

FILED
June 26, 2015
Data Center
Missouri Public
Service Commission

Exhibit No.: 122
Issue: Vegetation Management Costs
Witness: James "Jamie" S. Kiely
Type of Exhibit: Direct Testimony
Sponsoring Party: Kansas City Power & Light Company
Case No.: ER-2014-0370
Date Testimony Prepared: October 30, 2014

MISSOURI PUBLIC SERVICE COMMISSION

CASE NO.: ER-2014-0370

DIRECT TESTIMONY

OF

JAMES "JAMIE" S. KIELY

ON BEHALF OF

KANSAS CITY POWER & LIGHT COMPANY

**Kansas City, Missouri
October 2014**

KCP&L Exhibit No. 122
Date 6-15-15 Reporter AT
File No. ER-2014-0370

DIRECT TESTIMONY
OF
JAMES "JAMIE" S. KIELY
Case No. ER-2014-0370

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

2 A: My name is James "Jamie" S. Kiely. My business address is 4400 E. Front St, Kansas
3 City, Missouri, 64120.

4 **Q: By whom and in what capacity are you employed?**

5 A: I am employed by Kansas City Power & Light Company ("KCP&L" or "Company") as
6 Director, Resource Management.

7 **Q: On whose behalf are you testifying?**

8 A: I am testifying on behalf of KCP&L.

9 **Q: What are your responsibilities?**

10 A: I have responsibility for Resource Management, Meter Technology, and the Fleet
11 department.

12 **Q: Please describe your education, experience and employment history.**

13 A: I have a Bachelor of Science Degree from the University Central Missouri, a journeyman
14 lineman certification from Missouri Valley Line Contractors and 22 years of experience
15 in the electric utility industry. While working for various line contractors, I was
16 employed as a journeyman lineman, line foreman and general foreman. Following that, I
17 worked for Aquila and then KCP&L as a designer, work planner, operations supervisor
18 of a service center, a manager overseeing contractor labor and, currently, as Director of
19 Resource Management.

1 **Q: Have you previously testified in a proceeding at the Missouri Public Service**
2 **Commission (“MPSC” or “Commission”) or before any other utility regulatory**
3 **agency?**

4 A: No.

5 **I. INTRODUCTION**

6 **Q: What is the purpose of your testimony?**

7 A: The purpose of my testimony is to provide an overview of KCP&L’s plan to ensure
8 continued safe, efficient, and reliable supply of electric power by mitigating Vegetation
9 Management (“VM”) risk by: 1) implementing an ash tree mitigation plan due to
10 Emerald Ash Borer (“EAB”) infestation, 2) expanding the VM program to include triplex
11 circuits, and 3) aligning the trim cycles for the Urban and Rural areas to four years.

12 **Q: Have you communicated any of these issues and projects impacting VM in**
13 **KCP&L’s Annual VM Report that is submitted to the Commission? If not, why**
14 **not?**

15 A: No, in 2013 we completed our first full trim cycle as a combined company, since the
16 acquisition of Aquila Inc. (i.e. “KCP&L Greater Missouri Operations Company” or
17 “GMO”) by Great Plains Energy Incorporated. This full cycle trim for KCP&L
18 (Missouri and Kansas jurisdictions) and GMO provided enough data for us to analyze
19 and make recommendations for possible improvements going forward. We have only
20 recently concluded this analysis and developed recommendations.

21 **Q: What is Vegetation Management and why is it important?**

22 A: KCP&L’s Transmission and Distribution VM program promotes safe and reliable electric
23 service by reducing outage risk associated with trees and other vegetation, that left

1 unmanaged, can become a leading source of power interruptions during non-storm events
2 and can delay outage restoration during weather events. Beyond compliance and
3 requirements of a robust vegetation maintenance program under 4 CSR 240-23.030 and
4 the National Electric Safety Code Vegetation Management Section 218 (2007), regular
5 vegetation management mitigates service interruptions and reduces potentially dangerous
6 conditions, like downed power lines.

7 **Q: Please explain KCP&L's proposal for strengthening the VM program.**

8 A: KCP&L has identified VM risks and enhancements to the VM program to help ensure
9 continued reliability. These include adding 1) EAB mitigation efforts, 2) triplex circuit
10 tree trimming, and 3) urban and rural trim cycle alignment.

