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MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

REBUTTAL TESTIMONY

OF

DANIEL I. BECK

KANSAS CITY POWER & LIGHT COMPANY

FILE NO. ER-2014-0370

*Jefferson City, Missouri
May 2015*

**** Denotes Highly Confidential Information ****

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**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)

File No. ER-2014-0370

AFFIDAVIT OF DANIEL I. BECK

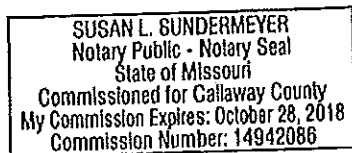
STATE OF MISSOURI)
) ss
COUNTY OF COLE)

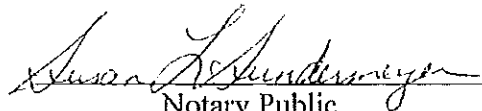
Daniel I. Beck, of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 12 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given 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.



Daniel I. Beck

Subscribed and sworn to before me this 7th day of May, 2015.





Notary Public

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REBUTTAL TESTIMONY

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KANSAS CITY POWER & LIGHT COMPANY

CASE NO. ER-2014-0370

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Q. Please state your name and business address.

A. Daniel I. Beck, P.O. Box 360, Suite 700, Jefferson City, MO 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission ("Commission") as the Manager of Engineering Analysis, which is in the Tariff, Safety, Economic and Engineering Analysis Department in the Regulatory Review Division. My credentials are attached as Schedule DB-R1 to this testimony.

Q. What knowledge, skills, experience, training and education do you have in the areas of which you are testifying as an expert witness?

A. I have been employed by this Commission in various positions related to Engineering for over 27 years and have submitted testimony on ratemaking matters numerous times before the Commission. I have also been responsible for the supervision of other Commission employees in rate cases and other regulatory proceedings many times. I have received continuous training at in-house and outside seminars on technical ratemaking matters since I began my employment at the Commission. I was the Staff witness that sponsored the draft rules for Reliability Reporting, Infrastructure Inspection and Vegetation Management in Case Nos. EX-2008-0230, EX-2008-0231, and EX-2008-0232, respectively.

1 Q. Have you participated in the Commission Staff's ("Staff") review of the
2 application filed by Kansas City Power & Light Company (KCPL) in Case No.
3 ER-2014-0370?

4 A. Yes, I have, with the assistance of other members of Staff.

5 **EXECUTIVE SUMMARY**

6 Q. Please summarize your rebuttal testimony in this proceeding.

7 A. In this testimony, I address from a technical perspective the proposal made by
8 KCPL requesting Commission authorization for a certain special regulatory mechanism,
9 called "tracker," to be implemented to account for KCPL's vegetation management expense.
10 The Staff recommends that KCPL's request be denied.

11 Q. Are other Staff witnesses addressing KCPL's proposed vegetation
12 management tracker?

13 A. Yes. Staff witnesses Mark Oligschlaeger and Karen Lyons address aspects of
14 KCPL's vegetation management tracker proposals in their rebuttal testimony.

15 **VEGETATION MANAGEMENT TRACKER PROPOSAL**

16 Q. Did KCPL propose a vegetation management tracker in this case?

17 A. Yes. KCPL proposes three new trackers, including a vegetation management
18 tracker. The other Staff witnesses listed above explain the term "tracker" and explain the
19 Staff's reasoning for why the Commission should deny the three new trackers requested in
20 this case.

21 Q. Earlier, you stated that you sponsored the draft rules for Reliability Reporting,
22 Infrastructure Inspection and Vegetation Management in Case Nos. EX-2008-0230,
23 EX-2008-0231, and EX-2008-0232, respectively. Could you briefly explain those cases?

1 A. In the summers of 2004, 2005, and 2006, one large electrical outage due to
2 thunderstorms occurred each year. In addition, several power outages due to ice storms
3 occurred in the 2006 – 2007 timeframe. At that time, the Commission did not have any
4 specific rules regarding Reliability Reporting, Infrastructure Inspection and Vegetation
5 Management. The Commission held local public hearings and workshops to solicit input
6 from various stakeholders before moving forward with the three rulemaking cases listed
7 above. During this rulemaking process, additional comments were considered and the three
8 rules that make up Chapter 23 of the Commission’s portion of the Code of State Regulations
9 were adopted. These rules have not been modified since their adoption in 2008.

