market and sell before this occurs or they are willing to accept this risk and hold their  
5 investments for a long enough time horizon to ride out these potential contractions. I have  
6 serious concerns about such adjustments because it implies market prices are inefficient. The  
7 assumption of efficient markets is a critical foundation for estimating the cost of equity.  
8 Economists have been predicting a rebound in long-term interest rates for the last several  
9 years and it just hasn't happened. If the potential for interest rate changes were not factored  
10 into current stock prices, and stock prices were to decline in the next few years, then this  
11 means the changes were unexpected. However, if investors are investing in utility stocks with  
12 the belief that dividend yields will return to previous levels, then this means that investors'  
13 required returns are actually less than those implied from a traditional constant-growth  
14 discounted cash flow (DCF) analysis, which sums the current dividend yield plus a dividend  
15 growth rate. The conclusion that dividend yields will increase means that investors are  
16 willing to accept either a flat<sup>1</sup> to declining stock price in the next few years, which means the  
17 required return, i.e. the COE, is actually closer to the dividend yield without capital gains  
18 from an expected increase in the stock price.

19           Q.     How do you plan to address the ROR testimonies sponsored by the various  
20 witnesses in this testimony?

21           A.     Both Mr. Gorman and Mr. Hevert sponsored ROR testimony in Ameren  
22 Missouri's last rate case. Because it appears the fundamentals of their DCF analyses have not

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<sup>1</sup> Assuming dividends continue to increase and the stock price stays flat, the dividend yield will eventually return to previous levels, but this means that the investor is willing to accept a lower return for the safety of the dividend.

1 changed drastically in this case, I believe it would be most productive to evaluate the relative  
2 change in each of their COE estimates in this case as it compares to their COE estimates in  
3 Ameren Missouri's last rate case. Most of my focus will be on the relative change in their  
4 COE estimates using the multi-stage DCF analysis because this model allows for changes in  
5 near-term assumptions, while maintaining a consistent perpetual growth rate since this rate  
6 should not change much over time. Additionally, in past rate cases the Commission has  
7 indicated a preference for the multi-stage DCF approach in assisting it with setting the  
8 allowed ROE.

9 Mr. Schafer did not sponsor testimony in Ameren Missouri's last rate case and, to my  
10 knowledge, has not sponsored any other ROR testimony in the past. Mr. Schafer's testimony  
11 supports Staff's position that the COE for electric utility companies is lower than it was in  
12 2012 because he makes upward adjustments to the current lower dividend yields, which are  
13 lower than they were in 2012. Because Mr. Schafer recommends the Commission allow an  
14 ROE that is toward the lower end of Staff's range, Staff will only address Mr. Schafer's  
15 testimony to the extent that it supports Staff's position that Ameren Missouri's previous  
16 allowed ROE should be lowered.

17 **SUMMARY OF MR. HEVERT'S, MR. GORMAN'S AND MR. SCHAFER'S COST**  
18 **OF EQUITY ESTIMATES**

19 Q. Please summarize Mr. Hevert's estimated COE and his resulting recommended  
20 ROE.

21 A. Mr. Hevert recommends an allowed ROE of 10.40%, which is the mid-point of  
22 his estimated COE range of 10.20% to 10.60%. Mr. Hevert's COE estimates are based on the  
23 following methods: (1) the discounted cash flow (DCF) method, using both the constant-

1 growth and the multi-stage forms; (2) the Capital Asset Pricing Model ("CAPM"); and (3) the  
2 Bond Yield Plus Risk Premium method. Mr. Hevert's constant growth DCF cost of equity  
3 estimate makes the incorrect assumption that investors believe utilities' dividends per share  
4 (DPS) will grow at the same rate as a projected 5-year compound annual growth rate  
5 ("CAGR") in EPS into perpetuity. Mr. Hevert's multi-stage DCF methodology makes the  
6 incorrect assumption that utilities' DPS can grow at an inflated estimate of GDP into  
7 perpetuity. Mr. Hevert's cost of equity estimates using the CAPM are much higher than one  
8 would expect in the current capital market environment. Mr. Hevert's high results are driven  
9 by two factors: (1) his projected total returns for the S&P 500 are double those of reputable  
10 investors and professional forecasts, and (2) he adds the risk premium resulting from these  
11 irrational projected returns to projected interest rates. The use of projected interest rates  
12 completely contradicts the efficient market hypothesis which maintains that current market  
13 prices (and their resulting yields) already reflect investors' expectations of capital market  
14 and economic changes in the future. Mr. Hevert's risk premium methodology is based on  
15 the spread of allowed ROEs as they compare to 30-year Treasury bond yields over an  
16 historical period.

17 Q. Please summarize Mr. Gorman's estimated COE and resulting  
18 recommended ROE.

19 A. Mr. Gorman's recommended ROE is 9.30%, based on an estimated COE range  
20 of 9.00% to 9.60%. Mr. Gorman uses three primary methodologies (DCF, CAPM and risk  
21 premium). Mr. Gorman applied his DCF and CAPM to the same proxy group selected by  
22 Mr. Hevert with the exception of Duke Energy Corporation and Cleco Corporation due to  
23 their current involvement in merger and acquisition activity. Mr. Gorman applied

1 three variants of the DCF – a constant-growth DCF using equity analysts’ growth rates, a  
2 constant-growth DCF using sustainable growth rates, and a multi-stage DCF analysis  
3 (*see* Table 2 on page 26 of Mr. Gorman’s Direct Testimony). Mr. Gorman’s COE estimates  
4 for the various methodologies were as follows: 8.74% using the DCF, 9.24% using the  
5 CAPM and 9.60% using a risk premium method (*see* Table 3 on page 38 of Mr. Gorman’s  
6 Direct Testimony).

7 Q. Please summarize Mr. Schafer’s estimated COE and resulting recommended  
8 ROE.

9 A. Mr. Shafer’s recommended ROE is 9.01% based on an estimated COE range  
10 of 8.74% to 9.22%. Mr. Schafer uses two methodologies (the DCF and the CAPM), but he  
11 relies individually on two forms of the DCF method, both the constant-growth and multi-stage  
12 forms. Mr. Schafer develops his own proxy group based on criteria he explains on pages 7  
13 through 9 of his Direct Testimony. Mr. Schafer’s CAPM cost of equity estimate of 8.74%  
14 forms the basis for the low end of his range; his constant-growth DCF cost of equity estimate  
15 of 9.22% forms the basis for the high end of his range; and his multi-stage DCF cost of equity  
16 estimate of 9.07% falls toward the middle of his range of COE estimates.

17 **CORRECTIONS TO STAFF REPORT**

18 Q. Do you have any corrections you need to make to the Rate of Return section of  
19 the Staff Report and Appendix 2 attached thereto?

20 A. Yes. Staff’s Schedule 15-1 in Appendix 2 contained an error in the underlying  
21 Excel formulas that caused the transition growth rates (growth for years 6 through 10) to be  
22 incorrect for eleven of the twelve comparable companies. This error only changed the COE  
23 estimate by 7 basis points (*see* attached corrected Schedule 15-1). Because Staff had relied on



1 several other comparisons, in addition to this one comparison, to estimate how much the  
2 Commission should reduce Ameren Missouri's allowed ROE, Staff has not changed its  
3 conclusion that the COE has declined by at least 25 to 75 basis points. If anything, capital  
4 market conditions through the time Staff was preparing its rebuttal testimony only causes  
5 Staff to believe the COE has declined closer to the high end of its estimated range.

6 Q. What page and lines of Staff's Report are impacted by the change to  
7 Schedule 15-1?

8 A. Page 40, lines 19 through 22, discuss Staff's quantification of the change in the  
9 COE estimate between 2012 and 2014 for its current proxy group. The average indicated  
10 COE for 2012 would have been in range of **8.23%** to 8.84% rather than **8.16%** to 8.84%.  
11 This correction provides support for an implied COE reduction of up to 60 basis points rather  
12 than up to 55 basis points.

13 **UPDATE ON CAPITAL MARKET CONDITIONS THROUGH DECEMBER 31, 2014**

14 Q. Is it important to provide an updated summary and analysis of utility capital  
15 markets since Staff filed its Cost of Service Report on December 5, 2014?

16 A. Yes. Although only a month has passed since Staff provided commentary and  
17 analysis of the conditions of the broader capital markets in general and utility capital markets  
18 in particular, Staff believes the capital market activity, specifically as it relates to utility  
19 stocks, through the end of the 2014 calendar year, provide even more evidence that there has  
20 been a significant decrease in the electric utility industries' COE since 2012. Although Staff  
21 is not changing the amount of its recommended reduction to Ameren Missouri's allowed  
22 ROE, this information provides substantial support for Ameren Missouri's allowed ROE to be  
23 reduced to at least 9.25%.

