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*Witness:* Arthur W. Rice, PE  
*Sponsoring Party:* MoPSC Staff  
*Type of Exhibit:* Surrebuttal Testimony  
*Case No.:* ER-2014-0258  
*Date Testimony Prepared:* February 6, 2015

**MISSOURI PUBLIC SERVICE COMMISSION**  
**REGULATORY REVIEW DIVISION**  
**UTILITY SERVICES**  
**ENGINEERING AND MANAGEMENT SERVICES UNIT**

**SURREBUTTAL TESTIMONY**

**OF**

**ARTHUR W. RICE, PE**

**UNION ELECTRIC COMPANY,  
d/b/a AMEREN MISSOURI**

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

**Jefferson City, Missouri  
February, 2015**

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**ARTHUR W. RICE, PE**  
**UNION ELECTRIC COMPANY,**  
**d/b/a AMEREN MISSOURI**  
**CASE NO. ER-2014-0258**

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1 **SURREBUTTAL TESTIMONY**

2 **OF**

3 **ARTHUR W. RICE, PE**

4 **UNION ELECTRIC COMPANY,**  
5 **d/b/a AMEREN MISSOURI**

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

7 Q. Please state your name and business address.

8 A. My name is Arthur W. Rice, and my business address is Missouri Public  
9 Service Commission, P.O. Box 360, Jefferson City, MO 65102.

10 Q. Are you the same Arthur W. Rice who prepared and sponsored sections of  
11 testimony addressing depreciation issues in Staff's Revenue Requirement Cost of Service  
12 Report filed December 5, 2014, and also prepared rebuttal testimony that was filed on  
13 January 16, 2015?

14 A. Yes.

15 Q. Has your current position with the Commission or your educational  
16 background and other qualifications changed since Staff's Cost of Service Report was filed?

17 A. No. My current position is still Utility Regulatory Engineer I in the  
18 Engineering and Management Services Unit of the Utility Services Department of the  
19 Regulatory Review Division, and my work and educational experience are on page 69 of  
20 Appendix 1 to Staff's Cost of Service Report.

21 Q. Have you previously testified before the Commission?

22 A. Yes. The cases in which I have filed testimony before the Commission are  
23 listed on page 70 of that same appendix.

1 **EXECUTIVE SUMMARY**

2 Q. What is the purpose of your surrebuttal testimony?

3 A. The purpose is to offer Staff's position regarding proposed depreciation rates  
4 for Ameren Missouri in response to the rebuttal testimonies filed by Ted Robertson on behalf  
5 of the Office of the Public Council ("OPC") and John J. Spanos on behalf of  
6 Ameren Missouri in this case.

7 Q. What is Staff's recommendation regarding the offsetting revenue requirement  
8 positions of OPC and Ameren Missouri?

9 A. In the rebuttal testimony of OPC witness Ted Robertson, OPC recommends  
10 that the retirement date used to determine Meramec steam plant depreciation rates be  
11 extended from 2022 to 2027. Using a retirement date of 2027 reduces current  
12 Ameren Missouri depreciation expense by approximately \$17 million per year. If the  
13 Meramec steam plant is retired in the near future, Staff's investigation shows an expected  
14 shortfall of accumulated depreciation, even with the collection of the \$17 million per year that  
15 OPC recommends be eliminated.

16 In the rebuttal testimony of John J. Spanos, Ameren Missouri opposes Staff's  
17 recommendation to limit the net salvage recoverable for two long life Distribution plant  
18 accounts to a maximum of a negative 100% of the initial value of the asset. Staff's  
19 recommendation would reduce Ameren Missouri's current depreciation expense by  
20 approximately \$20 million per year.

21 Staff's adjustment recommended in its direct filing, and here, concerns depreciation  
22 expense for Distribution system equipment that has no reasonable expectation of reaching its

1 end of life in the known future, and the value of which Ameren Missouri is recovering in its  
2 current rates.<sup>1</sup>

3 While some of Staff's recommended depreciation rates for various individual plant  
4 accounts differ significantly from the current depreciation rates, overall, Staff's recommended  
5 depreciation rates result in a depreciation expense that is approximately equal to (or slightly  
6 less by \$500,000 per year) Ameren Missouri's current depreciation accruals.

