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Study  
Witness: William M. Warwick  
Sponsoring Party: Union Electric Company  
Type of Exhibit: Direct Testimony  
File No.: ER-2014-0258  
Date Testimony Prepared: July 3, 2014

**MISSOURI PUBLIC SERVICE COMMISSION**

**FILE NO. ER-2014-0258**

**DIRECT TESTIMONY**

**OF**

**WILLIAM M. WARWICK**

**ON**

**BEHALF OF**

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

St. Louis, Missouri  
July, 2014

Ameren Exhibit No. 49  
Date 3/3/15 Reporter SB  
File No. ER-2014-0258

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**DIRECT TESTIMONY**

**OF**

**WILLIAM M. WARWICK**

**FILE NO. ER-2014-0258**

**I. INTRODUCTION**

**Q. Please state your name and business address.**

A. William M. Warwick, Union Electric Company d/b/a Ameren Missouri (“Ameren Missouri” or “Company”), One Ameren Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

**Q. What is your position with Ameren Missouri?**

A. I am Manager, Rate Engineering.

**Q. Please describe your educational background and employment experience.**

A. I received a Bachelor of Science degree in Engineering Management from the University of Missouri-Rolla in December 1978.

I was employed at ACF Industries’ Amcar Division-St. Louis Plant from December 1978 to December 1981, as an engineer in the Industrial Engineering Department, responsible for project planning. I began working at Union Electric Company in the Rate Engineering Department in December 1981.

My duties and responsibilities include assignments related to the Company’s gas and electric rates, including participation in regulatory proceedings, rate analysis, the development and interpretation of the Company’s gas and electric tariffs, including rules and regulations, and other rate or regulatory projects as assigned.

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**II. PURPOSE OF TESTIMONY**

**Q. What is the purpose of your direct testimony in this proceeding?**

A. My direct testimony in this proceeding concerns the development of a fully allocated embedded customer class cost of service study for the Company's electric operations for the test year, which is the twelve months ending March 31, 2014, with updates for known and measurable changes through December 31, 2014.

**III. CLASS COST OF SERVICE STUDY**

**Q. What is generally meant by the term "class cost of service study"?**

A. The class cost of service study is among the basic tools of ratemaking. The purpose of the study is to equitably allocate the various costs identified in the jurisdictional or total cost of service study (revenue requirement) to the respective rate or service classifications of a utility. It determines, as accurately as possible, the cost that is incurred to serve each customer class. The results of the study are utilized for equitable revenue allocation and rate design.

**Q. What is generally meant by the term "cost of service study"?**

A. A cost of service study determines a utility's aggregate or total annual revenue requirement necessary to recover its operating and maintenance expenses and taxes, depreciation of its plant, and a fair return on the utility's net investment in property and plant. An electric jurisdictional cost of service study (total revenue requirement), prepared and filed by Company witness Laura M. Moore, provided the total rate base and expense items that formed the starting point for the class cost of service study.

1           **Q.    Please explain the steps in performing a class cost of service study.**

2           A.    The three major steps in the performance of a class cost of service study  
3 are:

4           1.    Functionalization – the process of assigning Company total revenue  
5 requirement to specified utility functions, i.e., production, transmission, distribution, etc.  
6 This step is done mainly in the jurisdictional cost of service utilizing the Federal Energy  
7 Regulatory Commissions (“FERC”) Uniform System of Accounts Manual.

8           2.    Classification – is a further refinement of the functionalized revenue  
9 requirement. Cost classification identifies the various elements of functionalized  
10 revenue, on a cost causative basis, as demand-related, energy-related, or customer-  
11 related. Demand-related costs are rate base investment and related operating expenses  
12 associated with the facilities necessary to supply a customer’s service requirements  
13 during periods of maximum, or peak, levels of power consumption each month. The  
14 major portion of demand-related costs consists of generation and transmission plant and  
15 the non-customer-related portion of distribution plant. Energy-related costs are those  
16 costs related directly to the customer’s consumption of electrical energy (kilowatt-hours)  
17 and consist primarily of fuel, fuel handling, interchange power costs, a portion of  
18 production plant maintenance expenses, and off-system sales revenues. Customer-related  
19 costs are the minimum costs necessary to just make electric service available to the  
20 customer, regardless of the extent to which such service is utilized. Examples of such  
21 costs include monthly meter reading, billing, postage, customer accounting and customer  
22 service expenses, as well as a portion of the costs associated with the required investment  
23 in a meter, service line, transformer and certain other distribution system facilities.