1 Q. Can you provide information on how the performance of the Edison Electric  
2 Institute (“EEI”) Index of electric utilities compared to that of the broader markets for the  
3 12-months ended December 31, 2014?

4 A. Yes. For the twelve months ending December 31, 2014, the total return on the  
5 Dow Jones Industrial Average was 7.52%, the total return on the Standard & Poor’s  
6 500 (“S&P 500”) was 14.69%, and the total return of companies classified as regulated  
7 utilities by the Edison Electric Institute (“EEI”) was 32.86%.

8 Q. Can you provide the same information for the quarter-ended, December 31,  
9 2014?

10 A. Yes. For the three months ending December 31, 2014, the total return on the  
11 Dow Jones Industrial Average was 4.58%,<sup>2</sup> the total return on the Standard & Poor’s  
12 500 (“S&P 500”) was 4.93%,<sup>3</sup> and the total return of EEI’s regulated utilities was 16.44%.<sup>4</sup>

13 Q. What has been the primary reason for the significant increase in regulated  
14 utility stock prices?

15 A. A further decline in the cost of capital. Long-term interest rates have declined  
16 even further since September 30, 2014. Average long-term utility bond yields have dropped  
17 to below 4.25%. Average 30-year U.S. Treasury yields have been approximately 3% or lower  
18 during the last quarter of 2014.

19 Q. How has the further decline in the cost of capital affected the price-to-earnings  
20 (“p/e”) ratios of EEI’s regulated utilities?

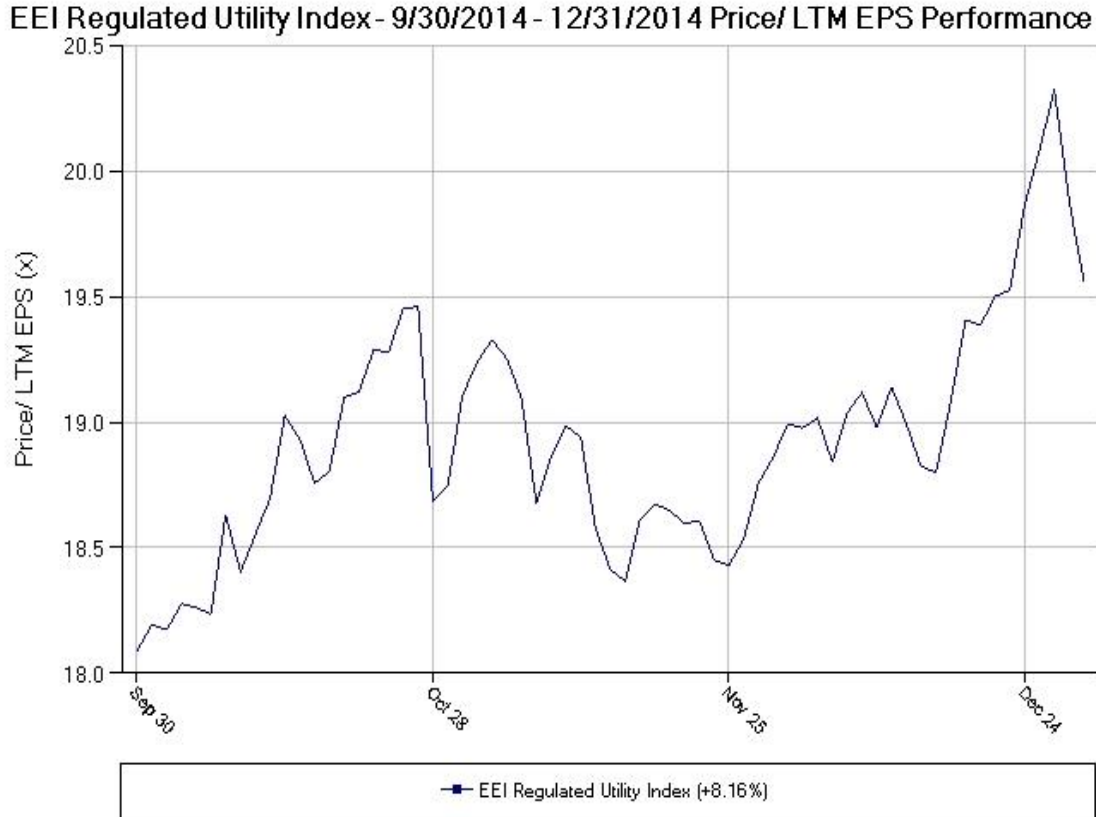
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<sup>2</sup> [http://performance.morningstar.com/Performance/index-c/performance-return.action?ops=p&t=\\$INDU&region=usa&culture=en-US&s=](http://performance.morningstar.com/Performance/index-c/performance-return.action?ops=p&t=$INDU&region=usa&culture=en-US&s=)

<sup>3</sup> SNL Financial.

<sup>4</sup> *Id.*

1 A. They have increased even more. For the year ended, December 31, 2014, the  
2 historical p/e ratio for EEI's regulated utilities was approximately 19.5x. The graph below  
3 shows the change in the p/e ratios of EEI's regulated utilities in the fourth quarter of 2014:  
4



5  
6 The above graph is based on price to historical earnings. It is also important to evaluate how  
7 utility stocks are trading on a price to forward earnings basis as well. If utility stock prices  
8 have increased as a result of an increase in expected earnings and/or dividends, then it is  
9 possible that these higher p/e ratios may be less attributed to a decline in the COE. At the  
10 time Staff provided its testimony for the Staff Report, the average forward p/e ratio

1 was 18.1x. As of the filing of this rebuttal testimony, the average forward p/e ratio had  
2 increased to 18.9x.

3 Q. Can you provide some commentary from utility stock analysts that sum up the  
4 performance of utility stocks through the end of the year?

5 A. Yes. UBS indicated the following in a January 5, 2015, equity research report:

6 **With the group [utilities] now exceeding P/E valuations last seen in**  
7 **2006, we're skittish**

8 Following the rally in utilities during its seasonally strong year-end, we  
9 see an argument for an end to at least utility outperformance.  
10 Following the December rally in the utilities we calculate the sector is  
11 trading at a forward rolling P/E of 18.5x, meaningfully ahead of the  
12 December 2006 peak of 18.2x. Meanwhile, the sector has reclaimed its  
13 13% premium to the wider S&P. Amidst these record high valuations,  
14 we see a more challenging outlook for commodity exposed names, as  
15 well as limited YoY growth for the wider sector in 2015 coming off  
16 tough YoY comps without the effect of the polar vortex (leading to  
17 limited EPS growth ). Moreover, we suspect this challenge could yet  
18 be compounded as 1Q results in May could look especially weak as  
19 comps will show a clear negative trend...

20 **Retracing utilities vs. bond yields: it's still historically cheap**  
21 **though**

22 While equities –and utilities –appear pricey, the search for yield would  
23 still suggest higher income equities are trading at a discount to their  
24 historic trends vs. not just the ten-year treasury but broader utility bond  
25 indices. We estimate a return to normal relationship would support  
26 26% upside to utilities; the question remains to what extent investors  
27 are willing to fully price in this historic yield relationship in equity  
28 markets, despite the seemingly transient nature of interest rates  
29 (although presumably the longer rates stay at current levels, the more  
30 acceptable the old utility-bond relationship appears to hold).<sup>5</sup>

31 Q. Is Staff changing the amount of its recommended decrease to Ameren  
32 Missouri's allowed ROE as a result of capital market events through the end of 2014?

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<sup>5</sup> Julien Dumoulin-Smith, Michael Weinstein, and Paul Zimbardo, "US IPP Weekly Power Points, Reaching a New High: Time for a Note of Caution," January 5, 2015, UBS Securities, LLC.

1           A.     No. However, Staff believes this information provides even more support for  
2 the Commission to lower Ameren Missouri's allowed ROE to at least 9.25%.

3 **COMPARISON OF MR. HEVERT'S COST OF COMMON EQUITY ANALYSIS IN**  
4 **THIS CASE AS COMPARED TO HIS ANALYSIS IN AMEREN MISSOURI'S LAST**  
5 **CASE**

6           Q.     Has Mr. Hevert's recommended ROE for Ameren Missouri changed since he  
7 sponsored testimony in Ameren Missouri's last rate case, Case No. ER-2012-0166?

