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Class Cost-of-Service  
Witness: Michael S. Scheperle  
Sponsoring Party: MO PSC Staff  
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Service Commission

**MISSOURI PUBLIC SERVICE COMMISSION**

**REGULATORY REVIEW DIVISION**

**DIRECT TESTIMONY**

**OF**

**MICHAEL S. SCHEPERLE**

**UNION ELECTRIC COMPANY D/B/A AMEREN MISSOURI**

**CASE NO. ER-2012-0166**

**Jefferson City, Missouri  
July 2012**

Staff Exhibit No. 204  
Date 9-27-12 Reporter KF  
File No. ER-2012-0166

**EXHIBIT 204**

**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        )  
Increase Its Revenues for Electric Service    )                     Case No. ER-2012-0166

**AFFIDAVIT OF MICHAEL S. SCHEPERLE**

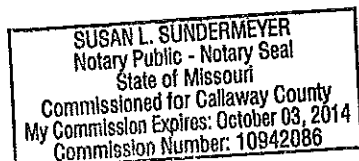
STATE OF MISSOURI    )  
  ) ss  
COUNTY OF COLE     )

Michael S. Scheperle, of lawful age, on his oath states: that he has participated in the preparation of the following Direct Testimony in question and answer form, consisting of 6 pages of Direct Testimony to be presented in the above case, that the answers in the following Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.

*Michael S. Scheperle*  
\_\_\_\_\_  
Michael S. Scheperle

Subscribed and sworn to before me this 19<sup>th</sup> day of July, 2012.

*Susan L. Sundermeyer*  
\_\_\_\_\_  
Notary Public



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**OF**  
**MICHAEL S. SCHEPERLE**  
**UNION ELECTRIC COMPANY D/B/A AMEREN MISSOURI**  
**CASE NO. ER-2012-0166**

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1 **DIRECT TESTIMONY**

2 **OF**

3 **MICHAEL S. SCHEPERLE**

4 **UNION ELECTRIC COMPANY D/B/A AMEREN MISSOURI**

5 **CASE NO. ER-2012-0166**

6 Q. Please state your name and business address.

7 A. My name is Michael S. Scheperle and my business address is Missouri Public  
8 Service Commission, P. O. Box 360, Jefferson City, Missouri 65102.

9 Q. Who is your employer and what is your present position?

10 A. I am employed by the Missouri Public Service Commission ("Commission")  
11 and my title is Manager, Economic Analysis Section, Energy Unit, Regulatory Review  
12 Division.

13 Q. What is your educational background and work experience?

14 A. I completed a Bachelor of Science degree in Mathematics at Lincoln  
15 University in Jefferson City, Missouri. I have been employed by the Missouri Public Service  
16 Commission since June 2000. Prior to joining the Commission, I was employed at United  
17 Water Company as a Commercial Manager from 1983 to 2000, and at Missouri Power &  
18 Light Company from 1973 to 1983 as a Supervisor of Rates, Regulations and Budgeting. A  
19 list of the cases in which I have filed testimony before the Commission is shown on Schedule  
20 MSS-D1. I moved to the Economic Analysis section, Energy Unit as a Regulatory Economist  
21 III in 2008. I assumed my current position in 2009. My previous testimony and  
22 responsibilities address topics including class cost of service, rate design, telecommunication  
23 issues, Missouri Universal Service Fund, energy efficiency/demand-side management, a Staff

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1 member of the Missouri-Deaf-Relay Committee, and a member of the Commission Staff's  
2 Electric Meter Variance Committee.

3 **EXECUTIVE SUMMARY**

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

5 A. The purpose of this testimony is to sponsor the Staff's recommendation in its  
6 Rate Design and Class Cost-of-Service Report ("CCOS Report") that is being filed  
7 concurrently with this direct testimony. I also provide in this direct testimony an overview of  
8 Staff's recommendations detailed in its CCOS Report. The CCOS Report presents Staff's  
9 updated CCOS study for Union Electric Company d/b/a Ameren Missouri ("Ameren  
10 Missouri") and provides methods to collect a Commission-ordered increase in Ameren  
11 Missouri's overall revenue requirement. Also, the CCOS Report makes a recommendation to  
12 require Ameren Missouri to combine its tariffs under one number; recommends changes to the  
13 Fuel and Purchased Power Adjustment Clause ("FAC") tariff sheets; and updates information  
14 on Ameren Missouri's loss study that was used in rate design.

