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Class Cost-of-Service
Witness: Michael S. Scheperle
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MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

DIRECT TESTIMONY

OF

MICHAEL S. SCHEPERLE

KANSAS CITY POWER & LIGHT COMPANY

FILE NO. ER-2014-0370

Jefferson City, Missouri

April 2015

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

In the Matter of Kansas City Power &)
Light Company's Request for Authority to)
Implement a General Rate Increase for)
Electric Service)

Case No. ER-2014-0370

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 10 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

Subscribed and sworn to before me this 16th day of April, 2015.

SUSAN L. SUNDERMEYER Notary Public - Notary Seal State of Missouri Commissioned for Callaway County My Commission Expires: October 28, 2018 Commission Number: 14942086
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Notary Public

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OF

MICHAEL S. SCHEPERLE

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1 **DIRECT TESTIMONY**

2 **OF**

3 **MICHAEL S. SCHEPERLE**

4 **KANSAS CITY POWER & LIGHT COMPANY**

5 **FILE NO. ER-2014-0370**

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, Utility Operations,
12 Regulatory Review Division.

13 **CREDENTIALS**

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

15 A. I completed a Bachelor of Science degree in Mathematics at Lincoln
16 University in Jefferson City, Missouri. I have been employed by the Missouri Public Service
17 Commission since June 2000. Prior to joining the Commission, I was employed at United
18 Water Company as a Commercial Manager from 1983 to 2000, and at Missouri Power &
19 Light Company from 1973 to 1983 as a Customer Service Representative and as a Supervisor
20 of Rates, Regulations and Budgeting. A list of the cases in which I have filed
21 testimony/reports before the Commission is shown on Schedule MSS-D1. I moved to the
22 Economic Analysis section as a Regulatory Economist III in 2008. I assumed my current
23 position in 2009. My duties consist of directing Staff within the Economic Analysis Section,

1 analyzing rate case activity, reviewing tariffs, and making recommendations based upon my
2 evaluations and the evaluations performed by the Economic Analysis section. My previous
3 testimony and responsibilities address topics including class cost of service, rate design, rate
4 case coordinator, telecommunication issues, complaint cases, Missouri Universal Service
5 Fund, energy efficiency/demand-side management, a Staff member of the Missouri-Deaf-
6 Relay Committee, and a member of the Commission Staff's Electric Meter Variance
7 Committee.

8 **EXECUTIVE SUMMARY**

9 Q. What are Staff's revenue requirement recommendations to the Commission for
10 KCPL in this case?

11 A. The Staff's recommended increase in revenue requirement is based upon an
12 adjusted test year for the twelve months ending March 30, 2014, including update amounts
13 through December 31, 2014. Additionally, Staff calculated an estimated allowance for known
14 and measureable changes through the true-up period of May 31, 2015, which Staff estimates
15 increase the revenue requirement by an additional \$65 million. Because of changes expected
16 for the true-up items through May 31, 2015, that are not known and measureable at this time,
17 the Staff revenue requirement for KCPL will change when the true-up process is completed.
18 The Staff's recommended revenue requirement increase for KCPL is \$82,383,073 to
19 \$91,283,864 based on a return on equity ("ROE") range of 9.00% to 9.50%. The Staff is not
20 now adopting for the purpose of setting KCPL's rates the items listed and quantified in the
21 Staff's preliminary estimates for the true-up period. The Staff has included these items as
22 placeholders, pending the Staff's completion of its true-up audit.

23 Q. Please describe KCPL rate classes and service classifications in this case.

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1 A. KCPL has six (6) rate classes:

- 2 1. Residential (“Res”)
- 3 2. Small General Service (“SGS”)
- 4 3. Medium General Service (“MGS”)
- 5 4. Large General Service (“LGS”)
- 6 5. Large Power Service (“LPS”)
- 7 6. Total Lighting (“Lighting”)

8 Each class has several rate classifications with approximately sixty-eight rate
9 schedules to meet the specific needs of its customers.