8           A.     Yes. Mr. Hevert's updated ROE recommendation in Case No. ER-2012-0166  
9 was 10.50%, which compares to his ROE recommendation in this case of 10.40%. While  
10 Mr. Hevert's lower recommended ROE recognizes some decline in the COE for electric  
11 utility companies in general and Ameren Missouri in particular, his recommendation does not  
12 give enough consideration to the magnitude of the decline in the COE since Ameren  
13 Missouri's last rate case.

14          Q.     Did Mr. Hevert use the same methodologies in this case to estimate Ameren  
15 Missouri's COE as he did in the last rate case?

16          A.     Yes. He used the same methodologies, but his proxy group is not the same and  
17 he also changed the weight he assigns to the methodologies he uses. He has also made some  
18 subtle changes in some of his assumptions, which Staff will discuss later in its testimony.

19          Q.     What methodologies did Mr. Hevert assign more weight to in Case No.  
20 ER-2012-0166?

21          A.     Mr. Hevert assigned more weight to his DCF methodologies, in particular his  
22 multi-stage DCF analysis. Mr. Hevert claimed he did so because of the Commission's  
23 traditional reliance on the DCF and in particular, the Commission's recent reliance on the  
24 multi-stage form of the DCF.

1 Q. Does it appear that Mr. Hevert gave the most weight to the average results  
2 from his multi-stage DCF analysis in the last rate case?

3 A. Yes. Page 113 of his rebuttal testimony in Case No. ER-2012-0166 provides  
4 his average COE estimates using the multi-stage DCF under various scenarios. The average  
5 COE using the multi-stage DCF ranged from 10.15% to 10.64%.

6 Q. What is the range of average results for Mr. Hevert's multi-stage DCF analysis  
7 in this case?

8 A. 9.93% to 10.13%. Consequently, based on a simple comparison of the  
9 differences in Mr. Hevert's multi-stage DCF result in the last case compared to this case  
10 implies a COE decline in the range of approximately 20 to 50 basis points.

11 Q. Was Mr. Hevert consistent in how he approached his multi-stage DCF analysis  
12 in this case compared to the last rate case?

13 A. No. In the last rate case Mr. Hevert's multi-stage DCF analysis involved two  
14 approaches for estimating the future cash flows of his proxy group. In one approach he  
15 assumed that the terminal cash flow was based on applying the constant-growth DCF to the  
16 final annual cash flow. In the second approach he estimated the terminal cash flow by  
17 applying a historical price-to-earnings ratio to an estimate of terminal EPS. In the instant  
18 case, Mr. Hevert only estimates the terminal cash flow based on applying the constant-growth  
19 DCF in the final year.

20 Q. Did Mr. Hevert do anything else different in his multi-stage DCF analysis in  
21 this case?

22 A. Yes. In the last case Mr. Hevert assumed the first cash flow would occur  
23 6 months from the stock purchase date and then every 12 months thereafter. In the instant

1 case Mr. Hevert assumes the first cash flow occurs at the end of the calendar year and then he  
2 assumes each subsequent cash flow will occur in the middle of the year.

3 Q. Although you don't agree with many of the inputs Mr. Hevert uses in his  
4 multi-stage DCF analysis, can comparing the results from the 2012 rate case and the 2014 rate  
5 case provide insight on the change in the COE?

6 A. Yes, but it is important to use the same proxy group for both periods and  
7 execute the multi-stage DCF consistently in each period.

8 Q. Did you do this for Mr. Hevert's 2012 proxy group?

9 A. Yes. However, I revised the multi-stage DCF analysis Mr. Hevert performed  
10 in 2012 to make it consistent with the way he performed his multi-stage DCF in 2014. I then  
11 updated the multi-stage DCF analysis on the 2012 proxy group, using Mr. Hevert's 2014  
12 methodology, through December 31, 2014, for the instant rate case. I eliminated Cleco  
13 Corporation and Integrys Corporation from the 2012 proxy group due to the fact that these  
14 two companies' stock prices are currently being influenced by merger and acquisition  
15 activities. I also eliminated Otter Tail Corporation because its financials in 2012 did not  
16 allow for a meaningful COE analysis, which Mr. Hevert recognized himself in 2012.

17 Q. What does a multi-stage DCF analysis of Mr. Hevert's 2012 proxy group  
18 imply regarding the change in the COE since Ameren Missouri's last rate case, Case No.  
19 ER-2012-0166?

20 A. It implies that the cost of common equity has declined in the range of 76 to  
21 92 basis points since 2012 (*see* Schedule DM-1).

22 Q. Did you perform the same analysis for Mr. Hevert's 2014 proxy group?

1           A.     Yes. I did this for the same periods. However, due to the fact that the websites  
2 Mr. Hevert used for his projected growth rates do not maintain an historical database of  
3 projected growth rates, I chose to use FactSet as the source for equity analysts' projected  
4 growth rates in EPS. Staff has access to the historical estimates as reported by FactSet  
5 through its current subscription to SNL. FactSet receives information from over 800  
6 contributing brokers and covers more than 16,000 active global companies. It is one of the  
7 most widely quoted sources for consensus analysts' estimates in mainstream financial media,  
8 such as *The Wall Street Journal*, the Associated Press, Dow Jones Newswires and CNN  
9 Money. The equity analysts contributing to the forecasted 5-year compound annual growth  
10 rates ("CAGR") in EPS forecasts can be identified through FactSet, but cannot be identified  
11 through sources such as Yahoo and Zacks. Additionally, FactSet reports on how recent the  
12 5-year CAGR estimates were provided, which is not provided by Yahoo or Zacks.  
13 Regardless, it appears that the FactSet consensus growth rates are fairly consistent with those  
14 reported by Zacks and Yahoo, causing Staff to conclude that these sources most likely  
15 received the reported estimates from the same analysts.

16           In addition to FactSet, I included the Value Line 3-5 year CAGR in EPS since  
17 Mr. Hevert also used these estimates. Value Line's CAGR are not based on reporting of  
18 equity analyst estimates, but rather a Value Line analyst that provides estimates based  
19 on Value Line's methodology. Consequently, this information should not be redundant  
20 to any of the equity analyst estimates provided by FactSet or any of the other  
21 aforementioned sources.

22           Q.     Did you have to exclude any companies in order to provide a reliable  
23 indication of the decline in the cost of equity since 2012?



1           A.     Yes. I excluded Cleco Corporation because they are currently the target of a  
2 planned takeover; I excluded Empire because FactSet did not report a projected 5-year CAGR  
3 for Empire in 2012; I excluded PNM Resources because they had non-investment grade credit  
4 ratings in 2012 due to financial risks/problems related to their non-regulated operations  
5 (which have since been divested); and I excluded Otter Tail because its financials do not  
6 allow for a meaningful COE analysis, which Mr. Hevert recognized in his 2012 testimony.

7           Q.     Are there any companies you didn't exclude in which an argument could be  
8 made that they should also be excluded?

9           A.     Yes. On December 3, 2014, NextEra Energy announced an agreement to  
10 acquire Hawaiian Electric for \$4.3 billion. Rate of return witnesses, including me, typically  
11 exclude companies that are either the target or acquirer in pending merger and acquisition  
12 transactions. Because this transaction was just announced this month, I chose to show results  
13 with and without these companies included. Because inclusion of these companies did imply  
14 a higher COE reduction, I relied on the results that excluded these companies.

15          Q.     What does a multi-stage DCF analysis of Mr. Hevert's 2014 proxy group  
16 imply regarding the change in the cost of common equity since Ameren Missouri's last rate  
17 case, Case No. ER-2012-0166?

18          A.     It implies that the cost of common equity has declined in the range of 66 to  
19 80 basis points since 2012 (*see* Schedule DM-2).

20          Q.     What does the evidence using consistent proxy groups, consistent inputs and  
21 consistent methodologies for the multi-stage DCF demonstrate?

22          A.     That the cost of common equity has declined by at least 75 basis points since  
23 Ameren Missouri's last rate case in which the Commission authorized an ROE of 9.80%.

1 This information certainly supports the reasonableness of Staff's recommendation to lower  
2 Ameren Missouri's allowed ROE by a more conservative 55 basis points to 9.25% from its  
3 current level of 9.80%. The savings from Ameren Missouri's reduced cost of capital should  
4 be shared with its ratepayers.

5 **COMPARISON OF MR. GORMAN'S COST OF COMMON EQUITY ANALYSIS IN**  
6 **THIS CASE AS COMPARED TO HIS ANALYSIS IN AMEREN MISSOURI'S LAST**  
7 **CASE**

8 Q. Has Mr. Gorman changed his recommended ROE for Ameren Missouri since  
9 he sponsored testimony in Ameren Missouri's last rate case, Case No. ER-2012-0166?