15 Q. What are Staff's rate design recommendations to the Commission for Ameren  
16 Missouri in this case?

17 A. As explained in its CCOS Report, Staff recommends that the Commission  
18 order Ameren Missouri:

- 19 1. That based on CCOS results, Staff recommends adjustments be made first on a  
20 revenue-neutral basis to all classes of customers. The Ameren Missouri residential  
21 class should receive a positive 1% adjustment, the lighting class should receive a  
22 positive 3% adjustment, and the remaining classes of customers (Small General  
23 Service, Large General Service, Small Primary Service, Large Primary Service, and  
24 the Large Transmission Service) should receive a negative adjustment of  
25 approximately 1.0%.  
26  
27 2. That after having made the recommended revenue-neutral adjustments above, any  
28 overall change in revenues ordered by the Commission should be applied on an equal-

1 percentage basis across-the-board to the adjusted class revenues. Staff further  
2 recommends that special precautions be taken that no class receive an overall  
3 reduction in its rate revenues while other customer classes receive an overall increase  
4 in rate revenues.

- 5  
6 3. Maintain non-residential rate schedule interrelationship uniformity for customer  
7 charges, Rider B voltage credits, Reactive charges, and Time-of-Day customer  
8 charges.  
9  
10 4. Eliminate the pole and span charges in the 5(M) lighting classification with the  
11 resulting revenue reduction collected from the entire 5(M) classification within the  
12 lighting class.  
13  
14 5. Increase the residential customer charge to \$9.00.  
15  
16 6. Require Ameren Missouri to combine its two tariffs and file them as a single tariff,  
17 bearing the designation "P.S.C. Mo. No. 6."  
18  
19 7. Adopt FAC tariff sheets consistent with Schedule LMM-2.

20 **STAFF RATE DESIGN AND CCOS REPORT**

21 Q. How is the Staff's CCOS Report organized?

22 A. The Report is organized by topic as follows:

23 I. Executive Summary

24 II. Class Cost-of-Service and Rate Design Overview

25 III. Staff's Class Cost-of-Service Study

26 IV. Rate Design

27 V. Loss Study

28 VI. Ameren Missouri to file its entire tariff as a single document

29 VII. Fuel Adjustment Clause Tariff Sheet Changes

30 Q. Which members of Staff are responsible for the Staff's CCOS Report?

31 A. I am responsible for the Class Cost-of-Service and Rate Design Overview and

32 Staff Class Cost-of-Service sections. Tom Imhoff is responsible for the recommendation that

1 Ameren Missouri combine its tariffs under one number. Lena M. Mantle and Michelle  
2 Bocklage are responsible for the recommended Fuel and Purchased Power Adjustment Clause  
3 tariff revisions. David Roos is responsible for information on Ameren Missouri's loss study.

4 Q. What relationship, if any, is there between the Staff's Revenue Requirement  
5 Cost of Service (COS) Report filed July 6, 2012, and the Staff's CCOS Report?

6 A. In its COS Report, Staff filed its accounting information, which included  
7 Staff's estimate of Ameren Missouri's revenue requirement through the true-up cut-off date of  
8 July 31, 2012. Consistent with that COS Report, this CCOS Report reflects the Staff's  
9 revenue requirement recommendation of \$210,300,136 (high-point) based on Staff's estimate  
10 through the true-up cut-off date of July 31, 2012.

11 **CLASS COST OF SERVICE STUDY**

12 Q. How did Staff reach its CCOS recommendations to the Commission?

13 A. Staff's Accounting Schedules filed with Staff's COS Report show that an  
14 increase in Ameren Missouri's revenue requirement in the range of \$152,480,937 to  
15 \$210,300,136 is warranted. The COS Report shows that the high point of Staff's calculated  
16 return on equity range is \$210,300,136, an overall increase of 8.13%.