10 The Res class includes the following rate classifications:

- 11 • General Use
- 12 • One-meter general use and heat
- 13 • Two-meter rate with general use on one meter and a separate meter for space
14 heating (frozen)
- 15 • Various time of day and other

16 The SGS, MGS, and LGS classes are commercial and industrial general service
17 classes which include different rate classifications and voltage level (secondary and primary)
18 at which a customer can receive service. The SGS, MGS, and LGS classes include the
19 following rate classifications:

- 20 • General Use and all electric
- 21 • Two-meter rate with general use on one meter and a separate meter for heating
22 (frozen)
- 23 • Unmetered (SGS only)
- 24 • General Use and all electric (frozen)

25 The LPS class includes specific rate classifications and voltage at which a customer
26 can receive service:

- 27 • Secondary voltage rate classification
- 28 • Primary voltage rate classification

- 1 • Substation voltage rate classification
- 2 • Transmission voltage rate classification

3 The Lighting class includes various lighting requirements and traffic signal
4 descriptions:

- 5 • Missouri commercial area lights (“ALC”)
- 6 • Missouri residential area lights (“ALR”)
- 7 • Kansas City School District parking lot lights (“OLS”)
- 8 • Missouri street lighting public & Kansas City street lights (“MLC, MLI, MLM,
9 MLS”)
- 10 • Missouri traffic signals (“TSL”)
- 11 • Missouri street light – LED (“MLL”)

12 Staff combined various rate service classifications for class cost-of-service summaries.

13
14 Q. What are Staff’s rate design recommendations to the Commission for KCPL in
15 this case?

16 A. As explained in its CCOS Report, Staff recommends that the allocation of any
17 rate increase for KCPL that is ordered will be accomplished with a four-step process:

- 18 1. Based on CCOS results, Staff recommends an increase/decrease to the current base
19 revenue on a revenue-neutral basis to various classes of customers. At this time, Staff
20 is not recommending any revenue-neutral adjustments to any class as each class would
21 be close to Staff’s CCOS study results within a realm of reasonableness range. The
22 revenue neutral shifts can be determined by subtracting the overall estimated 11.44%
23 revenue increase from each class’s calculated percentage change in revenues. On a
24 revenue neutral basis, the following shifts are calculated: Res, 0.97%; general service
25 class’s combined (SGS, MGS, LGS), -3.36%; LPS, 4.94%; and lighting, -1.33%.
26
- 27 2. Staff determined the amount of revenue responsibility increase to award to each KCPL
28 class based on Staff’s estimated mid-point revenue requirement recommendation.
29 Staff further recommends that an additional constraint (revenue requirement after true-
30 up) be placed to ensure no class receives an overall reduction in its rate revenue
31 responsibility while another class receives an overall increase in its rate revenue
32 responsibility.
33
- 34 3. Staff recommends the first energy block rate of the frozen winter All-Electric Service
35 rate schedules for the SGS, MGS, and LGS rate classes be increased by an additional

1 5%¹. This is further discussed in the rate design section of Staff's CCOS Report and
2 in Schedules MSS-D6, MSS-D7, and MSS-D8.

- 3
4 4. Staff recommends that each rate component of each class be increased across-the-
5 board for each class on an equal percentage basis after applying steps 1 through 3
6 above. Staff recommends that, based on its CCOS study results and policy
7 considerations, the residential and all other customer charges increase by the average
8 increase for each applicable class.

9
10 If the Commission grants KCPL a Fuel Adjustment Clause ("FAC"), the FAC tariff
11 sheets be consistent with Staff CCOS Report recommendations.

12 **PURPOSE OF DIRECT TESTIMONY**

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

14 A. The purpose of this testimony is to sponsor the Staff's recommendation in its
15 Rate Design and Class Cost-of-Service Report ("CCOS Report") that is being filed
16 concurrently with this direct testimony. The "report" approach to the case filing minimizes
17 the number of Staff witnesses required to file direct testimony and provides a clearer
18 presentation of the overall revenue requirement and rate design. I also provide in this direct
19 testimony an overview of Staff's recommendations detailed in its CCOS Report.

20 Q. What does the CCOS Report entail?

21 A. The CCOS Report presents Staff's updated CCOS study for KCPL and
22 provides methods to collect a Commission-ordered increase in KCPL's overall revenue
23 requirement. Staff relied on the CCOS study results presented in the CCOS Report as the
24 basis for Staff's rate design recommendations. The CCOS Report presents Staff rate design
25 recommendation that there should be overall company revenue neutral shifts in class revenue
26 responsibility to move certain classes closer to the cost of serving that class. The CCOS study

¹ The Commission has restricted the availability of the All-Electric and Separately-Metered space heating rates to customers currently served on one of those rate schedules, but only for so long as the customer continuously remains on that rate schedule.

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1 is based on Staff's allocation methods, Staff's accounting data, and Staff's revenue
2 requirement recommendation at the midpoint rate of return. Staff's revenue requirement
3 recommendation is found in Staff's Accounting Schedules filed on April 3, 2015. Several
4 members of the Commission Staff had specific assignments relating to different components
5 of the CCOS Report, and are individually responsible for those calculations. In this direct
6 testimony, I provide an overview of the work performed in this case by members of the Utility
7 Operations Department, Regulatory Review Division. Also, if the Commission grants KCPL
8 a FAC, the CCOS Report recommends a base factor calculation.