10 A. No. He still recommends an ROE of 9.30% for Ameren Missouri. The range  
11 he provides is wider (9.00% to 9.60%) as compared to what he provided in Ameren  
12 Missouri's last rate case (9.20% to 9.40%).

13 Q. Do the details of Mr. Gorman's COE analysis support his decision not to lower  
14 his recommended ROE based on a lower COE?

15 A. No.

16 Q. Did Mr. Gorman use the same methodologies in this case to estimate Ameren  
17 Missouri's cost of common equity as he did in the last rate case?

18 A. He used the same methodologies, but because he adopted Mr. Hevert's proxy  
19 group in each case, his proxy group is not the same. He also changed the weight he assigns to  
20 the methodologies he uses.

21 Q. How did Mr. Gorman use his methodologies to support his recommended ROE  
22 range in Case No. ER-2012-0166?

23 A. Mr. Gorman used his DCF results, in particular his multi-stage DCF, to  
24 support the high-end of his ROE recommendation (9.40%); Mr. Gorman used his risk

1 premium analyses to support the low-end of his ROE recommendation (9.20%); and  
2 Mr. Gorman dismissed his COE estimate of 8.70% using the CAPM. Mr. Gorman  
3 recommended Ameren Missouri's ROE be set based on the mid-point of his COE estimates  
4 from his DCF and risk premium results.

5 Q. How did Mr. Gorman use his methodologies to support his COE range in  
6 this case?

7 A. The methodologies that support the high end and the low end have  
8 flip-flopped from the last rate case. Mr. Gorman's DCF results loosely support the low end of  
9 his COE estimate of 9.00% (his actual average results indicated a COE of 8.74%, but he  
10 arbitrarily gives more weight to the results from his constant-growth DCF using equity  
11 analysts' near-term CAGR projections to estimate the perpetual growth rate). Mr. Gorman  
12 relies on his risk premium results to support the high-end of his range of 9.60%.  
13 Mr. Gorman's CAPM results now fall within the range of his risk premium and DCF results  
14 to apparently support the mid-point of the range between his DCF and risk premium results.

15 Q. Without analyzing the details of Mr. Gorman's communicated DCF results in  
16 this case compared to Ameren Missouri's last rate case, what is the implied decline in the cost  
17 of equity?

18 A. Approximately 35 basis points.

19 Q. What is the implied decline in the cost of equity based purely on the  
20 multi-stage DCF analysis?

21 A. Approximately 80 basis points.

22 Q. Does this support your recommendation to lower Ameren Missouri's allowed  
23 ROE by 25 to 75 basis points?

David Murray  
Rebuttal Testimony

1 A. Yes.

2 Q. Did Mr. Gorman use the same proxy group in this rate case as he did in the  
3 2012 rate case?

4 A. No. In both cases, Mr. Gorman adopted Mr. Hevert's proxy group with a  
5 few exceptions.

6 Q. Is it important to hold proxy groups constant when estimating the relative  
7 change in the COE over time?

8 A. Yes. While the intent of COE studies is to provide a current COE estimate for  
9 the industry in which the company operates, it is important to hold the proxy group constant  
10 to eliminate company-specific factors that may impact an aggregate COE estimate at different  
11 points in time.

12 Q. Did you evaluate the changes to the implied COE of Mr. Gorman's 2012 and  
13 2014 proxy groups in order to inform the Commission regarding how much the cost of equity  
14 has declined since 2012?

15 A. Yes. Again, I focused on the multi-stage DCF analyses because these  
16 analyses allow for a change in near-term growth rates, but should keep the perpetual growth  
17 rate constant because the expected growth into infinity should not change much due to  
18 short-term factors.

19 Q. Did you use all of the companies contained in Mr. Gorman's 2014 proxy group  
20 when estimating the COE for this group in 2012?

21 A. No. I excluded Empire District Electric Company due to lack of projected  
22 growth rates in 2012; I excluded Otter Tail because this company's financials do not provide  
23 meaningful COE estimates; and I excluded PNM Resources because its financial data was

1 impacted by non-regulated operations in 2012 making its current risk profile incomparable to  
2 its risk profile in 2012.

3 Q. After eliminating companies that should not be compared between 2012 and  
4 2014, how much did the COE results decline since 2012?

5 A. The implied decline in COE from Mr. Gorman's multi-stage DCF analysis is  
6 approximately 73 basis points.

7 Q. Did you update Mr. Gorman's COE estimate for his 2012 proxy group?

8 A. Yes, but I had to eliminate the following companies: Cleco Corporation  
9 because it is currently the target of an acquisition, Integrys because it is also currently  
10 involved in a merger and Otter Tail because its financial data does not allow for a meaningful  
11 COE estimate.

12 Q. After eliminating companies that should not be compared between 2012 and  
13 2014, how much did the COE decline since 2012?

14 A. Approximately 66 basis points.

15 **RESPONSE TO LANCE SCHAFER'S TESTIMONY**

16 Q. Did Mr. Schafer sponsor testimony in Ameren Missouri's last rate case?

17 A. No.

18 Q. Are you aware of any testimony Mr. Schafer may have sponsored in 2012 to  
19 allow you to compare the relative changes in his COE estimates over time?

20 A. No. Mr. Schafer indicates on page 2 of his direct testimony that this is the first  
21 case in which he has testified before the Missouri Public Service Commission.

22 Q. What is your general reaction to Mr. Schafer's cost of equity analysis?

1           A.     I believe Mr. Schafer's COE analysis supports Staff's position that the cost of  
2 equity for the electric utility industry is easily in the 7 to 8 percent range. Mr. Schafer makes  
3 upward adjustments to the COE implied from his analysis because of what he believes are  
4 current abnormally low dividend yields in the utility industry. While I understand  
5 Mr. Schafer may be uncomfortable recommending an ROE below 9% because allowed ROEs  
6 generally have not fallen below this level, this does not mean that the utility industry is not  
7 enjoying a favorable spread in the allowed ROE as it compares to the current cost of equity.  
8 I believe it is important to inform the Commission on the current COE, so that the  
9 Commission can then decide if it wants to narrow the gap between allowed ROEs and the  
10 COE. Staff has provided the Commission with information that allows it to at least maintain a  
11 spread similar to that allowed in Ameren Missouri's last rate case.

12           Q.     What are the implications of Mr. Schafer's decision to adjust the dividend  
13 yield because he believes they are currently abnormally low?

14           A.     Mr. Schafer's opinion implies that he believes investors are paying too much  
15 for utility stocks, causing the dividend yield (dividend/price) to be lower than what has been  
16 required by utility investors in the past. There are two primary reasons why the dividend  
17 yield may be currently lower than it was in the past. First, investors' required returns on  
18 utility stocks have declined. Second, investors expect higher growth in earnings from the  
19 stock as compared to historical years. Because there has not been a fundamental shift in  
20 industry growth prospects in the last couple of years, Staff believes it is more the former  
21 rather than the latter.

1 Q. If Mr. Schafer believes that electric utility dividend yields will return to the  
2 higher levels achieved in the past, how would this impact the assumptions of a DCF analysis  
3 and investors' resulting required returns?

4 A. In order for the dividend yields of the electric utility industry to return to  
5 higher levels, dividends would have to increase at a faster rate than stock prices over the next  
6 several years, meaning capital gains will be lower, and/or utility stock prices will need to  
7 contract from their current levels. In each case, investors would be investing in the stock with  
8 the expectation that capital returns will be less than that supported by the fundamental growth  
9 prospects. Consequently, an adjustment to increase the dividend yield to reflect current  
10 higher valuation levels also requires an offsetting adjustment to reflect that the stock price  
11 will either not increase at rates consistent with the fundamental underlying growth in  
12 dividends or even worse, the investor is investing in utility stocks with the understanding that  
13 stock prices will contract if interest rates increase to levels not currently expected.

14 Q. When adjusting his dividend yield has Mr. Schafer incorporated the negative  
15 offset to fundamental growth rates that will occur if p/e ratios return to historical levels?

16 A. No.

17 Q. If the p/e ratio returns to historical levels, does this mean a DCF analysis with  
18 an unadjusted dividend yield and a growth rate based on underlying fundamentals may  
19 actually overstate investors' required returns?

20 A. Yes.

21 Q. How did Mr. Schafer quantify the upward adjustment he made to the current  
22 dividend yield?

1           A.     He took an average of historical dividend yields reported by Value Line for the  
2 period 2004 through 2013 and Value Line's projected annual dividend yield for the period  
3 2017 to 2019.