17 Staff used Ameren Missouri's rate schedules for the customer classes in its CCOS  
18 study. However, Staff combined the Large General Service ("LGS") and Small Primary  
19 Service ("SPS") rate classes for purposes of its CCOS study because both rate schedules serve  
20 non-residential customers with billing demands of at least 100 kilowatts (kW), therefore a  
21 customer may choose to take service at secondary voltage level under the LGS 3(M) rate  
22 schedule or at a primary voltage level under the SPS 4(M) rate schedule. Also, the rate  
23 structures of the LGS and SPS classes are identical, except that the rate levels on the SPS rate

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1 schedule have been adjusted for the loss differential between primary and secondary voltages,  
2 and to account for customer provision of voltage transformation equipment. Staff also  
3 combined Ameren Missouri's lighting rate schedules to create its Lighting class. This  
4 consolidation resulted in Staff's six customer classes. The six customer classes are (1)  
5 residential, (2) small general service, (3) large general service/small primary service, (4) large  
6 primary service, (5) large transmission service, and (6) lighting service. For each of these six  
7 customer classes, Staff determined (1) Ameren Missouri's investment to serve the customers  
8 in that customer class and (2) Ameren Missouri's ongoing expenses to serve the customers in  
9 that customer class.

10 Staff's CCOS study revealed that, on a revenue-neutral basis, Ameren Missouri's  
11 current rates do not cover Ameren Missouri's cost to serve any customer class. Two of the  
12 customer classes are more than 6% below Ameren Missouri's cost (investment and expenses)  
13 to serve them, and four of the rate customer classes are less than 8% below Ameren  
14 Missouri's costs to serve them.

15 Q. How did Staff conduct its CCOS study?

16 A. The CCOS Report outlines how Staff performed its CCOS study. The cost-of-  
17 service procedure involves three steps: (1) Functionalization – this procedure identifies the  
18 different functional “levels” of the system; (2) Classification – this procedure determines for  
19 each functional type, the primary cause or causes of that cost being incurred, and segregates  
20 these cost of service components into a customer, demand or energy component; and (3)  
21 Allocation – this procedure allocates the class proportional responsibilities for each type of  
22 cost and spreads the cost among the various classes. The cost of service procedures of



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1 Functionalization, Classification, and Allocation are more fully explained in Schedule MSS-6  
2 to Staffs CCOS Report.

3 In its CCOS study, Staff used the Base, Intermediate and Peaking ("BIP") method for  
4 allocating production investment and costs to the customer classes. These costs consist of two  
5 categories: (a) fixed costs, which includes operating and maintenance expenses for labor and  
6 materials; and (b) variable costs, which includes fuel, fuel handling, and interchange power  
7 costs. The fixed portion of production expenses was allocated on the same basis as  
8 production plant, while the variable portion was allocated using a variable allocator based on  
9 the kilowatt-hours required at the generation level to provide service to each respective class.  
10 This type of allocation employs the familiar and widely used "expenses follow plant"  
11 principle of cost allocation. Staff used the twelve coincident peak method ("12 CP") to  
12 allocate transmission investment and costs to the customer classes. Staff used a combination  
13 of non-coincident peak demands ("NCP"), individual customer maximum demands, and  
14 company specific studies to allocate distribution investment and costs to customer classes.  
15 Customer costs are allocated to customer classes based on the number of customers, company  
16 studies, and other internal allocators. Staff's CCOS study summary attached to its CCOS  
17 Report (Schedule MSS-1) is based on the revenue requirement associated with the high end of  
18 Staff's return on equity ("ROE") recommendation for Ameren Missouri's jurisdictional retail  
19 operations of \$210,300,136, and an overall increase of 8.13%.

20 Q. Does this conclude your direct testimony?

21 A. Yes, it does.

**Michael S. Scheperle**

**Testimony/Reports Filed Before  
The Missouri Public Service Commission:**

**CASE NOS:**

TO-98-329, *In the Matter of an Investigation into Various Issues Related to the Missouri Universal Service Fund*

TT-2000-527/513, *Application of Allegiance Telecom of Missouri, Inc. ... for an Order Requiring Southwestern Bell Telephone Company to File a Collocation Tariff; Joint Petition of Birch Telecom of Missouri, Inc. for a Generic Proceeding to Establish a Southwestern Bell Telephone Company Collocation Tariff before the Missouri Public Service Commission*

