

**KCP&L-241**

Exhibit No.:  
Issues: Class Cost-of-Service  
Rate Design  
Witness: Michael S. Scheperle  
Sponsoring Party: MO PSC Staff  
Type of Exhibit: Direct Testimony  
File No.: ER-2010-0355  
Date Testimony Prepared: November 24, 2010

**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**DIRECT TESTIMONY**

**OF**

**MICHAEL S. SCHEPERLE**

**KANSAS CITY POWER & LIGHT COMPANY**

**FILE NO. ER-2010-0355**

*Jefferson City, Missouri  
November 2010*

*Staff Exhibit No. KCP&L-241  
Date 1/18/11 Reporter LMB  
File No. ER-2010-0355*

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

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    )

File No. ER-2010-0355

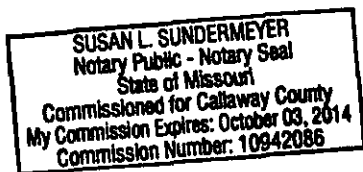
**AFFIDAVIT OF MICHAEL S. SCHEPERLE**

**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 7 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 23<sup>rd</sup> day of November, 2010.



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

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**OF**  
**MICHAEL S. SCHEPERLE**  
**KANSAS CITY POWER & LIGHT**  
**FILE NO. ER-2010-0355**

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**DIRECT TESTIMONY**  
**OF**  
**MICHAEL S. SCHEPERLE**  
**KANSAS CITY POWER & LIGHT COMPANY**  
**FILE NO. ER-2010-0355**

Q. Please state your name and business address.

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

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

A. I am employed by the Missouri Public Service Commission (Commission) and my title is Manager, Economic Analysis Section, Energy Department, Utility Operations Division.

Q. What is your educational background and work experience?

A. I completed a Bachelor of Science degree in Mathematics at Lincoln University in Jefferson City, Missouri. I have been employed by the Missouri Public Service Commission since June 2000. Prior to joining the Commission, I was employed at United Water Company as a Commercial Manager from 1983 to 2000, and at Missouri Power & Light Company from 1973 to 1983 as a Supervisor of Rates, Regulations and Budgeting. A list of the cases in which I have filed testimony before the Commission is shown on Schedule 1. I moved to the Economic Analysis section as a Regulatory Economist III in 2008 and began conducting Class Cost-Of-Service (CCOS) studies. I assumed my current position in 2009.

1 **EXECUTIVE SUMMARY**

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

3 A. The purpose of this testimony is to sponsor the Staff's recommendation in its  
4 Class Cost-of-Service and Rate Design Report (CCOS Report) that is being filed concurrently  
5 with this direct testimony. I also provide in this direct testimony an overview of Staff's  
6 recommendations detailed in its CCOS Report. The CCOS Report presents Staff's updated  
7 CCOS study for Kansas City Power & Light Company (KCPL) and provides methods to  
8 collect a Commission ordered overall increase or decrease in KCPL's overall revenue  
9 requirement.

10 Q. What are Staff's rate design recommendations to the Commission for KCPL in  
11 this case?

12 A. As explained in its CCOS Report, Staff recommends that the Commission  
13 order KCPL to:

14 1. Eliminate those frozen General Service All-Electric space heating rate schedules  
15 where no customers are currently served, retain all other existing rate schedules and  
16 implement any revenue requirement increase/decrease resulting from this case as  
17 follows:

- 18 a. Allocate the first \$13 million of any Commission ordered increase as an equal  
19 percentage increase to the rate schedules for the customer classes shown in  
20 Table 1 of the CCOS Report to have a positive percent (revenue is less than the  
21 cost to serve that class).
- 22 b. Allocate any Commission ordered increase above \$13 million to all rate  
23 schedules on an equal percentage basis.
- 24 c. Allocate any Commission ordered decrease as an equal percentage decrease to  
25 the rate schedules for the customer classes shown in Table 1 of the CCOS  
26 Report to have a negative percent (revenues exceed cost to serve).

- 1 2. Implement, with certain modifications, the new "Residential Other Use" (ROU) tariff  
2 provision KCPL has proposed.
- 3 3. Implement the "Collection Charge" provision KCPL has proposed.
- 4 4. Complete its evaluation of Light Emitting Diode (LED) Street and Area Lighting  
5 (SAL) systems and, no later than twelve (12) months of the effective date of the  
6 Commission's Report and Order in this case, file proposed LED lighting tariff sheet(s)  
7 to offer a LED SAL demand-side program, unless KCPL's analysis shows that a LED  
8 SAL demand-side program would not be cost-effective. If a LED SAL demand-side  
9 program is not cost-effective, update the Staff as to the finding's rationale and file a  
10 proposed tariff sheet(s) that would provide LED SAL services at cost to its customers.

### 11 **STAFF CCOS AND RATE DESIGN REPORT**

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

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

14 I. Executive Summary

15 II. Class Cost-of-Service Overview

16 III. Class Cost-of-Service

17 A. Data Sources

18 B. Classes and Rate Schedules

19 C. Functionalization of costs

20 D. Allocation of Production Costs

21 E. Allocation of Transmission Costs

22 F. Allocation of Distribution Costs

23 G. Allocation of Customer Service Costs

24 H. Revenues

25 IV. Rate Design

26 V. Miscellaneous Tariff Issues

1 VI. High Efficiency Street and Area Lighting

2 A. Current Street Lighting for KCPL Missouri

3 B. An Alternative for the SAL System: LED Lighting

4 C. Studies from Other Utilities and Municipalities

5 D. KCPL and GMO's LED SAL Research

6 E. Staff Recommendation

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

8 A. Manisha Lakhanpal and I are responsible for the Class Cost-of-Service  
9 Overview and Staff Class Cost-of-Service sections. I am responsible for the recommended  
10 rate schedules. William (Mack) L. McDuffey is responsible for the Recommended Tariff  
11 Language and the Collection Fee Charges subsections. Hojong Kang is responsible for High  
12 Efficiency Street and Area Lighting recommendations.