7 In short, it is still Staff's recommendation that the Commission order the depreciation  
8 rates Staff recommended in its Cost of Service Report filed on December 5, 2014. That  
9 recommendation includes depreciation expense reflecting an expected 2022 retirement date  
10 for the Meramec steam plant and capping the net salvage recoverable for an asset to negative  
11 100% of the initial value of the asset.

12 **RESPONSE TO OPC WITNESS TED ROBERTSON'S POSITION REGARDING**  
13 **THE MERAMEC RETIREMENT DATE FOR DEPRECIATION PURPOSES**

14 Q. What is the difference between OPC's and Staff's positions on the retirement  
15 date for the Meramec steam production plant to be used for purposes of developing a  
16 recommended depreciation rate?

17 A. OPC proposes a retirement date of 2027. Staff recommends a retirement date  
18 of 2022, the same retirement date Ameren Missouri proposes.

19 Q. How do Ameren Missouri's proposal and the Staff's recommendation in this  
20 case compare to what they proposed and what the Commission ordered for the Meramec  
21 steam production plant in Ameren Missouri's last electric general rate case, Case No.  
22 ER-2010-0036, where the life of that plant was disputed?

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<sup>1</sup> There is no reasonable expectation that Ameren Missouri's need to maintain a distribution system to provide electrical service will be eliminated in the foreseeable future.

1           A.     Ameren Missouri’s proposal and the Staff’s recommendation of the 2022  
2 retirement date are essentially the same in this case as they were in that case, but the  
3 Commission ordered a 5-year extension of the retirement date for the Meramec plant to 2027.

4           Q.     What retirement date did Ameren Missouri use for its Meramec  
5 steam production plant in its most recent Integrated Resource Plan (“IRP”), filed in Case No.  
6 EO-2015-0084?

7           A.     The same retirement date of 2022. Ameren Missouri states in that IRP that the  
8 2022 retirement date for its Meramec coal burning production plant is a part of its plan to  
9 progress towards a diverse, balanced and dependable mix of coal, nuclear, natural gas and  
10 renewable energy resources that result in further significant reductions in emissions of carbon  
11 dioxide, sulfur dioxide, nitrogen oxides, mercury and particulates.

12          Q.     Did Staff contemplate the possibility that Ameren Missouri could continue to  
13 operate the Meramec steam plant past 2022 when developing its recommended depreciation  
14 rates for the Meramec steam plant?

15          A.     Yes. There is a built-in future expected shortfall in depreciation accruals for  
16 the Meramec steam plant. The current depreciation expense, and proposed expense for this  
17 rate case, does not accrue expense for future terminal retirement of the Meramec facility.  
18 Even if the Meramec steam production plant is not promptly dismantled and disposed of,  
19 immediate retirement costs are expected to include activities to make the facility physically  
20 and environmentally safe.<sup>2</sup> Future ratepayers, who will not be receiving service from the  
21 Meramec steam plant after it is shutdown, will be asked to pay for these retirement and  
22 dismantlement costs. Thus, it is most reasonable to limit the exposure of those future

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<sup>2</sup> This includes activities such as satisfying regulatory requirements to remove river intake and discharge structures, and close any waste disposal works such as the ash ponds.

1 ratepayers to the extent that their exposure can be limited without unreasonably burdening  
2 current ratepayers.

3 Q. What is Staff's best estimate of the number of years Ameren Missouri will  
4 require to fully retire the Meramec steam plant facilities after Ameren Missouri ceases to use  
5 it to generate electricity?

6 A. Based on the process Ameren Missouri followed with respect to the Venice  
7 steam plant facility that was retired in 2002, Staff estimates that completion of all salvage and  
8 removal activities at Meramec will take approximately 11 years. At Venice, within the first  
9 couple of years, salvageable major equipment components were transferred within the  
10 company for reuse or sold to other companies. Environmental cleanup was conducted over  
11 approximately 10 years, including significant amounts of asbestos removal. The main  
12 physical structure dismantlement and disposal was completed in the 11<sup>th</sup> year.