10 The Electrical Corporation Vegetation Management Standards and Reporting
11 Requirements, 4 CSR 240-23.030, is commonly referred to as the vegetation management
12 rule. In the purpose section of this rule, it states that “The requirements in this rule provide
13 the minimum standards for the vegetation management programs of electrical corporations.”
14 From my perspective, I have always viewed the vegetation management rules as a minimum
15 standard for vegetation management activities but utilities can implement their own programs,
16 as long as that minimum requirement is met.

17 Q. Does the vegetation management program that KCPL is proposing meet and
18 exceed the minimum standards?

19 A. Yes. As proposed, KCPL’s vegetation management program would exceed the
20 minimum standard in three ways:

- 21 1) Implementation of an ash tree mitigation plan due to Emerald Ash Borer (“EAB”)
22 infestation;
- 23 2) Expanding the program to include triplex circuits; and
- 24 3) Moving rural trim cycles to 4 years.

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1 KCPL estimated that these three program expansions would each cost an additional
2 \$103,610, \$303,480, and \$615,721, respectively, annually for Missouri customers. KCPL
3 also states that the second and third items would not be implemented unless it is granted a
4 vegetation management tracker.

5 Q. Does KCPL's direct testimony explain their EAB program?

6 A. Yes. KCPL witness James "Jamie" S. Kiely discussed the EAB issue starting
7 on page 3, line 11, of his testimony and continuing to page 15, line 2. However, in response
8 to Staff data request number 187, KCPL provided a much more detailed highly confidential
9 report titled "Kansas City Power & Light Company: Impact Analysis of Emerald Ash Borer
10 on the KCP&L Distribution System." ** _____
11 _____
12 _____
13 _____
14 _____

** In my 27 years as an engineer
15 with the PSC, I cannot remember seeing a program that had that high of a cost to benefit ratio.

16 Q. Does KCPL intend to implement the EAB program only if granted a vegetation
17 management tracker?

18 A. Based on conversations with KCPL and Appendix C of KCPL's Distribution
19 Vegetation Management Budget and Scheduled Performance that was filed as part of KCPL's
20 annual vegetation management compliance filing in Case No. EO-2015-0244, KCPL is
21 planning to go forward with their EAB program; with or without being granted a vegetation
22 management tracker.

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1 Q. Do you believe the EAB report described above should be classified as highly
2 confidential, in its entirety?

3 A. No. In my opinion, most of the information contained in this report should be
4 made public. In the past, there have been cost numbers related to vegetation management
5 considered proprietary due to the competitive bidding process that KCPL conducts with
6 vegetation management vendors, but that doesn't explain making the whole document highly
7 confidential. I recommend that, at a minimum, KCPL redact this document to make as much
8 of the information public as possible.

9 Q. Did KCPL propose a discrete adjustment to restoration repair costs in their
10 cost-of-service study?

11 A. No. KCPL's proposal would have the costs of the EAB included in the tracker
12 but would not have the benefits of the program tracked.

13 Q. Are KCPL and GMO the only utilities that expect to have ash trees die due to
14 EAB in Missouri?

15 A. No. It is my understanding that all electric utilities will be impacted by EAB
16 in the next 12 years. That includes Ameren Missouri and The Empire District Electric
17 Company. The Empire District Electric Company agreed to eliminate the vegetation
18 management tracker as part of a stipulated agreement in Case No. ER-2014-0351 and the
19 Commission recently determined that Ameren Missouri's vegetation management tracker
20 should be eliminated in Case No. ER-2014-0258.

21 Q. Did KCPL discuss their proposed Triplex Circuit Trimming program?

22 A. Yes. Starting on page 5, line 3, and ending on page 6, line 3, of KCPL witness
23 Kiely's testimony, KCPL generally describes how the vegetation management rule does not

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1 require KCPL to trim lines with voltages of 600 volts or less. (At one point in the testimony,
2 it says that the limit is 600 kV but other places refer to 600 volts. Since a minimum 600 kV
3 would exempt all distribution lines from the vegetation management rule, this is clearly a
4 typing error.) The triplex lines targeted by the proposed program have voltages less the 600
5 volts. The testimony also estimates that there are 22,000 spans of standalone triplex. Staff
6 believes that this estimate is based on the total number of spans in KCPL's Missouri and
7 Kansas service areas plus the triplex in GMO's service area.

8 Q. KCPL witness Kiely states that "From 2008 to 2012, 22% of all tree caused
9 outages were secondary outages." Does this mean that KCPL can reduce their tree related
10 outages by 22% if the triplex program is implemented?

11 A. No. The standalone triplex lines are a fraction of the secondary lines that serve
12 KCPL customers. I do not have a good estimate of the fraction of triplex lines that make up
13 KCPL's secondary distribution system but I do not believe that it is anywhere near half of the
14 distribution lines and I do not believe that the 22% estimate of tree related outages provides
15 any relevant information.

16 Q. Did KCPL perform a study for the triplex issue?

17 A. Yes. In KCPL's response to Staff data request number 187, KCPL provided a
18 little more information in a slightly more detailed highly confidential report titled "VM
19 Triplex Trimming Survey". This report consists of less than a page of text and about 2/3 of a
20 page of graphs. It provides a little more information but does not provide an estimate of the
21 benefits or any analysis of trade-offs of trimming at different widths.

22 Q. Does the testimony or the report propose varying widths for trimming the
23 triplex?

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1 A. The testimony does not provide any information. ** _____

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7 _____ ** I maintain that this report, like the EAB report,

8 should also be made public or a redacted version should be filed in this case.

9 Q. If the cost to trim triplex is tracked, is KCPL proposing to also track any
10 benefits in reduced operation and maintenance costs and restoration costs?

11 A. No. KCPL's proposal would have the costs of the triplex trimming included in
12 the tracker but would not have the benefits of the program tracked.

13 Q. Was the 600 volt minimum that has been in the rule since its inception simply
14 chosen at random?

15 A. No. This was one of the aspects of the rule that was result of a significant
16 amount of stakeholder input. One of the considerations was the balance between removing all
17 vegetation that could possibly impact the lines and allowing customers to have as much
18 vegetation as possible.

19 Q. Could you explain the balance you are referring to?

20 A. Here are two extreme examples that illustrate the balance I am referring to.
21 The Tennessee Valley Authority (TVA) is known for having easements for major
22 transmission lines that are widths of 150 feet or more that are clear cut plus additional
23 requirements that give TVA the right to trim or cut any tree off the easement that could come

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1 within 10 feet of the transmission line. While this policy has merit for major transmission line
2 that large numbers of customers depend on, the same policy for distribution lines might totally
3 deforest cities like Kansas City or Gladstone.

4 In contrast, I visited the site of a customer's informal complaint in Kansas City while
5 in the area for a local public hearing in Belton on April 29, 2015. This customer is served by
6 a transformer that is three or four houses away with triplex extending down the alley that is
7 behind the houses. The triplex then branches 90 degrees along this customer's property line
8 and terminates at a pole that is about 15 feet from the home. At that point, there are three
9 service drops that go to houses in the immediate area. This triplex illustrates just how close
10 these lines can be to a customer's house and therefore how intense a customer might feel
11 about the trees near that line.

12 Q. Do you have any recommendations on the implementation of a triplex
13 trimming program?

14 A. Yes. First, I recommend that KCPL gather the input of stakeholders that have
15 an interest in the maintenance of the triplex. This would include both customers and utility
16 workers. Second, I recommend reviewing what triplex programs other utilities and states
17 have in place. Third, I would gather additional cost/benefit data and develop a new report that
18 summarizes all of the information gathered on the subject so that information can be shared
19 with stakeholders and not declared as highly confidential. Finally, KCPL's management
20 should make a decision on this issue after considering all of the stakeholder input and data
21 gathered.

22 Q. So do you support or oppose a triplex trimming program?

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1 A. I don't know. At this point, I do not believe I have enough information to
2 make an informed decision. At an estimated cost of \$303,480 annually, which is
3 approximately three times more than the annual cost of the EAB program, I would expect to
4 have at least as much information as on the EAB program before I made any decision.

5 Q. Have you analyzed the proposal to move rural circuits to 4-year cycles?

6 A. Yes. Despite the fact that this program is estimated to cost \$615,721 annually,
7 which is about 6 times the annual cost of the EAB program and about twice the cost of the
8 triplex trimming program, there is surprisingly little information available on the 4 year rural
9 cycle proposal. In KCPL's response to Staff's data request number 287, KCPL provided no
10 studies to support this proposal. KCPL witness Kiely discussed this program starting on page
11 6, line 4, to page 6, line 15, which is approximately one-half page. Ultimately, KCPL witness
12 Kiely states that "All of this could lead to less incidents of vegetation conductor contact
13 resulting in improved customer/system reliability." [Kiely Direct, page 6, lines 11-13]

14 Q. KCPL witness Kiely states that the current vegetation management program
15 uses a 6-year rural cycle. Is this your understanding of the current program?

16 A. No. As part of the vegetation management rules, KCPL files annual reports
17 with the PSC. The most recent filing was made in Case No. EO-2015-0244. In this filing,
18 KCPL's Table 1 states that rural circuits have a primary cycle length of "5 to 6" years. Staff
19 reviewed all seven annual filings that KCPL made in compliance with the rule and all of the
20 filings show the primary cycle length of "5 to 6" years. In addition, the report includes the
21 miles of rural lines trimmed each year and the miles of rural line that KCPL has in Missouri.
22 Here is the amount of trimming that actually took place during the 7-year period:

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1	Five Year Period	Rural Miles Trimmed
2	2008-2012	1911.9 miles
3	2009-2013	1972.38 miles
4	2010-2014	1770.81 miles

5 The latest report also shows that the total inventory of rural lines for KCPL in
6 Missouri is 1794.3 miles. Therefore the 2010-2014 data supports the claim that a 5 to 6 year
7 cycle is used while the other two time periods support an average of less than 5 years. Staff
8 notes that approximately 65 miles of lines were reclassified in 2012 from rural to urban so it is
9 difficult to determine an exact estimate of the true cycle length but all the data supports
10 Staff's contention that KCPL already trims rural circuits with cycle periods that are
11 significantly less than the 6-year minimum requirement in the rule.

12 Q. If the current length of the trim cycle is already less than 6 years, would KCPL
13 witness Kiely's estimates of the miles and costs also be called into question?

14 A. Yes. He states that "an additional 150 miles at an estimated cost of \$615,721
15 annually" [Kiely Direct, page 6, lines 14-15] is needed to move to a 4-year cycle for rural
16 circuits. If you take the total number of miles, 1794.3 miles, and divide that 4 and 6 years,
17 you get 448.575 miles and 299.05 miles respectively. The difference would be 149.525 miles
18 which would support the 150 mile claim. However, when you take into account that the
19 current average rural trimming cycle over the years that the rule has been in effect has been
20 significantly more than the 299.05 mile average required to meet the 6-year rural cycle
21 requirement, one has to conclude that the additional length and cost estimate is likely too
22 high.

23 Q. Does the number of miles trimmed each year vary from year to year?

24 A. Yes. However, that doesn't explain why the multiyear averages do not support
25 the contention that the current cycle for rural circuits is 6 years.

1 Q. Was any thought put into the rule's definition of a rural circuit being 25
2 customers per mile?

3 A. Yes. Like other aspects of the rule, we received a lot of input on the definition
4 of a rural circuit. Since the definition of a rural circuit is based on an average number of
5 customers per mile, the reality that one portion of that circuit could have much higher
6 customer densities while another portion could have very low customer densities was
7 discussed. Although this issue has not been raised by KCPL in this proceeding, it would be
8 reasonable to consider trimming the higher density portions of the circuit using a 4-year cycle
9 if the cost/benefit ratio supports that decision.

10 Q. What is Staff's recommendation for the proposal to move to a 4-year cycle for
11 rural circuit?

12 Similar to Staff's recommendation for the triplex trimming program, I recommend that
13 KCPL gather information and perform the analysis to determine the benefits and costs related
14 to a rural 4-year trim cycle. I would also look at the possibility of identifying the higher
15 density portions of the rural lines and trimming those more frequently if the analysis supports
16 that decision. Although not specifically part of this case, this decision is likely to have a
17 larger impact on the GMO service area. Since the same individuals manage both the KCPL
18 and GMO vegetation management programs, the impact on both KCPL and GMO should be
19 considered when making any change in policy that could affect either utility.

20 Q. So do you support or oppose a 4-year cycle for rural circuits?

21 A. I don't know. At this point, I do not believe I have enough information to
22 make an informed decision. At an estimated cost of \$615,721 annually, which is

1 approximately six times more than the annual cost of the EAB program, I would expect to
2 have at least as much information as on the EAB program before I made any decision.

3 **SUMMARY/CONCLUSION**

4 Q. Would you summarize your rebuttal testimony?

5 A. I recommend that the Commission reject KCPL's request to implement a
6 tracker for its vegetation management expenses. I believe that KCPL should make
7 management decisions on the three proposed enhancements to its vegetation management
8 program after gathering a reasonable amount of information and doing the appropriate
9 analysis. I do not believe that the vegetation management program, with or without
10 enhancements, meets appropriate criteria for approval of this special accounting treatment. I
11 also recommend that KCPL file redacted copies of the EAB and triplex reports so that the
12 public can have greater insight into these two proposed programs.

13 Q. Does this conclude your rebuttal testimony?

14 A. Yes, it does.

Daniel I. Beck, P.E.

Manager of Engineering Analysis Section
Tariff, Safety, Economic and Engineering Analysis Department
Regulatory Review Division

Missouri Public Service Commission
P.O. Box 360
Jefferson City, MO 65102

I graduated with a Bachelor of Science Degree in Industrial Engineering from the University of Missouri at Columbia. Upon graduation, I was employed by the Navy Plant Representative Office in St. Louis, Missouri as an Industrial Engineer. I began my employment at the Commission in November, 1987, in the Research and Planning Department of the Utility Division (later renamed the Economic Analysis Department of the Policy and Planning Division) where my duties consisted of weather normalization, load forecasting, integrated resource planning, cost-of-service and rate design. In December, 1997, I was transferred to the Tariffs/Rate Design Section of the Commission's Gas Department where my duties include weather normalization, annualization, tariff review, cost-of-service and rate design. Since June 2001, I have been in the Engineering Analysis Section of the Energy Department, which was created by combining the Gas and Electric Departments. I became the Supervisor of the Engineering Analysis Section, Energy Department, Utility Operations Division in November 2005 and my current title is Manager of Engineering Analysis.

I am a Registered Professional Engineer in the State of Missouri. My registration number is E-26953.

**List of Cases in which prepared testimony was presented by:
DANIEL I. BECK**

<u>Company Name</u>	<u>Case No.</u>
Union Electric Company	EO-87-175
The Empire District Electric Company	EO-91-74
Missouri Public Service	ER-93-37
St. Joseph Power & Light Company	ER-93-41
The Empire District Electric Company	ER-94-174
Union Electric Company	EM-96-149
Laclede Gas Company	GR-96-193
Missouri Gas Energy	GR-96-285
Kansas City Power & Light Company	ET-97-113
Associated Natural Gas Company	GR-97-272
Union Electric Company	GR-97-393
Missouri Gas Energy	GR-98-140
Missouri Gas Energy	GT-98-237
Ozark Natural Gas Company, Inc.	GA-98-227
Laclede Gas Company	GR-98-374
St. Joseph Power & Light Company	GR-99-246
Laclede Gas Company	GR-99-315
Utilicorp United Inc. & St. Joseph Light & Power Co.	EM-2000-292
Union Electric Company d/b/a AmerenUE	GR-2000-512
Missouri Gas Energy	GR-2001-292
Laclede Gas Company	GR-2001-629
Union Electric Company d/b/a AmerenUE	GT-2002-70
Laclede Gas Company	GR-2001-629
Laclede Gas Company	GR-2002-356
Union Electric Company d/b/a AmerenUE	GR-2003-0517
Missouri Gas Energy	GR-2004-0209
Atmos Energy Corporation	GR-2006-0387
Missouri Gas Energy	GR-2006-0422
Union Electric Company d/b/a AmerenUE	GR-2007-0003
The Empire District Electric Company	EO-2007-0029/EE-2007-0030
Laclede Gas Company	GR-2007-0208
The Empire District Electric Company	EO-2008-0043
Missouri Gas Utility, Inc.	GR-2008-0060

The Empire District Electric Company	ER-2008-0093
Trigen Kansas City Energy Corporation	HR-2008-0300
Union Electric Company d/b/a AmerenUE	ER-2008-0318
Kansas City Power & Light Company	ER-2009-0089
KCP&L Greater Missouri Operations Company	ER-2009-0090
Missouri Gas Energy	GR-2009-0355
The Empire District Gas Company	GR-2009-0434
Union Electric Company d/b/a AmerenUE	ER-2010-0036
Laclede Gas Company	GR-2010-0171
Atmos Energy Corporation	GR-2010-0192
Kansas City Power & Light Company	ER-2010-0355
KCP&L Greater Missouri Operations Company	ER-2010-0356
Union Electric Company d/b/a Ameren Missouri	GR-2010-0363
Kansas City Power & Light Company	ER-2012-0174
KCP&L Greater Missouri Operations Company	ER-2012-0175
Chaney vs. Union Electric Company	EO-2011-0391
Veach vs. The Empire District Electric Company	EC-2012-0406
The Empire District Electric Company	ER-2012-0345
KCP&L Greater Missouri Operations Company	ET-2014-0059
Kansas City Power & Light Company	ET-2014-0071
Union Electric Company d/b/a Ameren Missouri	ET-2014-0085
Missouri Gas Energy	GR-2014-0007
Union Electric Company d/b/a Ameren Missouri	EA-2012-0281
Union Electric Company d/b/a Ameren Missouri	EA-2014-0136
Summit Natural Gas of Missouri, Inc.	GR-2014-0086
Grain Belt Express Clean Line LLC	EA-2014-0207
Union Electric Company d/b/a Ameren Missouri	ER-2014-0258