13 Q. What relationship, if any, is there between the Staff's Revenue Requirement  
14 Cost of Service (COS) Report filed November 10, 2010, and the Staff's CCOS Report?

15 A. In its COS Report Staff filed its accounting information, which included  
16 Staff's estimate of KCPL's revenue requirement through the true-up cut-off date of December  
17 31, 2010. Consistent with that COS Report, this CCOS Report reflects the Staff's revenue  
18 requirement recommendation of \$6,970,905 (mid-point) based on Staff's estimate through the  
19 true-up cut-off date of December 31, 2010.

20 **CLASS COST OF SERVICE STUDY**

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

22 A. Staff's Accounting Schedules filed with Staff's COS Report show an increase  
23 in KCPL's revenue requirement in the range of \$-149,411 to \$14,121,139 is warranted. In its

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1 | COS Report, Staff's mid-point of its return on equity range calculated KPCL's revenue  
2 | requirement to be \$6,970,905, an overall increase of 1.04%.

3 |         With the exception of its lighting class, Staff used KCPL's rate schedules for the  
4 | customer classes in its CCOS study. For its lighting class Staff combined KCPL's lighting  
5 | rate schedules. This resulted in twenty-one customer classes. For each of these twenty-one  
6 | customer classes Staff determined: (1) KCPL's investment to serve the customers in that  
7 | customer class; and (2) KCPL's ongoing expenses to serve the customers in that customer  
8 | class. Staff's CCOS study revealed that, on a revenue neutral basis, KCPL's current rates  
9 | result in nine of the customer classes having more revenue responsibility than KCPL's cost  
10 | (investment and expenses) to serve them and twelve of the rate customer classes having less  
11 | revenue responsibility than KCPL's costs to serve them. For Staffs' CCOS study results, a  
12 | positive percentage indicates revenue responsibility of that customer class is less than KCPL's  
13 | cost to serve that class, i.e., the class has underpaid. In contrast, a negative percentage  
14 | indicates revenue responsibility of the customer class exceeds KCPL's cost to serve to that  
15 | class, i.e., the class has overpaid.

16 |         Q.     How did Staff conduct its CCOS study?

17 |         A.     The CCOS Report outlines how Staff performed its CCOS study. In its CCOS  
18 | study Staff used the Base, Intermediate, and Peaking (BIP) method for allocating production  
19 | investment and costs to the customer classes. Staff used the 12 coincident peaks (12 CP)  
20 | method to allocate transmission investment and costs to the customer classes. Staff used a  
21 | combination of non-coincident peak(NCP) demands, individual customer maximum demands,  
22 | and company specific studies to allocate distribution investment and costs to customer classes.  
23 | Customer costs are allocated to customer classes based on the numbers of customers,



1 | company studies, and other internal allocators. Staff's CCOS study summary attached to its  
2 | CCOS Report (Schedule MSS-1) is based on Staff's midpoint ROE recommendation revenue  
3 | requirement for KCPL's Missouri jurisdictional retail operations of \$6,970,906 and an overall  
4 | increase of 1.04%

5 | **RATE DESIGN RECOMMENDATIONS**

6 | Q. What are Staff's Rate Design recommendations detailed in its CCOS Report?

7 | A. Staff recommends that the Commission order KCPL to:

- 8 | 1. Eliminate those frozen General Service All-Electric space heating rate schedules  
9 | where no customers are currently served, retain all other existing rate schedules and  
10 | implement any revenue requirement increase/decrease resulting from this case as  
11 | follows:
- 12 | a. Allocate the first \$13 million of any Commission ordered increase as an equal  
13 | percentage increase to the rate schedules for the customer classes shown in  
14 | Table 1 of the CCOS Report to have a positive percent (revenue is less than the  
15 | cost to serve that class).
  - 16 | b. Allocate any Commission ordered increase above \$13 million to all rate  
17 | schedules on an equal percentage basis.
  - 18 | c. Allocate any Commission ordered decrease as an equal percentage decrease to  
19 | the rate schedules for the customer classes shown in Table 1 (Staff Report) to  
20 | have a negative percent (revenues exceed cost to serve).
- 21 | 2. Implement, with certain modifications, the new ROU tariff provision KCPL has  
22 | proposed.
- 23 | 3. Implement the "Collection Charge" provision KCPL has proposed.
- 24 | 4. Complete its evaluation of LED SAL systems and, no later than twelve (12) months of  
25 | the effective date of the Commission's Report and Order in this case, file proposed  
26 | LED lighting tariff sheet(s) to offer a LED SAL demand-side program, unless KCPL's  
27 | analysis shows that a LED SAL demand-side program would not be cost-effective. If  
28 | a LED SAL demand-side program is not cost-effective, update the Staff as to the

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1 finding's rationale and file a proposed tariff sheet(s) that would provide LED SAL  
2 services at cost to its customers.

3 Q. Does Staff also recommend other tariff changes?

4 A. Yes. Staff recommends the Commission order eleven minor tariff changes as  
5 detailed in the CCOS Report.

6 Q. Does this conclude your direct testimony?

7 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*