TT-2001-139, *In the Matter of Mark Twain Rural Telephone Company's Proposed Tariff to Introduce its Wireless Termination Service*

TT-2001-298, *In the Matter of Southwestern Bell Telephone Company's Proposed Tariff PSC Mo. No. 42 Local Access Service Tariff, Regarding Physical and Virtual Collocation*

TT-2001-440, *In the Matter of the determination of Prices, Terms, and Conditions of Line-Splitting and Line-Sharing*

TO-2001-455, *In the Matter of the Application of AT&T Communications of the Southwest, Inc., TCG St. Louis, Inc., and TCG Kansas City, Inc., for Compulsory Arbitration of Unresolved Issues with Southwestern Bell Telephone Company Pursuant to Section 252(b) of the Telecommunications Act of 1996*

TC-2002-57, *In the Matter Of Northeast Missouri Rural Telephone Company's And Modern Telecommunications Company's Complaint Against Southwestern Bell Telephone Company Regarding Uncompensated Traffic Delivered by Southwestern Bell Telephone Company To Northeast Missouri Rural Telephone And Modern Telecommunications Company.*

TC-2002-190, *In the Matter Of Mid-Missouri Telephone Company vs. Southwestern Bell Telephone Company*

TC-2002-1077, *BPS Telephone Company, et al., vs. Voicestream Wireless Corporation, Western Wireless Corp., and Southwestern Bell Telephone Company*

TO-2005-0144, *In the Matter of a Request for the Modification of the Kansas City Metropolitan Calling Area Plan to Make the Greenwood Exchange Part of the Mandatory MCA Tier 2*

TO-2006-0360, *In the Matter of the Application of NuVox Communications of Missouri, Inc. for an Investigation into the Wire Centers that AT&T Missouri Asserts are Non-Impaired Under the TRRO*

IO-2007-0439, *In the Matter of Spectra Communications Group, LLC d/b/a CenturyTel's Request for Competitive Classification Pursuant to section 392.245.5 RSMo*

IO-2007-0440, *In the Matter of CenturyTel of Missouri, LLC's Request for Competitive Classification Pursuant to Section 392.245.5 RSMo*

TO-2009-0042, *In the Matter of the Review of the Deaf Relay Service and Equipment Distribution Fund Surcharge*

ER-2009-0090, *In the Matter of the Application of KCP&L Greater Missouri Operations Company for Approval to Make Certain Changes in its Charges for Electric Service*

ER-2009-0089, *In the Matter of the Application of Kansas City Power and Light Company for Approval to Make Certain Changes in its Charges for Electric Service To Continue the Implementation of Its Regulatory Plan*

ER-2010-0036, *In the Matter of Union Electric Company, d/b/a AmerenUE's Tariffs to Increase its Annual Revenues for Electric Service*

ER-2010-0130, *In the Matter of The Empire District Electric Company of Joplin, Missouri for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company*

ER-2010-0355, *In the Matter of the Application of Kansas City Power & Light Company for Approval to Make Certain Changes in its Charges for Electric service to Continue the Implementation of Its Regulatory Plan*

ER-2010-0356, *In the Matter of the Application of KCP&L Greater Missouri Operations Company for Approval to Make Certain Changes in its Charges for Electric Service*

ER-2011-0028, *In the Matter of Union Electric Company, d/b/a Ameren Missouri's Tariff to Increase Its Annual Revenues for Electric Service*

ER-2011-0004, *In the Matter of The Empire District Electric Company of Joplin, Missouri for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company*

EC-2011-0383, *Briarcliff Development Company, a Missouri Corporation, Complainant, v. Kansas City Power and Light Company, Respondent*

EO-2012-0141, *In the Matter of the Application of The Cathedral Square Corporation, a Missouri Non-Profit Corporation, for a Variance from Kansas City Power & Light Company's General Rules and Regulations Requiring Individual Metering*

EO-2012-0009, *In the Matter of KCP&L Greater Missouri Operations Company's Application for Approval of Demand-Side Programs and for Authority to Establish a Demand-side Programs Investment Mechanism*

EO-2012-0142, *In the Matter of Union Electric Company d/b/a Ameren Missouri's Filing to Implement Regulatory changes in Furtherance of Energy Efficiency as Allowed by MEEIA*