4           Q.     Does Value Line's method of projecting dividend yields require a projected  
5 stock price?

6           A.     Yes. The calculation of a projected dividend yield requires a projected  
7 dividend, which is divided by a projected stock price.

8           Q.     Have you calculated the projected stock price in 2019, which would produce  
9 the projected dividend yield Mr. Schafer assumes in his DCF analyses?

10          A.     Yes. Schedule DM-3 attached to this testimony shows the stock price required  
11 by 2019 to allow a return to the dividend yield Mr. Schafer assumes is more normal (*see*  
12 Column 9). Because Value Line provides its projected dividend through this period,  
13 determining the required stock price involves some simple algebra.

14          Q.     If this truly represents what investors expect, then what does this imply?

15          A.     Investors' required returns are even lower than what is supported by even a  
16 non-adjusted DCF analysis. Investors are willing to take on the risk of potential capital losses  
17 just to participate in the return offered by utilities' dividends. If Value Line's projected DPS  
18 for the period 2017 to 2019 is realized by 2019 and the dividend yield is also as projected,  
19 then the expected average compound annual return would only be 6.12% through 2019 for  
20 Mr. Schafer's proxy group. While Mr. Schaefer's adjustment is intended to account for what  
21 he believes to be abnormally high valuation levels of electric utility stocks, perhaps the most  
22 important insight that can be taken from Mr. Schafer's adjustment is that if anything,  
23 investors required returns may actually be below what fundamentals can support if a constant



1 p/e ratio is not assumed in estimating the COE. Because the dividend yields are lower than  
2 they were in 2012, this supports Staff's recommendation to lower Ameren Missouri's allowed  
3 ROE. It is for this reason that the Commission needs to give more weight to the current  
4 evidence from capital markets rather than relying on historical allowed returns. It seems that  
5 ROR witnesses have been recommending and commissions have been allowing returns higher  
6 than what is supported by capital market evidence because of the belief that long-term interest  
7 rates will return to higher levels. Staff urges the Commission to recognize the current and  
8 prolonged low long-term interest rate levels and the lower implied cost of equity for utilities  
9 by reducing the allowed ROE. If interest rates should increase and valuations of utility stocks  
10 decline, then the allowed ROE can be increased in a later rate case. Otherwise, the  
11 Commission will continue to allow shareholders a higher than necessary ROE over the COE.

12 Q. Are there any other important takeaways to consider from Mr. Schafer's  
13 upward adjustment to the dividend yield?

14 A. Yes. Mr. Hevert's multi-stage DCF analysis does not contemplate a  
15 contraction in the p/e ratios of his proxy group. His terminal p/e ratios are approximately 17x,  
16 which is well above historical averages. It is widely recognized by investors that utility  
17 stocks are trading at p/e ratios that are much higher than historical averages. Although  
18 Mr. Hevert's analysis is fundamentally consistent with the assumption in the DCF that  
19 p/e ratios will remain constant, Value Line projects that they will contract. Staff also has not  
20 modified its analysis to consider a possible contraction in p/e ratios in the future, but Staff is  
21 aware of a form of the DCF method, the Grinold-Kroner method, that does take expected  
22 changes in the p/e ratios into consideration. If Mr. Hevert's DCF analysis had assumed lower

1 terminal multiples than what is currently implied in his analysis, his multi-stage DCF results  
2 in this case would imply an even higher decline in the COE.

3 Q. What p/e ratios are assumed in Value Line's projections?

4 A. The average p/e ratios for Mr. Schafer's proxy group for 2017 to 2019 was  
5 13.7x for Mr. Schafer's proxy group.

6 Q. What is the average implied terminal p/e ratio in Mr. Hevert's proxy group?

7 A. 16 to 17x depending on whether Mr. Hevert uses 30 days, 90 days or 180 days  
8 of stock prices in his analysis.

9 Q. In past testimonies, did Mr. Hevert perform a multi-stage DCF analysis  
10 applying p/e multiples to the terminal year EPS to estimate the terminal year cash flow?

11 A. Yes, but he hasn't done so in this case. Staff performed this analysis and  
12 assumed Mr. Hevert's proxy companies could be sold in their terminal year at the  
13 p/e multiples Value Line projects 3 to 5 years from now. Using these terminal values,  
14 Mr. Hevert's DCF cost of equity estimates would be 100 basis points lower than his  
15 initial estimates.

16 Q. What would happen to Staff's and Mr. Schafer's cost of equity estimate if it  
17 incorporated an expected decline in the p/e ratios?

18 A. They would be lower because this means that investors would be expecting a  
19 compression in the p/e ratios in the future, which would offset the assumed one-for-one  
20 growth in stock price from the growth in earnings/dividends. However, because Staff has not  
21 made any upward adjustments for potential changes to the dividend yield or the p/e ratios,  
22 Staff believes its COE estimates are more accurate and reliable and consistent with the  
23 assumptions underlying the DCF methodology.

1 Q. Although you have not made any specific adjustments due to current higher  
2 valuation levels of utility stocks, what is the main insight the Commission should draw from  
3 this discussion?

4 A. Just the mere fact that the Commission is receiving expert opinions that the  
5 implied cost of equity is so low that initial results should be adjusted upward, should be  
6 sufficient evidence that Ameren Missouri's allowed ROE should be lowered from its previous  
7 level in 2012.

8 **COMPARISON OF OTHER COST OF COMMON EQUITY METHODS USED BY**  
9 **MR. GORMAN AND MR. HEVERT IN THE 2012 AND 2014 RATE CASES**

10 Q. Can a comparison of Mr. Gorman's and Mr. Hevert's other methodologies be  
11 relied upon for purposes of estimating the change in the COE since 2012?

12 A. No. Mr. Hevert's CAPM analyses are inherently flawed due to irrational  
13 assumptions he uses to estimate the market risk premium and Mr. Gorman's approach using  
14 the CAPM has significant fundamental changes that don't allow for a meaningful comparison  
15 of his 2012 results to his 2014 results.

16 Q. What is wrong with Mr. Hevert's CAPM approach?

17 A. The biggest issues I have with Mr. Hevert's CAPM are the assumptions he  
18 makes when estimating the equity market risk premium. Just the mere fact that his  
19 assumptions result in an estimated market risk premium that is higher than most rational  
20 investors would project for total returns on the S&P 500 should cause the Commission to be  
21 wary about relying on his CAPM analysis, specifically for its absolute results, but also for the  
22 relative change from 2012 to 2014.

1 Q. What expected returns for the S&P 500 does Mr. Hevert use to estimate the  
2 equity risk premium?

3 A. In the instant rate case he uses an expected return of 13.44% for the S&P 500  
4 based on 5-year EPS forecasts he retrieved from Bloomberg. In the 2012 rate case, using  
5 the same source for 5-year EPS forecasts, he used an expected return of 12.93% for the  
6 S&P 500.

7 Q. Are Mr. Hevert's projected returns for the S&P 500 consistent with those  
8 expected by investors?

9 A. No. Mr. Hevert's method produced expected returns for the S&P 500 that are  
10 over twice JP Morgan Asset Management's expected returns of 6.50% for U.S. large cap  
11 stocks.<sup>6</sup> Considering that JP Morgan Asset Management publishes these expected returns for  
12 use by its professional and institutional clients should provide the Commission assurance that  
13 investors are not using anything close to what Mr. Hevert suggests in his CAPM analysis.

14 Q. Not only are Mr. Hevert's expected returns in 2014 high on an absolute basis,  
15 but they are even higher than the estimates he used in 2012. Is this consistent with the changes  
16 in investors' expectations?

17 A. No. Due to higher returns achieved on the S&P 500 in 2013 and 2014, most  
18 institutional investors have been reducing the long-term return expectations on large  
19 capitalization stocks. As of September 30, 2012, JP Morgan Asset Management expected  
20 long-term returns on U.S. large cap stocks to be approximately 7.25%.<sup>7</sup> As of September 30,  
21 2013, JP Morgan Asset Management increased its expected return on U.S. large cap stocks to

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<sup>6</sup> <https://am.jpmorgan.com/gi/getdoc/1383169768793>.

<sup>7</sup> [http://www.jpmorganassetmanagement.se/dms/LTCMRA%202013%20\[MKR1%20\[LU\\_EN\].pdf](http://www.jpmorganassetmanagement.se/dms/LTCMRA%202013%20[MKR1%20[LU_EN].pdf).

