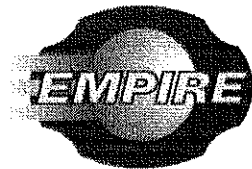


Exhibit No.  
Issue: Vegetation Control Program  
Witness: Thomas S. Mackey  
Type of Exhibit: Direct Testimony  
Sponsoring Party: Empire District Electric  
Case No.  
Date Testimony Prepared: October 2009

**Before the Public Service Commission  
of the State of Missouri**

**Direct Testimony**  
**of**  
**Thomas S. Mackey**

**October 2009**



**SERVICES YOU COUNT ON**

DIRECT TESTIMONY  
OF  
THOMAS S. MACKEY  
THE EMPIRE DISTRICT ELECTRIC COMPANY  
BEFORE THE  
MISSOURI PUBLIC SERVICE COMMISSION  
CASE NO.

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. Thomas S. Mackey, 602 S. Joplin Avenue, Joplin, Missouri 64801.

3 **Q. WHO IS YOUR EMPLOYER AND WHAT POSITION DO YOU HOLD?**

4 A. The Empire District Electric Company (“Empire” or “Company”) is my  
5 employer. I hold the position of Manager of Vegetation Control.

6 **Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND.**

7 A. I hold a Bachelor of Science Degree in Timber Management from Oklahoma  
8 State University.

9 **Q. PLEASE DESCRIBE YOUR EMPLOYMENT BACKGROUND.**

10 A. I joined the staff at Empire in June 2003 in my current position. Prior to working  
11 for Empire I worked for Southwest Electric Power Company in Fayetteville,  
12 Arkansas, and Public Service Company of Oklahoma in Tulsa, Oklahoma, in  
13 similar roles.

14 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE**  
15 **BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION**  
16 **(“COMMISSION”)?**

17 A. My testimony will overview features of Empire’s current vegetation management  
18 program and discuss the methods used to adhere to the requirements of  
19 Commission Rule 4 CSR 240-23.030.

1 **Q. PLEASE DESCRIBE EMPIRE'S CURRENT VEGETATION**  
2 **MANAGEMENT PROGRAM.**

3 A. Vegetation management is a critical maintenance activity through which proper  
4 application of tools and techniques increases reliability and greatly reduces the  
5 need for certain restoration efforts during outage occurrences caused by major  
6 weather events. Since vegetation management is a costly maintenance area and  
7 an ongoing need, Empire seeks to achieve the objectives of its vegetation  
8 management program while achieving the least cost per individual site. This can  
9 be accomplished through a program using selective clearing while integrating  
10 vegetation management tools in areas suitable for each category of work type and  
11 specific application type.

12 **Q. HOW ARE THE DISTRIBUTION AND TRANSMISSION PROGRAMS**  
13 **MANAGED?**

14 A. Our distribution vegetation management program is structured to include planned,  
15 cyclical maintenance, necessary construction clearing, and activities related to  
16 addressing immediate reliability threats or unexpected vegetation problems that  
17 are generally weather related. All of our efforts are related to customer service as  
18 it relates to the delivery of reliable, affordable electric power for homes and  
19 businesses.

20 Our transmission system trimming program is primarily cycle planned work  
21 although on occasion reactive work is necessary as well. Reactive work generally  
22 is caused by trees outside the right-of-way, which are handled by dealing with the  
23 individual property owner if possible. Like the distribution system, our

1 transmission system requires an integrated program which utilizes various tools  
2 and application types to control unwanted vegetation.

3 **Q. PLEASE DESCRIBE EMPIRE'S PHILOSOPHY TOWARD THE**  
4 **VEGETATION MANAGEMENT PROCESS.**

5 A. Empire employs a selective clearing philosophy toward vegetation management;  
6 therefore, the vegetation must be a current or future threat to be considered for  
7 trimming or removal. Distribution vegetation maintenance is managed by  
8 personnel directly employed by Empire whose background is in natural resource  
9 management, beginning with the Manager of Vegetation Control. Additional  
10 positions assisting with daily operations and cyclical work are two Vegetation  
11 Management Coordinators, who are responsible for vegetation under distribution  
12 conductors, and the Vegetation Management Administrator, who is responsible  
13 for all documentation related to progress, performance, and customer inquiries.  
14 Planning services are provided through an outside contractor that is independent  
15 of the clearing contractors that Empire uses. The outside contractor providing the  
16 planning services is Appraisals, Consulting, Research, and Training ("ACRT").