1           3. Allocation – is the process of allocating the classified costs among the  
2 Company’s customer rate classes. Demand-related distribution costs are allocated to  
3 customer classes using one or more allocation factors based upon customer class  
4 coincident, class non-coincident, or individual customer non-coincident kilowatt  
5 demands. Energy-related costs are allocated to the customer classes on the basis of their  
6 respective energy (kilowatt-hour) requirements at the generation level of the Company’s  
7 system, which includes applicable system energy losses. The use of this common point  
8 on the Company’s system to allocate such costs ensures that each customer class will be  
9 assigned the appropriate portion of the Company’s total incurred variable fuel and  
10 purchased power costs. Customer-related costs are normally allocated on the basis of the  
11 number of customers associated with each rate class. In some instances involving non-  
12 residential customer multiple or advanced metering installations, weighting factors may  
13 also be used. In addition, where specific costs can be identified as being attributable to  
14 one or more specific customer classes, such as credit and collection expenses, a direct  
15 assignment of such costs will be made.

16           **Q. Please explain the information contained in Schedule WMW-1**  
17 **attached to your testimony.**

18           A. Schedule WMW-1 contains the results of my customer class cost of  
19 service study for the Company’s electric operations for the test year ending March 31,  
20 2014. This study is based upon the Company’s present rate levels and uses weather  
21 normalized sales and associated revenues.

1           **Q.    What rate classes were included in the Company's class cost of service**  
2 **study?**

3           A.    The Company's existing residential, small general service, large general  
4 service, small primary service, large primary service, large transmission service, and  
5 lighting service classes were allocated their respective portions of the Company's  
6 operating costs in the class cost of service study. The Company has three active lighting  
7 service classifications: 1) Street & Outdoor Area Lighting – Company-Owned 5(M),  
8 2) Street and Outdoor Area Lighting – Customer-Owned 6(M), and 3) Municipal Street  
9 Lighting – Incandescent 7(M). These lighting service classifications are combined into a  
10 “lighting” class in the class cost of service study.

11           **Q.    What categories of cost did you examine in developing the customer**  
12 **class cost of service study summary included in Schedule WMW-1 of your**  
13 **testimony?**

14           A.    Consistent with my earlier testimony, I conducted a detailed analysis of all  
15 elements of investment and expense associated with the Company's electric operations  
16 for the purpose of allocating such costs to the customer classes served by the Company.  
17 As a part of this analysis, total expenses and investment in property and plant were  
18 classified into their customer-related, energy-related, and demand-related components.

19           **Q.    Please describe the development of the factors used to allocate costs to**  
20 **each customer class.**

21           A.    The allocation factors for each customer class were determined by  
22 calculating the proportionate share of total customer or property units of each class and  
23 the total energy or demand-related units of each class, including applicable losses. These

1 calculations were developed at the various voltage levels on the Company's generation,  
2 transmission, and distribution system that are associated with the facilities whose costs  
3 are being allocated.

4 **Q. After the allocation factors for each class were derived, what was the**  
5 **next step in the study?**

6 A. The next step was to apply these allocation factors to the various  
7 functional components of rate base and operating and maintenance expenses, as  
8 developed, in total, for the Company's electric operations.

9 **Q. Please describe how those costs and expenses were allocated to the**  
10 **customer classes.**

11 A. The original cost and depreciation reserves of the major functional  
12 components of the Company's electric rate base were allocated to customer classes as  
13 described below. The resulting dollar amount (in thousands) allocated to each class is  
14 shown in Schedule WMW-1.

15 (1) Production Plant. Production plant was allocated to each customer class  
16 on the basis of the Four Non-Coincident Peak ("4 NCP") Average and Excess Demand  
17 allocation factors for each customer class at the Company's generating stations. Non-  
18 coincident peak demand is the customer class' maximum load at any time of the study  
19 period regardless of the time of occurrence or magnitude of the Company's system peak.  
20 The four non-coincident peak demands are the average of the customer class' four  
21 maximum monthly loads. The direct testimony sponsored by Ameren Missouri witness  
22 William R. Davis in this docket describes why the 4 NCP Average and Excess method is



1 appropriate for the allocation of the electric Production Plant to the various customer  
2 classes.