1 7.5%.<sup>8</sup> As indicated previously, they lowered it to 6.5% in 2014. Consequently, when these  
2 expected returns are compared to risk-free rates, investors' equity risk premiums have actually  
3 declined across the board since 2012, which supports Staff's position that Ameren Missouri's  
4 cost of equity has declined since it was authorized an ROE of 9.8% in 2012.

5 Q. Are you aware of any other professional opinions that corroborate JP Morgan  
6 Asset Management's projections?

7 A. Yes. The Federal Reserve Bank of Philadelphia publishes professional  
8 forecasts of long-term returns on the S&P 500 annually in the *Survey of Professional*  
9 *Forecasters*. In 2012 the projected long-term annual return on the S&P 500 was 6.80%; in  
10 2013 the projected long-term annual return dropped to 6.13%; and in 2014 it dropped to  
11 6.00%. Considering these forecasts are half of that projected by Mr. Hevert in his COE  
12 analysis should cause the Commission to completely dismiss the Mr. Hevert's COE estimates  
13 in which he uses over 13% returns on the S&P 500.

14 Q. Can any insight be drawn from comparing Mr. Gorman's CAPM cost of equity  
15 estimate in 2012 as compared to his estimate 2014?

16 A. No. In 2012 Mr. Gorman's CAPM analysis had the lowest implied cost of  
17 common equity out of his three methodologies, with a cost of equity estimate of 8.70%.  
18 Mr. Gorman's CAPM analysis in 2014 indicates that the cost of common equity is now  
19 50 basis points higher, at 9.24%.

20 In 2012 Mr. Gorman had used the average of his two market risk premium estimates  
21 (7.5% and 5.7% for an average of 6.6%) for purposes of his CAPM analysis. In 2014,  
22 Mr. Gorman used the high-end of his two estimates (6.2% and 7.3%) rather than the average,

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<sup>8</sup> <https://am.jpmorgan.com/gi/getdoc/1383169610860>.

1 which is 6.75%. If Mr. Gorman had continued to use the average of his two estimates, his  
2 cost of common equity range using the CAPM would be 8.82% to 9.23%, mid-point of  
3 9.025%. Keeping his previous averaging technique constant would imply that the cost of  
4 common equity had increased by approximately 30 basis points since the last rate case.

5 Q. What are the primary causes of Mr. Gorman's increased cost of common  
6 equity estimates after keeping the approach for his inputs consistent?

7 A. First, Mr. Gorman's expected market return estimates for the S&P 500 are  
8 higher in 2014 than they were in 2012. As Staff has already discussed when addressing  
9 Mr. Hevert's CAPM analysis, this increase in expected returns for the U.S. markets is not  
10 consistent with the expectations of sophisticated investors, such as JP Morgan. If anything,  
11 expected long-term returns should be lower going forward due to recent increases in the  
12 valuation levels of stocks in the S&P 500.

13 Second, and the most fundamental disagreement I have with Mr. Gorman's CAPM  
14 analysis, is that he adds his risk premium to a projected interest rate. This is inappropriate  
15 because it is akin to using projected stock prices in a DCF analysis. A rate of return witness  
16 should not attempt to estimate where he thinks stock prices and bond yields will be in the  
17 future because then he is substituting his judgment for that of the market. Bond prices already  
18 reflect investors' expectations of future interest rates.

19 Q. How much higher is the projected 30-year U.S. Treasury Bond rate  
20 Mr. Gorman uses compared to the current 30-year U.S. Treasury Bond rate?

21 A. Over 100 basis points. 30-year U.S. Treasury bonds have been trading at a  
22 yield below 3% and Mr. Gorman assumes investors require a return on 30-year Treasury  
23 bonds of 4.10% in his CAPM analysis.

1 Q. Did Mr. Gorman use projected 30-year U.S. Treasury bond yields in the last  
2 rate case as well?

3 A. Yes. However, the projected bond yield was 40 basis points lower at 3.70%.  
4 The current yield at the time was also approximately 3.00%.

5 Q. Can you provide an example of why using projected interest rates violates  
6 some of the basic tenets of finance and risk arbitrage?

7 A. Yes. As I explained earlier, the current yield on U.S. Treasury bonds reflects  
8 investors' expectations of the interest rate environment for the foreseeable future. If investors  
9 believed that they could achieve higher yields in the future, then they would not buy long-  
10 term bonds today, because they would experience a capital loss when interest rates increase.  
11 If an investor purchased a newly issued \$1,000, 30-year U.S. Treasury Bond today at a  
12 coupon rate of 3%, this would entitle the investor to semiannual coupon payments of \$15 for  
13 the next 30 years and a return of the \$1,000 investment at maturity. If these payments are  
14 discounted at the current required rate of 3%, then the present value of this stream of  
15 payments is exactly equal to the \$1,000 initial investment. However, if investors expected the  
16 30-year T-bond rate to increase to 4.1% in the next year as Mr. Gorman suggests in his  
17 CAPM analysis, then the investor that purchased the 3% bond today would see the value of  
18 their \$1,000 bond investment decline to \$814.40 within one year. While it is possible that  
19 some investors may be strong enough in their convictions to short long-term treasury bonds  
20 because they expect interest rates to increase by this much, it is obvious that the consensus of  
21 investors are not doing so, otherwise the prices of bonds would have already dropped to levels  
22 that would push interest rates up to this higher projected level.

1 Q. If utility stock investors expected long-term interest rates to return to these  
2 levels in the near future, would they be rational in their decision to purchase utility stocks at  
3 their current much higher valuation levels?

4 A. No. As Staff explained when discussing assumptions made in a multi-stage  
5 DCF analysis, investors purchasing utility stocks at the current higher p/e ratios would have to  
6 knowingly be buying utility stocks with the expectation that they will experience a loss in the  
7 value of their investments. Unless an investor thinks they can time the market and sell his/her  
8 investment in a utility stock before interest rates increase, then he/she has accepted this risk  
9 and is willing to incur this risk due to the current low long-term interest rate environment.

10 Q. Did the Edison Electric Institute (EEI) recently comment on the continued low  
11 long-term interest rate environment in spite of predictions year-after-year that they will  
12 eventually increase?

13 A. Yes. EEI indicated the following in its third quarter 2014 financial update on  
14 utility stock performance:

15 Multi-year predictions of rising rates continue to be confounded  
16 by falling yields. Utilities tend to underperform in rising rate  
17 environments, yet if long-rates stay flat when the Fed finally  
18 tightens, this time may be different.

19 The Commission should set the allowed ROE based on the required return information being  
20 communicated by the capital markets at the present time. Staff recalls predictions of long-  
21 term interest rate increases by “experts” dating back to 2010, yet it seems that these  
22 predictions never come to fruition. There has been much commentary in the financial media  
23 that long-term interest rates have been lower due to the Fed’s monetary policy. In fact, one of  
24 the expressed goals of the Fed’s bond buyback program was to drive long-term interest rates  
25 lower since this bond buyback program targeted longer-dated bonds. However, the Fed



1 discontinued this monetary policy initiative, but long-term yields have still remained low and  
2 have even declined since the program was terminated. Because investors determine the price  
3 they are willing to pay for their investments, perhaps, as EEI surmises, investors expect a low  
4 interest rate, low growth environment for a prolonged period of time.

5 Q. Does the current yield curve support the notion that investors will expect the  
6 risk-free rate to be as high as 4.1% next year?

7 A. No. Mr. Hevert uses a common practice in finance to project forward expected  
8 inflation rates 10 years from now. The methodology he uses is based on the risk and return  
9 principle that an investor should not be able to earn a riskless profit by earning a higher return  
10 by buying and selling short-term treasuries and reinvesting them at the shorter-term rate each  
11 time they mature. For example, if the yield on a current long-term bond did not adequately  
12 compensate investors for an expected increase in rates, then investors would short the long-  
13 term bond and invest the proceeds in short-term bonds and continuously roll over its  
14 investment to achieve a higher rate of return over the same period of the long-term bond.  
15 This is why many analysts, such as Mr. Hevert, use forward rates to determine the market  
16 consensus expectation of required rates of return for certain holding periods in the future.

17 Q. If you calculate the forward long-term rate one year from now using the  
18 average monthly spot rate of a 1-year U.S. Treasury Bond and a 30-year U.S. Treasury Bond,  
19 what is the implied market consensus long-term rate a year from now?