13 Q. What is Staff's best estimate of the expected cost to retire and dismantle the  
14 Meramec steam plant?

15 A. At this time Staff has only a very rough estimate of a cost for terminal net  
16 salvage of the Meramec steam plant, (retirement and removal cost corrected for salvage  
17 receipts). Based on this limited information, Staff estimates the cost at approximately  
18 \$100 million, (15% of the current plant in service for the Meramec steam plant).<sup>3</sup>

19 Q. If OPC's proposal that the retirement date for the Meramec steam plant be  
20 extended from 2022 to 2027 is adopted, what would be the expected shortfall in depreciation  
21 reserves to cover the original cost of plant in comparison to if Ameren Missouri retires the  
22 plant in 2022?

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<sup>3</sup> Derivation of this 15% terminal net salvage is provided in Staff work papers.

Surrebuttal Testimony of  
Arthur W. Rice, PE

1 A. The shortfall would be approximately \$85 million.<sup>4</sup>

2 Q. Is it important that the retirement date for the Meramec steam plant not be  
3 extended from 2022 to 2027 for calculating depreciation rates?

4 A. Yes.

5 Q. Why?

6 A. It is important because doing so would add approximately \$85 million in  
7 unrecovered original cost to the approximate \$100 in retirement and dismantlement cost  
8 future ratepayers will be expected to pay for a steam plant that would no longer be in service  
9 if the Meramec plant is shut down in 2022.

10 Q. Your testimony has only addressed one steam production plant - Ameren  
11 Missouri's Meramec plant. What about Ameren Missouri's current accrued depreciation  
12 reserves for its other plant accounts?

13 A. Ameren Missouri has an estimated over-accrual of approximately \$540 million  
14 for all of its plant, as determined by Staff's analysis of a calculated theoretical reserve to  
15 actual reserves.

16 Q. Did Ameren Missouri and Staff consider this \$540 million theoretical  
17 over-accrual when they developed the depreciation rates they propose and recommend in this  
18 rate case?

19 A. Yes. The retirement rate observed from the analysis of historical retirements  
20 for each plant account has been modified to produce a depreciation rate that will result in  
21 accruals over the estimated remaining life of the plant in that account such that the total  
22 reserves equal the original cost at the end of the estimated remaining life (for the current

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<sup>4</sup> Staff's stated estimate is caveated with the assumption that the Company's depreciation rates would not be examined and changed in a future rate case prior to 2022.



1 dollars in the account). Thus Ameren Missouri's proposed and Staff's recommended  
2 depreciation rate for each account includes a correction for any observed over- or  
3 under-accumulated reserves.

4 Q. Were the depreciation rates the Commission ordered in Ameren Missouri's last  
5 electric general rate case derived to include a remaining life correction for over- or  
6 under-accruals?

7 A. Yes. The same procedure was used for deriving Ameren Missouri's current  
8 depreciation rates as Staff used to develop its recommended depreciation rates in this case,  
9 with the exception of the introduction of a vintage amortization method for specific general  
10 plant accounts.

11 Q. What did Staff estimate as the amount of theoretical over-accrual of  
12 depreciation expense for all plant accounts in Ameren Missouri's last electric general rate  
13 case, Case No. ER-2010-0036?

14 A. Staff's estimated over-accrual in the 2010 case was \$648 million.<sup>5</sup>

15 Q. How does that compare to Staff's estimated amount of over-accrual of  
16 depreciation expense for all plant accounts in this case?

17 A. Staff's over-accrual estimate has declined to Staff's \$540 million estimate, a  
18 reduction of \$108 million.

19 Q. Could some of the millions of dollars in theoretical over-accrual be used to  
20 make up for shortfalls in accumulated reserves that may occur in individual accounts or for

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<sup>5</sup>. Staff cautions that a calculated theoretical reserves amount is based on the assumption that the depreciation rate is constant over the life of the dollars being analyzed which is often not the case. A change in depreciation rate will effect a change in the theoretical reserve and therefore a different over or under accrual amount will be calculated.

1 individual plant facilities when major retirements occur and terminal cost of removal is  
2 recorded?