3 (2) Transmission Plant. Transmission line and substation investment was  
4 allocated to each customer class on the basis of the twelve coincident peak ("12 CP")  
5 demands of each class at their point of input to the Company's transmission system.  
6 Coincident peak demand is the customer class' load at the time of occurrence of the  
7 Company's system peak. The twelve coincident peak demands are the customer class'  
8 twelve monthly loads at the time of the Company's twelve monthly system peaks. Such  
9 12 CP allocation is consistent with the development of the Ameren system transmission  
10 revenue requirement, under the Midcontinent Independent System Operator, Inc.'s  
11 ("MISO") Attachment O Rate Formulae in the Open Access Transmission, Energy and  
12 Operating Reserve Markets Tariff on file at the FERC.

13 (3) Distribution Plant. The Company's Distribution Plant was allocated to  
14 each customer class based upon the results of an analysis of the functions performed by  
15 the facilities in Distribution Plant Accounts 360-369. This analysis determined the  
16 breakdown of each account based on its customer-related and demand-related  
17 components. The demand-related component was further broken down by high voltage  
18 primary, primary voltage and secondary voltage demand-related functions. High voltage  
19 primary is 34.5 kilovolts up to 69 kilovolts, primary distribution voltage is above 600  
20 volts up to 34.5 kilovolts, while secondary distribution voltage is 600 volts or less.

21 The portion of the Distribution Plant accounts assigned to the customer  
22 component was derived using the generally accepted zero intercept method described in  
23 the National Association of Regulatory Utility Commissioners ("NARUC") Electric

1 Utility Cost Allocation Manual. This approach to cost assignment is predicated on the  
2 fact that there is a zero or no load component in even the smallest available unit of utility  
3 distribution equipment. The zero intercept method identifies the portion of plant related  
4 to a hypothetical no-load or zero-intercept condition, i.e., the cost of simply making  
5 service available to a customer. The remaining, or demand-related, portion of the  
6 Company's Distribution Plant accounts were split among the high voltage primary,  
7 primary voltage and secondary voltage levels on the basis of a review of the functional  
8 utilization of various equipment and hardware in such accounts. For all distribution  
9 accounts, with the exception of Account 369, Services, the demand-related investment in  
10 each account was allocated to each customer class on the basis of the non-coincident peak  
11 demand of each class at the appropriate high voltage, primary and secondary voltage  
12 levels.

13 The demand-related investment in Account 369, Services, was allocated to each  
14 customer class on the basis of the sum of the maximum demand of all customers in the  
15 class at the secondary level. The maximum individual customer demand was used to  
16 reflect the fact that the maximum demand of individual customers dictates the sizing of  
17 their service facilities.

18 Distribution Account 370, Meters, was allocated to each of the customer classes  
19 by allocation factors that weigh the results of multiplying the current cost of the typical  
20 metering arrangement for each customer class by the number of meters used in serving  
21 that class. All metering cost is classified as customer-related.

1 Account 371-1, Installation on Customer's Premises Substation Equipment, was  
2 allocated to the Primary class on the basis of such customers' historical use of these  
3 facilities.

4 Account 373, Street Lighting & Signal Systems, was directly assigned to the  
5 lighting class.

6 (4) General Plant. The balance in this account was allocated to each customer  
7 class on the basis of the proportion of labor expense allocated to each class.

8 (5) Accumulated Reserves for Depreciation. Because such reserves are  
9 functionalized by type of plant, these reserves were allocated on the same basis as the  
10 allocation of the various plant accounts, as described above.

11 (6) Materials & Supplies. This component consists of fuel inventories and  
12 general materials and supplies related to power plants, transmission facilities and  
13 distribution facilities. Fuel inventories and the power plants and transmission facilities  
14 materials are directly related to the generation and transmission of energy and were  
15 therefore allocated on the basis of the energy allocation factor. The local distribution  
16 materials were allocated on the basis of the composite allocation of Distribution Plant, as  
17 previously described.

18 (7) Cash Working Capital. This item is related primarily to operating  
19 expenses and was therefore allocated to each customer class in proportion to the total  
20 operating expenses allocated to each class.