9 Q. Is this the entire filing being made by Staff for this case?

10 A. No. Staff's Cost of Service Revenue Requirement was filed on April 3, 2015.

11 Q. What relationship, if any, is there between the Staff's Revenue Requirement
12 Cost of Service ("COS") Report filed April 3, 2015, and the Staff's CCOS Report?

13 A. In its COS Report, Staff filed its accounting information, which included
14 Staff's estimate of KCPL's revenue requirement through the true-up cut-off date of
15 May 31, 2015. These estimates will be replaced with actual amounts following the true-up as
16 authorized by the Commission. For its direct filing, the Staff has determined KCPL's revenue
17 requirement with the end of the test year established for this case, March 31, 2014, and
18 estimated amounts through the true-up cut-off date, May 31, 2015. The matching principle is
19 designed to keep revenues, expenses and rate base in a proper relationship for a set period of
20 time. Employing a test period helps implement the matching principle by providing the
21 Commission a common basis for considering utility revenues and expenses over an annual
22 period, so that rates going forward will maintain the same balanced relationship. Consistent
23 with that COS Report, this CCOS Report reflects the Staff's revenue requirement

1 recommendation of \$86,851,199 (mid-point) based on Staff's estimate through the true-up
2 cut-off date.

3 **STAFF RATE DESIGN AND CCOS REPORT**

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

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

- 6 I. Executive Summary
- 7 II. Class Cost-of-Service and Rate Design Overview
- 8 III. Class Cost-of-Service Study
- 9 IV. Rate Design
- 10 V. Residential Customer Charge
- 11 VI. Commercial and Industrial Customer Charges
- 12 VII. Fuel Adjustment Clause ("FAC")

13 Q. Please identify the Staff expert responsible for addressing each area in the
14 CCOS Report?

15 A. The Staff expert for each listed issue is as follows:

16 Issue	Staff Expert
17 Executive Summary	Michael Scheperle
18 Class Cost of Service Overview	Robin Kliethermes
19 Class Cost of Service	Robin Kliethermes, Sarah Kliethermes
20 Rate Design	Michael Scheperle, Robin Kliethermes
21 FAC	Dana Eaves
22 Residential Customer Charge	Robin Kliethermes
23 Commercial & Industrial	
24 Customer Charges	Michael Scheperle

25 **CLASS COST OF SERVICE STUDY**

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

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1 A. Staff's Accounting Schedules filed with Staff's COS Report show that an
2 increase in KCPL's revenue requirement in the range of \$82,383,073 to \$91,283,864 is
3 warranted. The COS Report shows that the mid-point of Staff's calculated return on equity
4 range is \$86,851,199 an overall increase of 11.44%.

5 Staff used KCPL's rate classes for the customer classes in its CCOS study. For each
6 of these six customer classes, Staff determined KCPL's investment to serve the customers in
7 that customer class and KCPL's ongoing expenses to serve the customers in that customer
8 rate class.

9 Q. What are Staff's CCOS study results?

10 A. Staff CCOS study indicates that the following revenue adjustments would need
11 to occur to exactly align each class's revenues with its class cost of service: Res, +12.41%;
12 SGS, +1.87%; MGS, +8.32%; LGS, +10.68%; LPS, +16.38%; and Lighting, +10.11%. Staff
13 notes that the estimated system average increase is 11.44% while the Res class CCOS results
14 are for a 12.41% increase.

15 Q. What do the signs on the above percentages indicate?

16 A. If the study shows that a negative percentage shift should occur for a class, it
17 indicates that the class is collecting revenue in excess of the cost to serve the class and its
18 rates should be reduced. If the study shows that a positive percentage shift should occur, it
19 indicates that the class is not generating enough revenue to cover its costs and its rates should
20 be increased.

21 Q. Is Staff recommending that each class have its revenue responsibility shifted to
22 exactly equal its cost of service?

1 A. No. Because of the relative rate impacts, the Staff is not recommending a
2 movement all the way to each class' cost of service. Because a CCOS study is not precise, it
3 should be used only as a guide for designing rates. In addition, bill impacts, rate riders, and
4 economic development need to be considered. While reducing over-collection from customer
5 classes with negative revenue shift percentages (revenues greater than cost to serve) for KCPL
6 customer classes on the general service rate classes all the way to zero is appealing, the bill
7 impact on the customer classes with positive revenue shift percentages must be considered.
8 Staff's recommendations for shifts in the class-revenue requirements are based on its CCOS
9 study results, Staff's review of KCPL's revenue-neutral adjustments in previous general rate
10 increases, and Staff's judgment regarding the impact of revenue shifts for all classes.