3 A. Yes, as a transfer of reserves between plant accounts after an analysis of all  
4 individual accounts is conducted to evaluate imbalances of theoretical and actual reserve for  
5 each account.

6 **RESPONSE TO AMEREN MISSOURI'S POSITION REGARDING NET SALVAGE**  
7 **FOR FEDERAL ENERGY REGULATORY COMMISSION ("FERC") UNIFORM**  
8 **SYSTEM OF ACCOUNTS ("USOA") PLANT ACCOUNTS 364 AND 369.1**

9 Q. What is the difference between Ameren Missouri's and Staff's positions for net  
10 salvage on these two accounts?

11 A. Mr. Spanos proposes in his direct testimony and argues in his rebuttal  
12 testimony for a net salvage rate in Uniform System of Accounts ("USOA") Account 364,  
13 (Distribution Plant Poles and Fixtures), of a negative 150%, and in USOA Account 369.1,  
14 (Distribution plant Overhead Services), of a negative 200%, respectively. Staff's  
15 recommendation is that net salvage rates be capped at a maximum negative value of 100% for  
16 all of Ameren Missouri's plant accounts.

17 Q. What is the approximate difference in depreciation expense between  
18 Ameren Missouri and Staff?

19 A. Staff's recommendation reduces Ameren Missouri's annual depreciation  
20 expense by approximately \$20 million (\$14 million from Account 364 and \$6 million from  
21 Account 369.1) relative to Ameren Missouri's proposal.

22 Q. Why is Staff recommending that negative net salvage be capped at 100%?

23 A. Staff has two reasons for recommending a cap on negative net salvage. The  
24 first is that the other major electric corporations regulated in Missouri do not have negative

1 net salvages of greater than 100% incorporated into their depreciation rates. The second is  
2 that this distribution system plant for which Ameren Missouri is recovering net salvage in its  
3 current rates has no reasonable expectation of reaching its end of life in the foreseeable future.

4 Q. Do you know why The Empire District Electric Company (“Empire”) does not  
5 have negative net salvage that exceeds 100%?

6 A. Yes. As Empire proposed, the Commission capped negative net salvage at  
7 100% in Empire’s 2004 electric rate case, Case No. ER-2004-0570, where in its *Report and*  
8 *Order* the Commission stated on page 55:

9 As in the Laclede<sup>6</sup> case cited above, it is the Commissions’ conclusion  
10 that, with respect to Mass Property<sup>7</sup>, traditional accrual<sup>8</sup> of Net Salvage is  
11 required. As proposed by Empire, this accrual will be capped at 100%.

12 Q. Do Empire’s current depreciation rates the Commission ordered in rate  
13 Case No. ER-2012-0345, and the depreciation rates Empire is proposing in its currently  
14 pending electric general rate case, Case No. ER-2014-0351, apply the negative 100% net  
15 salvage cap?

16 A. Yes.

17 Q. Do Kansas City Power and Light Company (“KCP&L”) and KCP&L Greater  
18 Missouri Operations Company (“GMO”) have negative net salvage that exceeds 100%?

19 A. No. The depreciation rates the Commission ordered for KCP&L and GMO in  
20 their most recent electric general rate cases, Case Nos. ER-2010-0355 and ER-2010-0356,  
21 respectively, do not have negative net salvage that exceeds 100%.

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<sup>6</sup> Case No. GR-99-315, a tariff filing for Laclede Gas Company.

<sup>7</sup> Mass Property has accounts with Whole Life depreciation accounting, such as for poles and wires, and is different from Life Span Property with Life Span depreciation, where the life is truncated when a large unit of property, such as a production unit, is retired.

<sup>8</sup> There is no distinction between Interim and Terminal net salvage, all net salvage is accrued over the expected life of the current plant in service.

Surrebuttal Testimony of  
Arthur W. Rice, PE

1 Q. Is KCP&L proposing negative net salvage that exceeds 100% in its pending  
2 electric general rate case, Case No. ER-2014-0370?

3 A. No, KCP&L is not proposing depreciation rates that incorporate negative net  
4 salvage that exceeds 100% for any plant account in that case.

5 Q. Is the plant associated with the particular accounts identified by Staff in this  
6 case likely to be fully retired in the foreseeable future?