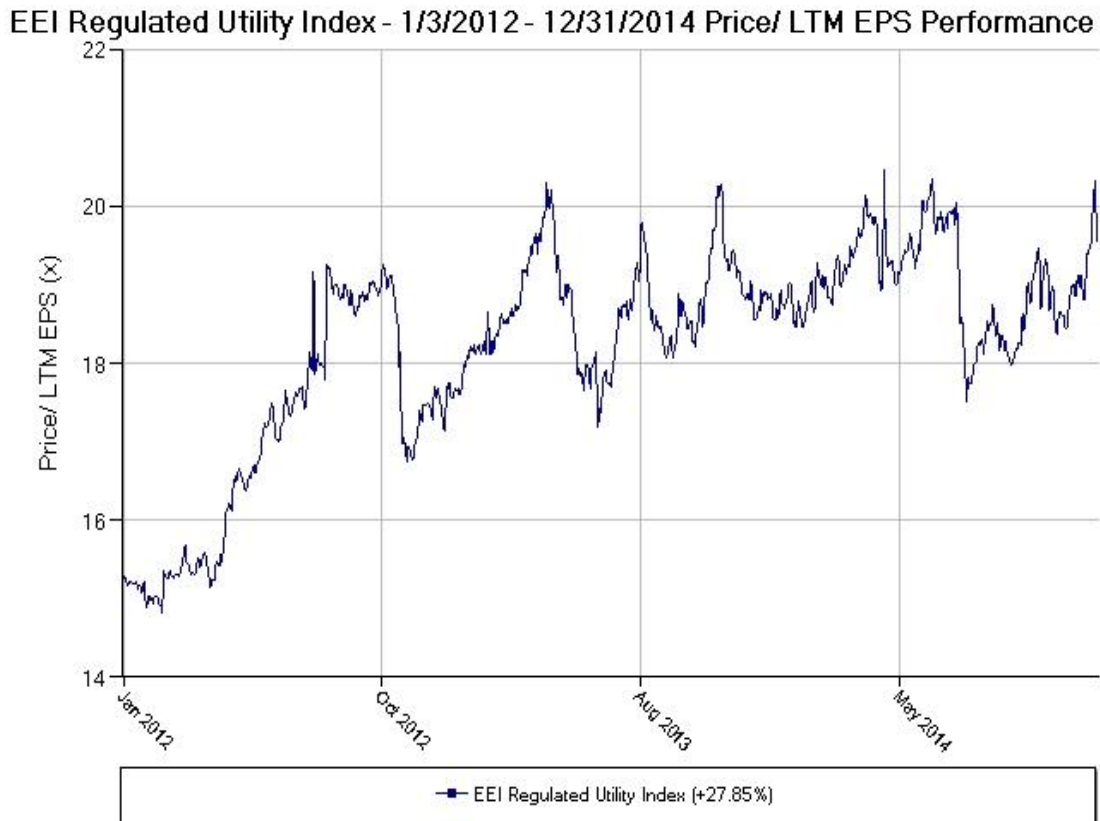
20 A. 2.92% for the remaining 29 years on the 30-year U.S. Treasury Bond.

21 Q. Is it possible that interest rates will be different in one year than what current  
22 capital market prices imply?

1           A.     Yes. The current market consensus is based on all known information at the  
2 time, which is the premise underlying the efficient market hypothesis. In recent years utility  
3 stock prices were priced based on the expectation that interest rates may possibly increase or  
4 stay the same. Otherwise, utility stocks wouldn't have performed so well in recent months.  
5 It is reasonable to conclude that the achieved total stock return for EEI's regulated utilities of  
6 over 30% in 2014 (almost half of these returns were achieved in the fourth quarter) wasn't  
7 expected at the beginning of the year. For that matter, the compound annual returns of  
8 approximately 14.60% for EEI's regulated utilities since 2012 wasn't expected either. As can  
9 be seen in the below graph, for the period from January 1, 2012 through December 31, 2014,  
10 the p/e ratios for EEI's regulated utilities has expanded by 27.85%. This is an additional  
11 9.72% over the 18.13% expansion in EEI's regulated utilities p/e ratios through  
12 September 30, 2014, Staff showed on page 20 of its Cost of Service Report.

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23 *continued on next page*

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3 Q. If long-term interest rates do not change unexpectedly, then what returns  
4 should investors expect for electric utilities going forward?

5 A. Returns consistent with the underlying fundamentals of the industry, which are  
6 reflected in the current dividend yield and a reasonable long-term growth rate in those  
7 dividends, which is consistent with the fundamentals and the underlying assumptions of the  
8 constant-growth DCF.

9 Q. Do you believe Mr. Hevert's and Mr. Gorman's risk premium analyses  
10 provides useful insight on the change in the cost of equity since 2012?

11 A. No.

1 Q. Why?

2 A. Their risk premium approach is not based on market-implied costs. It is  
3 commonly understood in the investment community that allowed ROEs are not consistent  
4 with the COE. There is no doubt that investors expect (and hope) commissions to continue to  
5 allow ROEs above the COE, but allowed ROEs are not synonymous with the market-implied  
6 COE. Consequently, I think it is more appropriate to characterize Mr. Hevert's and  
7 Mr. Gorman's risk premium studies as a "bond yield plus allowed ROE premium analysis."

8 Mr. Hevert's analysis compounds the circularity involved in using allowed ROEs to  
9 estimate the COE by suggesting that the COE should be adjusted due to his observation that  
10 allowed ROEs are negatively correlated with changes in utility bond yields. While Staff  
11 believes it is safe to conclude that risk premiums are not constant over time, Staff also  
12 believes that the use of actual or allowed ROE data to interpret the market's required risk  
13 premium is of questionable value. For example, Eugene Fama and Kenneth French concluded  
14 that *earned* ROEs over the period of 1950 through 2000 were not consistent with *required*  
15 ROEs over the same period.<sup>9</sup> Fama and French arrived at this conclusion by using the DCF  
16 method to compare the cost of equity to the return on equity over the same period. The Fama  
17 and French study also helps explain what is currently happening with regulated utility stocks.

18 Investors in regulated utility stocks have benefited from a continued decline in interest  
19 rates, just as investors in bonds have benefited from a continued decline in interest rates  
20 (increase in bond prices). Because of the higher value placed on bonds and dividend-paying  
21 stocks, such as regulated electric utilities, the issuers of these securities now realize much  
22 lower costs when they need to raise capital. In the instance of bonds, it is easy to measure this

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<sup>9</sup> Eugene F. Fama and Kenneth R. French, "The Equity Premium," *The Journal of Finance*, (April 2002).

1 lower cost because the lower rate is indicated directly in the lower coupon rates attached to  
2 the bonds. However, in the instance of stock, it must be measured by judgment, but  
3 considering the bond-like characteristics of regulated utility stocks, it really should be fairly  
4 intuitive that the cost of equity for regulated utility companies is below 9%.

5 Q. Is it important to understand how other commissions are reacting to the current  
6 capital market environment before reducing allowed ROEs too drastically?

7 A. Yes. However, there is a practical limitation to this exercise. This Commission,  
8 and other commissions like it that have rate cases pending before them, are hearing evidence  
9 about recent changes in the capital markets that have caused utility valuations to increase to  
10 an even greater degree than evidence that was heard in rate cases decided in 2014.  
11 As discussed previously, utility stock returns have increased dramatically through the second  
12 half of 2014. Much of this can be explained by the surprise decrease in long-term interest  
13 rates. In case after case before this Commission, ROR witnesses provide cost of equity  
14 estimates based on projected interest rates, which are always higher than current interest rates.  
15 This has been in the situation for rate cases dating back to the financial crisis over 6 years ago.  
16 Staff urges the Commission give weight to this evidence as compared to the lag effect  
17 of allowed ROEs and reduce Ameren Missouri's allowed ROE to 9.25%, but no higher  
18 than 9.50%.

19 **SUMMARY AND CONCLUSIONS**

20 Q. Please summarize the conclusions of your rebuttal testimony.

21 A. Based on Staff's comparison of Mr. Hevert's and Mr. Gorman's COE  
22 estimates in the 2012 rate case and in this case, Staff believes the methodologies that both

1 witnesses primarily relied upon in 2012, namely the DCF with particular emphasis on the  
2 multi-stage DCF, clearly indicate that Ameren Missouri's allowed ROE should be reduced.  
3 The evidence from their DCF analyses support lowering Ameren Missouri's allowed ROE by  
4 at least 50 basis points. The reduction in the COE for electric utilities has become even more  
5 pronounced through the end of the 2014 calendar year. The recent rally in utility stocks has  
6 caused some investors to be concerned that utility stocks are too expensive (cheaper for utility  
7 companies to issue stock). Fortunately, a couple of additional months will have passed before  
8 the hearings in this case so Staff will continue to monitor the utility equity capital market  
9 conditions to provide the Commission with updated data to make an informed decision on a  
10 fair and reasonable allowed ROE in this case.