11 Q. What is Staff's rationale for the revenue-neutral shifts it recommends?

12 A. Staff believes that CCOS studies should serve as a guide to setting revenue
13 requirements and thus are not precise. Staff's CCOS study revealed that, on a revenue-neutral
14 basis, KCPL's current rates do not cover KCPL's cost to serve any customer class. At this
15 time, Staff is not recommending any revenue-neutral adjustments to any class as each class
16 would be close to Staff CCOS study results within a realm of reasonableness range.
17 Therefore, Staff recommends that each class increase be the system average increase.

18 Q. How did Staff conduct its CCOS study?

19 A. The CCOS Report outlines how Staff performed its CCOS study. The cost-of-
20 service procedure involves three steps of Functionalization; Classification; and Allocation: (1)
21 Functionalization – this procedure identifies the different functional “levels” of the system;
22 (2) Classification – this procedure determines for each functional type, the primary cause or
23 causes of that cost being incurred, and segregates these cost of service components into a

1 customer, demand or energy component; and (3) Allocation – this procedure allocates the
2 class proportional responsibilities for each type of cost and spreads the cost among the various
3 classes. The cost of service procedures of Functionalization, Classification, and Allocation
4 are more fully explained in Schedule CCOS-1 to Staffs CCOS Report.

5 In its CCOS study, Staff used the Detailed Base, Intermediate and Peaking ("BIP")
6 method for allocating production investment and costs to the customer classes. These costs
7 include operating and maintenance expenses for labor and materials, fuel, fuel handling, and
8 interchange power costs, and also capacity costs based on each class's energy and demand
9 requirements. Staff used the twelve coincident peak method ("12 CP") to allocate
10 transmission investment and costs to the customer classes. Staff used a combination of non-
11 coincident peak demands ("NCP"), individual customer maximum demands, and company
12 specific studies to allocate distribution investment and costs to customer classes. Customer
13 costs are allocated to customer classes based on the number of customers, company studies,
14 and other internal allocators. Staff's CCOS study summary attached to its CCOS Report is
15 based on the revenue requirement associated with the mid-point of Staff's return on equity
16 ("ROE") recommendation for KCPL's jurisdictional retail operations of \$86,851,199, and an
17 overall increase of 11.44%.

18 Q. Does this conclude your direct testimony?

19 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*

ER-2012-0166, *In the Matter of Union Electric Company, d/b/a Ameren Missouri's Tariff to Increase Its Annual Revenues for Electric Service*

ER-2012-0174, *In the Matter of Kansas City Power & Light Company's Request for Authority to Implement A General Rate Increase for Electric Service*

ER-2012-0175, *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-2012-0345, *In the Matter of The Empire District Electric Company of Joplin, Missouri Tariffs Increasing Rates for Electric Service Provided to Customers in the Missouri Service Area of the Company*

HT-2013-0456, *In the matter of KCP&L Greater Missouri Operations Company for Authority to File Tariffs Changing the Steam QCA for Service Provided to Customers in its Service Territory*

EO-2014-0075, *Ameren Missouri's Request for Waivers for its Missouri Energy Efficiency Investment Act Programs*

HR-2014-0066, *In the Matter of Veolia Energy Kansas City, Inc. for Authority to File Tariffs to Increase Rates*

EC-2014-0224, *Noranda Aluminum, Inc., et al, Complainants, v. Union Electric Company, d/b/a Ameren Missouri, Respondent*

HT-2014-0286, *In the Matter of KCP&L Greater Missouri Operations Company to File Tariffs Changing the Steam QCA for Service Provided to Customers in its Service Territory*

ER-2014-0258, *In the Matter of Union Electric Company, d/b/a Ameren Missouri's Tariff to increase Its Revenues for Electric Service*

ER-2014-0351, *In the Matter of the Empire District Electric Company for Authority to File Tariffs increasing Rates for Electric service Provided to Customers in the Company's Missouri Service Area*

ER-2015-0132, *In the Matter of the Application of Union Electric Company d/b/a Ameren Missouri's Energy Efficiency Investment Charge Rider*

ER-2015-0141, *In the Matter of Kansas City Power & Light Company's First Demand Side Investment Mechanism Rider Rate Adjustment and True-Up Required by 4 CSR 240-3.163(8)*