21 (8) Customer Advances for Construction and Deposits. This component of  
22 rate base was assigned to each customer class on the basis of an analysis of the sources of  
23 such deposits in Missouri.

1           (9)    Total Accumulated Deferred Income Taxes. This component is related  
2 primarily to investment in property and was therefore allocated to each customer class on  
3 the basis of allocated gross plant.

4           **Q.    How did you allocate the electric test year operating and maintenance**  
5 **expenses to the customer classes?**

6           A.    With very few exceptions, operating and maintenance expenses were  
7 allocated to the customer classes on the same basis as the related investment in plant was  
8 allocated. This type of allocation employs the familiar and widely used "expenses follow  
9 plant" principle of cost allocation. For example, the allocator for Transmission Lines was  
10 used to allocate Transmission Line expenses. The only exceptions to this procedure are  
11 as follows:

12           (1)   Production Expenses. This item consists of two categories: (a) fixed,  
13 which includes standard operating and maintenance ("O&M") crews, nuclear support  
14 staff and a portion of non-labor production plant O&M expenses; and (b) variable, which  
15 includes fuel, fuel handling, interchange power costs, and the remaining portion of non-  
16 labor production plant O&M expenses. The fixed portion of production expenses was  
17 allocated on the same basis as Production Plant, while the variable portion was allocated  
18 using a variable allocator based on the megawatt-hours required at the generator to  
19 provide service to each respective customer class.

20           (2)   Customer Accounts Expenses. An analysis of Account 903, Customer  
21 Records & Collection Expenses, indicated that approximately 24 percent of such  
22 expenses are devoted to credit and collection activities. Therefore, this portion of  
23 Account 903 and all of Account 904, Uncollectible Accounts, were allocated to each

1 customer class on the basis of the annual level of collection activities applicable to each  
2 customer class. The remaining 76 percent of Account 903 expense was allocated to each  
3 customer class utilizing a weighted billing and customer accounts administration  
4 allocation factor. Account 902, Meter Reading Expenses, was allocated to each class by  
5 weighting the results of applying the monthly contract meter reading cost per meter to the  
6 respective number of meters in each customer class. Account 901, Supervision, was  
7 allocated to each class on the basis of the composite allocation of all other Customer  
8 Accounts Expenses.

9 (3) Customer Service & Sales Expenses. These expenses were allocated to  
10 each customer class using the composite allocation of Customer Accounts Expenses.

11 (4) Interest on Customer Surety Deposits. These expenses were allocated to  
12 each customer class on the basis of the previously allocated Customer Advances and  
13 Deposits, since advances and deposit accounts are typically representative of where  
14 surety deposits are booked.

15 (5) Administrative & General ("A&G") Expenses. With the exception of  
16 property insurance expense, A&G expenses were allocated to the customer classes on the  
17 basis of the class composite distribution of previously allocated labor expense. Property  
18 insurance expense was allocated using a composite allocator based on gross production,  
19 transmission, distribution, and general plant.

20 **Q. How did you allocate off-system sales revenues?**

21 A. Off-system sales revenues were allocated to each class using each class'  
22 variable production allocation factor based on the megawatt-hours required at the

1 generator to provide service to each respective customer class. This allocation is  
2 consistent with the Commission's Report and Order in File No. ER-2010-0036.

3 **Q. How did you allocate the test year depreciation expenses?**

4 A. Since depreciation expenses are functionalized and are directly related to  
5 the Company's original cost investment in plant, depreciation expense within each  
6 function was allocated to each customer class on the basis of the previously allocated  
7 original cost production, transmission, distribution and general plant.

8 **Q. How did you allocate the test year real estate and property taxes?**

9 A. Real estate and property tax expenses are directly related to the Company's  
10 original cost investment in plant, so these expenses were allocated to customer classes on  
11 the basis of the sum of the previously allocated production, transmission, distribution and  
12 general plant investment.

13 **Q. How did you allocate the test year income taxes?**

14 A. Income tax expense is directly related to the Company's net operating  
15 income as a proportion of its net rate base investment, i.e., rate of return on its net  
16 original cost rate base. As a result, income taxes were allocated to each class on the basis  
17 of the net original cost rate base allocated to each customer class.