11 Q. Does this conclude your rebuttal testimony?

12 A. Yes, it does.

**BEFORE THE PUBLIC SERVICE COMMISSION**  
**OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company d/b/a )  
Ameren Missouri's Tariff to Increase Its ) Case No. ER-2014-0258  
Revenues for Electric Service )

AFFIDAVIT OF DAVID MURRAY

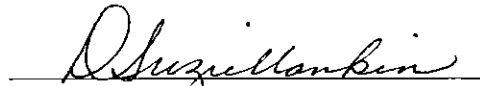
STATE OF MISSOURI     )  
                                  )     ss.  
COUNTY OF COLE     )

David Murray, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Rebuttal Testimony in question and answer form, consisting of 36 pages to be presented in the above case; that the answers in the foregoing Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

  
\_\_\_\_\_  
David Murray

Subscribed and sworn to before me this 16<sup>th</sup> day of January, 2015.

D. SUZIE MANKIN  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: December 12, 2016  
Commission Number: 12412070

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

**Union Electric Company d/b/a Ameren Missouri  
Case No. ER-2014-0258**

**Backdated Multiple-Stage Discounted Cash Flow (DCF) Estimated Costs of Common Equity  
for the Comparable Electric Utility Companies**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Company Name	Annualized Quarterly Dividend	Growth Years 1-5	6	7	Growth Years 8	9	10	Growth in Perpetuity	Cost of Equity
Alliant Energy	\$1.80	6.18%	5.65%	5.12%	4.59%	4.06%	3.53%	3.00%	8.17%
American Electric Power	\$1.88	3.09%	3.08%	3.06%	3.05%	3.03%	3.02%	3.00%	8.66%
CMS Energy Corp.	\$0.96	5.90%	5.42%	4.93%	4.45%	3.97%	3.48%	3.00%	8.36%
DTE Energy Company	\$2.35	4.38%	4.15%	3.92%	3.69%	3.46%	3.23%	3.00%	8.05%
Great Plains Energy	\$0.85	7.63%	6.86%	6.09%	5.32%	4.54%	3.77%	3.00%	8.53%
OGE Energy Corp.	\$0.79	5.87%	5.39%	4.91%	4.44%	3.96%	3.48%	3.00%	6.71%
Pinnacle West Capital	\$2.10	6.18%	5.65%	5.12%	4.59%	4.06%	3.53%	3.00%	8.51%
Portland General Electric Compa	\$1.06	4.35%	4.13%	3.90%	3.68%	3.45%	3.23%	3.00%	8.05%
Southern Company	\$1.89	5.33%	4.94%	4.55%	4.17%	3.78%	3.39%	3.00%	8.13%
TECO Energy, Inc.	\$0.88	5.20%	4.83%	4.47%	4.10%	3.73%	3.37%	3.00%	9.07%
Westar Energy, Inc.	\$1.32	5.75%	5.29%	4.83%	4.38%	3.92%	3.46%	3.00%	8.85%
Xcel Energy	\$1.04	4.65%	4.38%	4.10%	3.83%	3.55%	3.28%	3.00%	7.72%
								<b>Average</b>	<b>8.23%</b>
								<b>Average without OGE and TECO</b>	<b>8.30%</b>

Sources: Column 1 = SNL Financial

Column 8 = See range of averages from Schedules 13-1 through Schedule 13-4.



**Union Electric Company d/b/a Ameren Missouri**

**Case No. ER-2014-0258**

**IMPLIED COST OF EQUITY DECLINE BASED ON  
ROBERT HEVERT'S 2012 PROXY GROUP**

(Eliminated Cleco, Integrys and Otter Tail for 2012 Cost Equity and 2014 Cost of Equity)

**Updated Results Through 12/31/2014**

**Results Based on Data Through 7/13/2012**

<b>30-Day Multi-Stage</b>	<b>9.55%</b>	<b>10.47%</b>
<b>90-Day Multi-Stage</b>	<b>9.78%</b>	<b>10.62%</b>
<b>180-Day Multi-Stage</b>	<b>9.90%</b>	<b>10.66%</b>

**Implied Cost of Equity Reduction**

<b>30-Day Multi-Stage</b>	<b>0.92%</b>
<b>90-Day Multi-Stage</b>	<b>0.85%</b>
<b>180-Day Multi-Stage</b>	<b>0.76%</b>

**Union Electric Company d/b/a Ameren Missouri**  
**Case No. ER-2014-0258**

**IMPLIED COST OF EQUITY DECLINE BASED ON**  
**ROBERT HEVERT'S 2014 PROXY GROUP**

(Eliminated Cleco, Empire, Otter Tail and PNM for 2012 Cost Equity and 2014 Cost of Equity)

**Updated Results Through 12/31/2014**

**Results Based on Data Through 7/13/2012**

<b>30-Day Multi-Stage (without HE and NEE)</b>	<b>9.59%</b>	<b>10.39%</b>
Results with Hawaiian Electric and NextEra Energy	9.54%	10.45%
<b>90-Day Multi-Stage (without HE and NEE)</b>	<b>9.81%</b>	<b>10.55%</b>
Results with Hawaiian Electric and NextEra Energy	9.77%	10.63%
<b>180-Day Multi-Stage (without HE and NEE)</b>	<b>9.93%</b>	<b>10.59%</b>
Results with Hawaiian Electric and NextEra Energy	9.90%	10.70%

**Implied Cost of Equity Reduction**

<b>30-Day Multi-Stage (without HE and NEE)</b>	<b>0.80%</b>
Results with Hawaiian Electric and NextEra Energy	0.92%
<b>90-Day Multi-Stage (without HE and NEE)</b>	<b>0.74%</b>
Results with Hawaiian Electric and NextEra Energy	0.86%
<b>180-Day Multi-Stage (without HE and NEE)</b>	<b>0.66%</b>
Results with Hawaiian Electric and NextEra Energy	0.79%

**Union Electric Company d/b/a Ameren Missouri**  
**Case No. ER-2014-0258**

**Expected 5-Year Total Return Based on Value Line's Projected Dividends and  
Fututre Stock Prices Required to Produce Schafer's Adjusted Dividend Yield**

(1) Company Name	(2) Compound Return	(3) Purchase Price	(4) 2015	(5) 2016	(6) 2017	(7) 2018	(8) 2019 Dividend & Selling Price	(9) 2019 Stock Price	(10) 5-Year CAGR in Stock Price
Alliant Energy Corp	5.25%	(\$58.87)	\$2.20	\$2.25	\$2.30	\$2.35	\$65.68	<b>\$63.28</b>	1.45%
American Electric Power Company Inc	6.01%	(\$54.64)	\$2.12	\$2.22	\$2.31	\$2.36	\$62.76	<b>\$60.26</b>	1.98%
Great Plains Energy Inc	6.85%	(\$25.53)	\$0.98	\$1.04	\$1.09	\$1.14	\$30.56	<b>\$29.36</b>	2.83%
IDACORP Inc	4.73%	(\$57.66)	\$1.90	\$1.98	\$2.05	\$2.10	\$63.64	<b>\$61.44</b>	1.28%
Pinnacle West Capital Corp	5.68%	(\$58.03)	\$2.44	\$2.53	\$2.62	\$2.67	\$64.71	<b>\$61.91</b>	1.30%
PNM Resources Inc	9.50%	(\$26.95)	\$0.80	\$0.89	\$0.98	\$1.03	\$37.83	<b>\$36.68</b>	6.36%
Portland General Electric Company	5.20%	(\$34.38)	\$1.14	\$1.21	\$1.27	\$1.32	\$38.70	<b>\$37.30</b>	1.65%
Southern Co	7.02%	(\$45.29)	\$2.15	\$2.20	\$2.26	\$2.31	\$53.00	<b>\$50.64</b>	2.26%
Westar Energy Inc	5.01%	(\$36.32)	\$1.44	\$1.48	\$1.52	\$1.57	\$39.58	<b>\$37.98</b>	0.90%
Xcel Energy Inc	5.99%	(\$32.06)	\$1.26	\$1.31	\$1.36	\$1.41	\$36.73	<b>\$35.28</b>	1.93%
<b>Proxy Group Average</b>	<b>6.12%</b>						<b>Proxy Group Average</b>		<b>2.19%</b>

Sources:

Column 3: Schafer's Schedule LCS-5

Columns 4 - 7: Value Line Investment Survey: September 19, 2014; October 31, 2014; November 21, 2014

Column 9: Schafer's Constant Growth DCF Adjusted Dividend Yield Divided by 2020 Projected Dividend