7 A. No.

8 Q. Why not?

9 A. With respect to actual future cost of removal expenses for this type of plant,  
10 (distribution poles and services) there is no reasonable expectation of reaching the end of life  
11 for the account in the foreseeable future.

12 Q. What is the expected remaining life of the plant for which invested dollars are  
13 recorded in Account 369.1?

14 A. 29.9 years.

15 Q. A year from now, will the expected remaining life of the plant for which  
16 invested dollars recorded in USOA Account 369.1 still be 29.9 years?

17 A. Staff has every expectation that there will be no noticeable change in the  
18 remaining life of the dollars invested in Account 369.1. The remaining life simply keeps  
19 moving forward as older overhead services are retired and replaced with newer equipment.  
20 The remaining life essentially remains the same.

21 Q. On page 6 of his rebuttal testimony, Ameren Missouri witness Mr. Spanos  
22 refers to a Laclede rate case, Case No. GR-99-315, to support his argument that the

1 Commission has previously addressed the methodology for net salvage and did not impose a  
2 cap on it in that case. Do you have a response?

3 A. Yes. In a subsequent Empire electric general rate case, Case No. ER-2004-  
4 0570, the Commission modified the Laclede case decision by limiting net salvage to a  
5 maximum of 100%.

6 Q. Do Ameren Missouri's USOA plant Accounts 364 or 369.1 currently show a  
7 negative rate base?

8 A. Yes. For USOA plant Account 369.1 the Staff Accounting Schedules filed on  
9 December 5, 2014, show plant-in-service of \$179,541,797, with an accumulated reserve of  
10 \$244,291,311. Thus, accumulated reserve exceeds the original cost, yielding a negative rate  
11 base amount of (\$64,749,514).

12 Q. When a long life plant account depreciation rate is specified with a cost of  
13 removal greater than original cost (net salvage greater than a negative 100%) is it reasonable  
14 to expect that account to exhibit a negative rate base when the average investment in the  
15 account has only been 50% consumed?

16 A. Yes. These distribution accounts exhibit a continuous life with a fairly  
17 constant remaining life, such that the account will tend to become a permanent negative  
18 rate base component.

19 **VINTAGE AMORTIZATION PLANT AND RESERVE ADJUSTMENTS**

20 Q. Does Ameren Missouri's proposed and Staff recommended switch of  
21 accounting method from a mass asset to vintage amortization method for specific General  
22 Plant accounts result in additional retirements to the accounts for all plant on the books that  
23 has a vintage age older than the specified amortization period?

Surrebuttal Testimony of  
Arthur W. Rice, PE

1 A. Yes.

2 Q. What is Staff's estimate of the total dollars that will be retired as a result of this  
3 switch in methods?

4 Q. Approximately \$65 million.

5 Q. Are these additional retirements shown in the accounting schedules submitted  
6 with Staff surrebuttal testimony?

7 A. No. Staff's estimated additional retirements have been not entered at this time.

8 Q. Does the procedure to switch to vintage amortization require adjustments to  
9 reserves to insure the accumulated reserves for each account be equal to the appropriate  
10 accumulated amortization for the remaining plant in service?

11 A. Yes. Staff estimates that the switch in methods will result in an over accrual in  
12 vintage amortized accounts of approximately \$25 million.

13 Q. Did Staff include adjustments in the Staff accounting schedules to reflect this  
14 estimated over accrual of reserves?

15 A. Yes, as a transfer of reserves from General Plant to Production Plant as shown  
16 in the attached Schedule AWR-3.

17 Q. Does this conclude your surrebuttal testimony?

18 A. Yes.


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

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

AFFIDAVIT OF ARTHUR W. RICE, PE


STATE OF MISSOURI     )  
                                  )     ss.  
COUNTY OF COLE     )

Arthur W. Rice, PE, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Surrebuttal Testimony in question and answer form, consisting of 12 pages to be presented in the above case; that the answers in the foregoing Surrebuttal 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.

  
\_\_\_\_\_  
Arthur W. Rice, PE

Subscribed and sworn to before me this 5<sup>th</sup> day of February, 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