18 **Q. How did you allocate the revenue requirement associated with energy  
19 efficiency to the various affected customer classifications?**

20 A. Costs associated with the Company's energy efficiency were split into two  
21 categories: 1) program costs reflected as a regulatory asset in Ms. Moore's jurisdictional  
22 revenue requirement study and 2) energy efficiency revenue requirements reflected in the  
23 Company's January 2012 Missouri Energy Efficiency Investment Act ("MEEIA") filing,

1 which are recovered through the Company's Rider EEIC and excluded from Ms. Moore's  
2 jurisdictional study. The revenue requirement associated with energy efficiency program  
3 costs in category 1 was directly assigned to the respective rate classes based on utilization  
4 of program benefits to date. The revenue requirement associated with category 2  
5 expenses was excluded from the class cost of service study.

6 **Q. What general conclusions can be drawn from the information**  
7 **contained in Schedule WMW-1?**

8 A. Line 33 of WMW-1 indicates the rate of return on rate base currently  
9 being earned on the service being provided to the Company's customer classes and, also,  
10 the rates of return by customer class. The results of my study indicate the residential and  
11 large transmission classes are providing below average rates of return, the large primary  
12 and lighting classes are providing near average rates of return, and all other rate classes  
13 are providing above average rates of return.

14 **Q. Please identify Schedule WMW-2.**

15 A. Schedule WMW-2 was derived from my class cost of service summary,  
16 Schedule WMW-1. To develop Schedule WMW-2, I modified the base revenues of each  
17 class in Schedule WMW-1 to reflect the class revenues necessary for the Company to  
18 realize equalized rates of return from each customer class at the Company's proposed  
19 revenue requirement level.

20 **Q. Please describe the method used to equalize rates of return for each**  
21 **customer class, as reflected in your Schedule WMW-2.**

22 A. The total net original cost rate base of each customer class was multiplied  
23 by the Missouri electric test year return of 8.045 percent to obtain the required total net

1 operating income for each class. This net operating income was then added to the  
2 operating expenses for each class to obtain the total operating revenue for each class  
3 required for equal class rates of return. The resulting cost of service of each customer  
4 class is set forth on line 6 of Schedule WMW-2. However, the revenue requirement of  
5 each customer class is as indicated and discussed in Mr. Davis' direct testimony.

6 **Q. How are the results of your class cost of service used?**

7 A. The results of the study are utilized by Mr. Davis as the starting point of  
8 his revenue allocation and rate design.