11 **1) Emerald Ash Borer Mitigation**

12 **Q: What is Emerald Ash Borer?**

13 A: EAB is an invasive pest that has killed millions of ash trees. All North American species
14 of ash that EAB has encountered to date are susceptible to varying degrees, including
15 green ash, white ash, and black ash, which are the most widely distributed and abundant
16 ash species in North America. It appears increasingly likely that EAB could functionally
17 extirpate one of North America's most widely distributed tree genera, with devastating
18 economic and ecological impacts.

19 **Q: Is EAB present in KCP&L's service territory?**

20 A: EAB may be present in every county within the KCP&L and GMO service territories as
21 soon as the year 2026. Trees infested with EAB often die within one to three years.
22 Significant ash tree mortality can occur within five years of initial EAB detection within
23 a given community. Currently, five of the 47 counties that comprise the KCP&L and

1 GMO systems within northwest Missouri and eastern Kansas have known EAB
2 infestations. In total, two counties in Kansas and the entire state of Missouri have been
3 quarantined to minimize the spread of this pest by limiting the transportation of ash wood
4 and by-products.

5 **Q: Do we know the potential impact of EAB in the communities served by KCP&L?**

6 A: KCP&L is estimated to have nearly 29,500 ash trees along its distribution corridors
7 throughout all three electric rate jurisdictions (i.e., KCP&L-MO, KCP&L-KS and GMO)
8 that are currently of sufficient height to impact the Company's facilities should they
9 succumb to EAB. The customer impact is estimated to be an additional 11,170 tree-
10 caused outages over the next 12 years, impacting nearly three-quarters of a million
11 customers. Preventing over 930 ash tree-caused outages annually will have an average
12 annual impact on system average interruption frequency index ("SAIFI", a measure of
13 electric reliability based on frequency of service interruptions) of approximately 0.08.
14 Ash tree failure and subsequent outages as a result of EAB has the potential to negatively
15 affect system average interruption duration index ("SAIDI", a measure of electric
16 reliability based on duration of service interruptions) as well. EAB caused outages due to
17 whole tree failure may increase outage restoration time, due to the cumbersome nature of
18 removing entire fallen trees from KCP&L facilities. A proactive approach in mitigating
19 EAB caused outages will have a positive effect on both SAIFI and SAIDI.

20 **Q: What is KCP&L's response to this risk and what would be the associated cost?**

21 A: KCP&L has developed an ash tree mitigation plan for its distribution system for those
22 trees that have the potential to hit the electrical conductors or associated equipment

1 should they fail due to infestation of EAB. For KCPL-MO, the approximate cost would
2 be \$103,610 annually over 12 years.

3 **2) Triplex Circuits**

4 **Q: What are triplex circuits?**

5 A: Triplex circuits normally operate at 600 volts or less and are considered secondary
6 circuits. Triplex is a type of secondary conductor that is composed of two insulated
7 energized conductors wrapped around a single bare conductor which is normally the
8 neutral or ground.

9 **Q: What is the Company's proposal for triplex circuits?**

10 A: KCP&L is seeking to expand the VM program and include routine trimming of stand-
11 alone triplex circuits operating at 600 volts or less. KCP&L performed a survey of
12 triplex facilities without primary conductor overbuilt. The survey includes data based
13 upon achieving ten feet of tree to conductor clearance, and removal of all brush (4"
14 diameter or under trees). Currently, the MPSC does not require VM activities for
15 facilities carrying voltages 600kV or less, so KCP&L does not trim standalone triplex
16 with the exception of tree branches applying direct pressure on the conductor.

17 **Q: Why should the VM program include this enhancement?**

18 A: From 2008 through 2012, 22% of all tree caused outages were secondary outages. The
19 cost and duration of outages associated with this standalone triplex can be limited if it
20 were included in the routine cycle trim of the VM program.

21 KCP&L estimates that there are approximately 22,000 spans of standalone triplex
22 that do not get trimmed during its routine maintenance operation. Urban circuits account
23 for two-thirds of the total number of triplex spans, and contain approximately 200% more

1 trees and brush per span than rural circuits. Annual cost is a direct reflection of workload
2 per span, and also accounts for cycle length differences for urban and rural circuits. For
3 KCP&L-MO, the cost would be approximately \$303,480 annually.

4 **3) Alignment of Urban and Rural Trim Cycles**

5 **Q: Please explain what you are proposing regarding tree trimming cycle changes.**

6 A: KCP&L's current VM program operates on a four year urban cycle and a six year rural
7 cycle. KCP&L is seeking to move all circuits to a four year trim cycle. The significant
8 benefits to this proposal include but are not limited to: increased visibility of our VM
9 program in the rural communities; and more frequent patrols of our lines, including mid-
10 cycle patrol every two years instead of three years which would allow KCP&L to address
11 specific areas of concern on a more frequent and timely basis. All of this could lead to
12 less incidents of vegetation conductor contact resulting in improved customer/system
13 reliability.

14 Moving all KCP&L-MO circuits to a four-year cycle equates to an additional
15 150 miles at an estimated cost of \$615,721 annually.

16 **II. CONCLUSION**

17 **Q: Is KCP&L proposing a specific recovery method for the costs associated with these**
18 **VM projects?**

19 A: Yes, KCP&L is proposing a VM tracker mechanism. The tracker request is explained in
20 detail in Company witness Tim Rush's testimony.

1 **Q: Please describe historical VM cost trends and expectations regarding future VM**
2 **costs.**

3 A: VM costs incurred by all of the Company's jurisdictions increased from just under \$23
4 million in 2010 to almost \$24.58 million in 2013. I expect this upward trend to continue
5 in the future for a couple of reasons even in the absence of the enhanced VM programs
6 discussed in this testimony. First, the Company's VM work is done by third party
7 contractors whose prices have increased by about 2% annually in the past and it is
8 reasonable to expect similar increases going forward. Second, the Company's system
9 (both distribution and transmission) is growing, not contracting, so there will be more
10 circuit miles requiring VM work in the future.

11 **Q: Do you have an opinion about whether VM work can be undertaken more**
12 **efficiently and effectively 1) by performing that work ratably over each rate**
13 **jurisdiction (i.e., the same amount each year for each rate jurisdiction based on each**
14 **rate jurisdiction's proportional share of total Company costs) or 2) by performing**
15 **that work so as to meet all applicable regulatory requirements but otherwise having**
16 **the flexibility to shift resources to meet hot spots that may emerge or address other**
17 **operating needs?**

18 A: It is very difficult, if not impossible, to meet operational needs that vary over time in
19 differing rate jurisdictions by performing the same amount of work in each rate
20 jurisdiction each year. The Company will meet all minimum requirements, but should
21 otherwise have the flexibility to meet operating requirements as they arise and change
22 over time. As I understand it, the VM tracker mechanism explained by Company witness
23 Tim Rush would provide the Company with appropriate flexibility in the area of VM.

1 **Q: Why is it important to include these projects in the VM program plan?**

2 A: KCP&L's distribution VM program is based on a set of clearly defined strategies,
3 specifications, and guidelines using a systematic preventive maintenance approach
4 focused on maintaining high reliability in a cost-effective manner. The program is
5 centered on strategic cornerstones that focus on maintaining reliability and not just
6 trimming trees and implementing industry best practices. Inclusion of the above projects
7 is key to that strategy and in reducing reliability risk.

8 **Q: What else is KCP&L evaluating for possible inclusion in the VM program for the**
9 **future?**

10 A: In the future, we are considering the impact of removing all lateral overhang and
11 trimming of overhead service lines in order to improve system reliability. The initial
12 outage data collected seems to indicate there may be incremental improvement to be
13 achieved in these areas if performed. Currently we trim these primary laterals on a
14 routine cycle and we allow specific types of tree species to overhang these lines. Service
15 lines, from the last pole to the point of attachment at the end user, are not normally
16 trimmed. Removing vegetation from these lines could also provide improved reliability
17 to these customers. Our evaluation of this possible approach is not yet complete,
18 however, we are not prepared to recommend implementation at this time.

19 **Q: Does that conclude your testimony?**

20 A: Yes, it does.

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) Case No. ER-2014-0370
A General Rate Increase for Electric Service)

AFFIDAVIT OF JAMES "JAMIE" S. KIELY

STATE OF MISSOURI)
) ss
COUNTY OF JACKSON)

James "Jamie" S. Kiely, being first duly sworn on his oath, states:

1. My name is James "Jamie" S. Kiely. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Director, Resource Management.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony on behalf of Kansas City Power & Light Company consisting of eight (8) pages, having been prepared in written form for introduction into evidence in the above-captioned docket.

3. I have knowledge of the matters set forth therein. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded, including any attachments thereto, are true and accurate to the best of my knowledge, information and belief.

James S. Kiely
James "Jamie" S. Kiely

Subscribed and sworn before me this 30th day of October, 2014.

Nicole A. Wehry
Notary Public

My commission expires: Feb. 4, 2015

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2015
Commission Number: 11391200