17 **Q. HOW ARE SPECIFIC PROJECTS CARRIED OUT?**

18 A. Within this group of contract professionals site specific work plans are detailed,  
19 individual contact with customers is made, and all related documentation is  
20 developed. Empire requires that ACRT attain permission via signature on a  
21 printed card, which generally hand delivered to the property before the removal of  
22 trees can occur on each individual site. This requirement is applied to distribution  
23 level electric lines located in yards or other manicured areas to ensure that the

1 customer understands the purpose of the removals. This requirement even applies  
2 to areas where Empire has an easement granting the right to remove vegetation.  
3 Empire does, however, remove trees in most transmission line rights-of-way, even  
4 in manicured settings, and removes trees that have no obvious intentional  
5 purpose, which are generally volunteer species that are a common occurrence  
6 under the lines. Empire has made available to the planning services group,  
7 through precise training and contract set up, a number of tools for sites that lend  
8 themselves to alternative means of control, including the mechanical and  
9 herbicide control methods. Upon completion of work, ACRT auditors check the  
10 work to verify that it was performed according to the plan. Included in the  
11 standards verified by the planner are: desired clearance minimums, proper  
12 pruning techniques, and the adherence to the work plan. All contractors are  
13 required to correct issues found during the audit before payment is made for the  
14 associated section of work. Empire requires contractors to follow selective  
15 clearing philosophy and natural pruning techniques resulting in healthier residual  
16 vegetation, while retaining clearance for longer periods of time. Through the  
17 course of a few trimming cycles, the more established and mature trees will  
18 redirect growth making the trees less of a reliability issue in the future.

19 **Q. IS THIS PHILOSOPHY IN COMPLIANCE WITH MISSOURI RULES?**

20 A. Yes. Empire requires that all contractors follow the Commission's regulations as  
21 set forth in 4 CSR 240-23. 030, and Empire is taking additional steps to attain the  
22 Tree Line USA award from the Arbor Day Foundation, which requires approval  
23 from the Missouri Department of Conservation.

1 **Q. HAS EMPIRE MADE ANY RECENT CHANGES TO ITS VEGETATION**  
2 **MANAGEMENT PROGRAM?**

3 A. Yes. There have been several recent modifications. First, Empire has finalized a  
4 program to track the management of tree trimming required for new extensions to  
5 customers. Second, planners are continuously training to learn the processes that  
6 most aggressively seek effective management for each site. Third, a new database  
7 has been created to manage maintenance information and billing from outside  
8 contractors. Finally, Empire's customer information system is being used with  
9 the new processes and systems to track customer inquiries, conversations, and  
10 resolutions.

11 Aerial patrol continues to be a critical part of managing our transmission system  
12 and alerting the transmission planner of upcoming vegetation issues.

13 **Q. HOW DOES EMPIRE DETERMINE WHERE VEGETATION**  
14 **MAINTENANCE WILL BE PERFORMED?**

15 A. Empire is conducting vegetation management on a cyclical basis, which is based  
16 upon the Company's ability to cover the set mileage goals in 4 CSR 240-23. 030  
17 while at the same time addressing reliability issues that may occur in the near  
18 future. Empire's Outage Management System ("OMS"), which provides real and  
19 timely outage information, is reviewed for indications of circuits that may need to  
20 be addressed earlier than originally planned. Although there is a cycle plan set  
21 years in advance of the work, the annual plans will be adjusted as needed based  
22 on reliability during normal conditions. The length of a circuit is a consideration  
23 in adjusting the annual plan based on realistic expectations of the ability to

1 complete the work within the time period. Also, Empire's reaction to outages on  
2 particular circuits is a consideration in modifying the planned work schedule.  
3 Therefore, areas where reaction time can greatly affect outage duration may be  
4 advanced on the cyclical plan or managed as reactive work.

5 **Q. DOES EMPIRE HAVE A PUBLIC OUTREACH AND CUSTOMER**  
6 **EDUCATION PROGRAM?**

7 A. Yes. In the latter months of 2008, Empire began a public outreach program  
8 through the installation of a utility arboretum. This is a real example of suggested  
9 tree species and where they should be located in proximity to electric lines.  
10 The customer education program is primarily associated with the one-on-one  
11 discussions that tend to occur on site with the individual property owners at the  
12 time of vegetation management planning. Because of the education and working  
13 knowledge of our outside contractors, the Company believes they are the best  
14 avenue to help our customers understand the reasoning for the work Empire needs  
15 to perform. These individuals are also able and encouraged to help answer other  
16 tree health related questions, when possible, to help educate our customers on the  
17 subject. In addition to the planning effort, Empire is in the process of adding  
18 helpful information to our website related to tree planting tips and energy efficient  
19 planting. The final stage in the effort is to educate our future customers. Empire  
20 began efforts to work with municipalities serious about the "urban forest" and has  
21 partnered with them to work with schools to promote the Arbor Day Foundation  
22 poster contest that occurs every year. In addition, we are promoting, through city  
23 tree boards, state urban foresters, city parks, and other municipal organizations,

1 the idea of educating, through the local schools, proper tree planting, placement,  
2 and care in an urban environment.

3 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

4 **A.** Yes it does.