9 **Q. Does this conclude your direct testimony?**

10 A. Yes, it does.



Ameren Missouri  
**MISSOURI ELECTRIC OPERATIONS**  
**CLASS COST OF SERVICE ALLOCATION STUDY**

**TITLE: SUMMARY CURRENT ROR RESULTS (\$000'S)**

	MISSOURI	RESIDENTIAL	SMALL GENERAL SERV	LARGE G.S. / SMALL PRIMARY	LARGE PRIMARY	LARGE TRANSMISSION	LIGHTING
1 BASE REVENUE	\$ 2,737,799	\$ 1,230,497	\$ 302,850	\$ 804,460	\$ 202,782	\$ 159,333	\$ 37,876
2 OTHER REVENUE	\$ 80,601	\$ 45,242	\$ 7,407	\$ 18,269	\$ 4,760	\$ 4,082	\$ 841
3 LIGHTING REVENUE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 SYSTEM, OFF-SYS SALES & DISP OF ALLOW	\$ 234,414	\$ 86,233	\$ 22,405	\$ 74,656	\$ 24,506	\$ 25,474	\$ 1,140
5 RATE REVENUE VARIANCE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6 TOTAL OPERATING REVENUE	\$ 3,052,814	\$ 1,361,973	\$ 332,662	\$ 897,384	\$ 232,049	\$ 188,889	\$ 39,857
7							
8 TOTAL PROD, T&D, CUST, AND A&G EXP	\$ 1,819,741	\$ 800,627	\$ 184,966	\$ 518,185	\$ 153,606	\$ 142,990	\$ 19,367
9 TOTAL DEPR AND AMMORT EXPENSES	\$ 529,416	\$ 269,918	\$ 57,564	\$ 136,762	\$ 33,329	\$ 22,508	\$ 9,336
10 REAL ESTATE AND PROPERTY TAXES	\$ 143,851	\$ 73,655	\$ 15,929	\$ 36,466	\$ 8,916	\$ 6,298	\$ 2,588
11 INCOME TAXES	\$ 213,749	\$ 107,047	\$ 23,245	\$ 55,780	\$ 14,203	\$ 10,284	\$ 3,191
12 PAYROLL TAXES	\$ 21,430	\$ 10,727	\$ 2,264	\$ 5,590	\$ 1,454	\$ 1,023	\$ 372
13 FEDERAL EXCISE TAX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14 REVENUE TAXES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15							
16 TOTAL OPERATING EXPENSES	\$ 2,728,188	\$ 1,261,974	\$ 283,968	\$ 752,783	\$ 211,508	\$ 183,101	\$ 34,853
17							
18 NET OPERATING INCOME	\$ 324,626	\$ 99,999	\$ 48,694	\$ 144,601	\$ 20,540	\$ 5,788	\$ 5,004
19							
20 GROSS PLANT IN SERVICE	\$15,919,092	\$ 8,145,648	\$ 1,758,883	\$ 4,044,477	\$ 988,945	\$ 695,657	\$ 285,480
21 RESERVES FOR DEPRECIATION	\$ 6,796,331	\$ 3,523,775	\$ 756,035	\$ 1,689,034	\$ 402,370	\$ 283,081	\$ 142,036
22							
23 NET PLANT IN SERVICE	\$ 9,122,760	\$ 4,621,874	\$ 1,002,848	\$ 2,355,444	\$ 586,575	\$ 412,576	\$ 143,444
24							
25 MATERIALS & SUPPLIES - FUEL	\$ 375,572	\$ 138,160	\$ 35,896	\$ 119,612	\$ 39,264	\$ 40,814	\$ 1,826
26 MATERIALS & SUPPLIES -LOCAL	\$ 187,831	\$ 117,600	\$ 22,559	\$ 34,255	\$ 5,874	\$ 3	\$ 7,541
27 CASH WORKING CAPITAL	\$ 39,362	\$ 17,318	\$ 4,001	\$ 11,209	\$ 3,323	\$ 3,093	\$ 419
28 CUSTOMER ADVANCES & DEPOSITS	\$ (22,563)	\$ (8,909)	\$ (5,375)	\$ (6,233)	\$ (957)	\$ -	\$ (1,089)
29 ACCUMULATED DEFERRED INCOME TAXES	\$ (2,385,054)	\$ (1,221,198)	\$ (264,101)	\$ (604,603)	\$ (147,826)	\$ (104,417)	\$ (42,910)
30							
31 TOTAL NET ORIGINAL COST RATE BASE	\$ 7,317,909	\$ 3,664,845	\$ 795,827	\$ 1,909,684	\$ 486,253	\$ 352,069	\$ 109,231
32							
33 RATE OF RETURN	4.436%	2.729%	6.119%	7.572%	4.224%	1.644%	4.581%

**Ameren Missouri**  
**MISSOURI ELECTRIC OPERATIONS**  
**CLASS COST OF SERVICE ALLOCATION STUDY**  
**EQUALIZED CLASS RATES OF RETURN ANALYSIS**

<u>TITLE: SUMMARY EQUAL ROR (\$000's)</u>							
	MISSOURI	RESIDENTIAL	SMALL GENERAL SERV	LARGE G.S. / SMALL PRIMARY	LARGE PRIMARY	LARGE TRANSMISSION	LIGHTING
1 BASE REVENUE	\$ 3,001,899	\$ 1,425,335	\$ 318,180	\$ 813,493	\$ 221,361	\$ 181,869	\$ 41,660
2 OTHER REVENUE	\$ 80,601	\$ 45,242	\$ 7,407	\$ 18,269	\$ 4,760	\$ 4,082	\$ 841
3 LIGHTING REVENUE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4 SYSTEM, OFF-SYS SALES & DISP OF ALLOW	\$ 234,414	\$ 86,233	\$ 22,405	\$ 74,656	\$ 24,506	\$ 25,474	\$ 1,140
5 RATE REVENUE VARIANCE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6 TOTAL OPERATING REVENUE	\$ 3,316,914	\$ 1,556,811	\$ 347,992	\$ 906,418	\$ 250,627	\$ 211,425	\$ 43,641
7							
8 TOTAL PROD., T&D, CUSTOMER, AND ASG EXP.	\$ 1,819,741	\$ 800,627	\$ 184,966	\$ 518,185	\$ 153,606	\$ 142,990	\$ 19,367
9 TOTAL DEPR. AND AMOR. EXPENSES	\$ 529,416	\$ 269,918	\$ 57,564	\$ 136,762	\$ 33,329	\$ 22,508	\$ 9,336
10 REAL ESTATE AND PROPERTY TAXES	\$ 143,851	\$ 73,655	\$ 15,929	\$ 36,466	\$ 8,916	\$ 6,298	\$ 2,588
11 INCOME TAXES	\$ 213,749	\$ 107,047	\$ 23,245	\$ 55,780	\$ 14,203	\$ 10,284	\$ 3,191
12 PAYROLL TAXES	\$ 21,430	\$ 10,727	\$ 2,264	\$ 5,590	\$ 1,454	\$ 1,023	\$ 372
13 FEDERAL EXCISE TAX	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
14 REVENUE TAXES	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
15							
16 TOTAL OPERATING EXPENSES	\$ 2,728,188	\$ 1,261,974	\$ 283,968	\$ 752,783	\$ 211,508	\$ 183,101	\$ 34,853
17							
18 NET OPERATING INCOME	\$ 588,726	\$ 294,837	\$ 64,024	\$ 153,634	\$ 39,119	\$ 28,324	\$ 8,788
19							
20 GROSS PLANT IN SERVICE	\$ 15,919,092	\$ 8,145,648	\$ 1,758,883	\$ 4,044,477	\$ 988,945	\$ 695,657	\$ 285,480
21 RESERVES FOR DEPRECIATION	\$ 6,796,331	\$ 3,523,775	\$ 756,035	\$ 1,689,034	\$ 402,370	\$ 283,081	\$ 142,036
22							
23 NET PLANT IN SERVICE	\$ 9,122,760	\$ 4,621,874	\$ 1,002,848	\$ 2,355,444	\$ 586,575	\$ 412,576	\$ 143,444
24							
25 MATERIALS & SUPPLIES - FUEL	\$ 375,572	\$ 138,160	\$ 35,896	\$ 119,612	\$ 39,264	\$ 40,814	\$ 1,826
26 MATERIALS & SUPPLIES -LOCAL	\$ 187,831	\$ 117,600	\$ 22,559	\$ 34,255	\$ 5,874	\$ 3	\$ 7,541
27 CASH WORKING CAPITAL	\$ 39,362	\$ 17,318	\$ 4,001	\$ 11,209	\$ 3,323	\$ 3,093	\$ 419
28 CUSTOMER ADVANCES & DEPOSITS	\$ (22,563)	\$ (8,909)	\$ (5,375)	\$ (6,233)	\$ (957)	\$ -	\$ (1,089)
29 ACCUMULATED DEFERRED INCOME TAXES	\$ (2,385,054)	\$ (1,221,198)	\$ (264,101)	\$ (604,603)	\$ (147,826)	\$ (104,417)	\$ (42,910)
30							
31 TOTAL NET ORIGINAL COST RATE BASE	\$ 7,317,909	\$ 3,664,845	\$ 795,827	\$ 1,909,684	\$ 486,253	\$ 352,069	\$ 109,231
32							
33 RATE OF RETURN	8.045%	8.045%	8.045%	8.045%	8.045%	8.045%	8.045%

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

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

AFFIDAVIT OF WILLIAM M. WARWICK

STATE OF MISSOURI )  
 ) ss  
CITY OF ST. LOUIS )

William M. Warwick, being first duly sworn on his oath, states:

1. My name is William M. Warwick. I work in the City of St. Louis, Missouri and I am employed by Union Electric Company d/b/a Ameren Missouri as a Manager, Rate Engineering.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Union Electric Company d/b/a Ameren Missouri consisting of 14 pages, and Schedule(s) WMW-1 and WMW-2, all of which have been prepared in written form for introduction into evidence in the above-referenced docket.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct.

*William M. Warwick*

William M. Warwick

Subscribed and sworn to before me this 3<sup>rd</sup> day of July, 2014.

*Julie Irby*  
Notary Public

My commission expires:

