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May 1, 2015

Mark R. Overstreet  
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**HAND DELIVERED**

Jeff R. Derouen  
Executive Director  
Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, KY 40602-0615

RECEIVED

MAY 04 2015

PUBLIC SERVICE  
COMMISSION

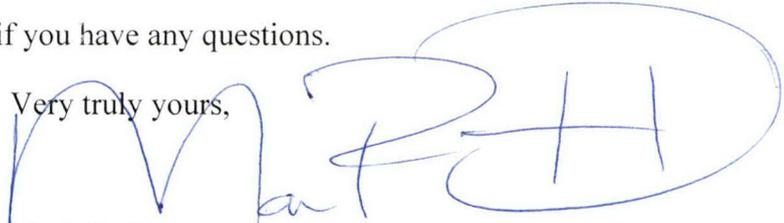
**RE: Case No. 2011-00450**

Dear Mr. Derouen:

In accordance with the Commission's April 1, 2014 and May 30, 2013 Orders in the above proceeding, please find enclosed and accept for filing the required reliability report.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

  
Mark R. Overstreet

MRO

# KENTUCKY PUBLIC SERVICE COMMISSION

## Electric Distribution Utility Annual Reliability Report

### SECTION 1: CONTACT INFORMATION

UTILITY NAME	Kentucky Power Company
REPORT PREPARED BY	Everett G. Phillips
E-MAIL ADDRESS OF PREPARER	<a href="mailto:egphillips@aep.com">egphillips@aep.com</a>
PHONE NUMBER OF PREPARER	606-929-1463

### SECTION 2: REPORT YEAR

CALENDAR YEAR OF REPORT	2014
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### SECTION 3: MAJOR EVENT DAYS

$T_{MED}$	29.1409
FIRST DATE USED TO DETERMINE $T_{MED}$	1-Jan-10
LAST DATE USED TO DETERMINE $T_{MED}$	31-Dec-14
NUMBER OF MED IN REPORT YEAR	2

NOTE: Per IEEE 1366  $T_{MED}$  should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

### SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

#### System Wide Information

Total Customers	169,342	Total Circuits	220
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#### Excluding MED

	5 Year Average	Reporting Year
SAIDI	473.4	505.3
SAIFI	2.498	2.374

#### Including MED

	5 Year Average	Reporting Year
SAIDI	1047.5	761.9
SAIFI	2.962	2.677

#### Notes:

- 1) All duration indices (SAIDI) are to be reported in units of minutes.
- 2) Reports are to be filed with the Commission by May 1 of each year.
- 3) Reports cover the calendar year ending in the December before the reports are due.
- 4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI and  $T_{MED}$

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

### **CIRCUIT #1:**

1. SUBSTATION NAME AND NUMBER
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
3. CIRCUIT NAME AND NUMBER
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
5. TOTAL CIRCUIT LENGTH (MILES)
6. CUSTOMER COUNT FOR THIS CIRCUIT
7. DATE OF LAST CIRCUIT TRIM (VM)
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE  
NUMBERS REPRESENTED BY EACH CAUSE
9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
10. REPORTING YEAR (SAIDI)
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
12. REPORTING YEAR (SAIFI)
13. CORRECTIVE ACTION PLAN

REPEAT INFORMATION FOR EACH CIRCUIT EXCEEDING ITS 5 YEAR AVERAGE  
FOR SAIDI AND/OR SAIFI

*Please see Attachment 1 for Section 5: Circuit Reporting*  
Note: Circuits sorted according to reporting year SAIDI

# KENTUCKY PUBLIC SERVICE COMMISSION

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## SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

### INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional page may be attached as needed

**See attached copy of Kentucky Power's Forestry Report for Commission Order Case No. 2009-00459.**

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## SECTION 7: UTILITY COMMENTS

Kentucky Power's overall system performance for SAIDI was 505.29 minutes in 2014. The IEEE statistical approach, known as the Beta Method, was developed to normalize SAIDI and extract out major event days (MED). This approach seeks to limit the effect of weather in making year to year comparisons. In 2014, nine significant weather events came across the Kentucky Power service territory. Seven of these nine weather events did not meet the MED threshold and thus are included in 2014 SAIDI minutes. These seven events accounted for nearly 25% of the SAIDI minutes. One of the 2014 Non-MED events, February 4 and 5, alone accounted for 10% of the SAIDI minutes. If this same event occurred in 2015, the MED threshold of customer minutes of interruption would be met and SAIDI minutes excluded. The daily MED threshold peaked in 2013 (after the Derecho in 2012) at 6,264,399 customer minutes of interruption. The 2015 threshold is 4,934,781 of customer minutes of interruption.

It is important to recognize that in those instances where system reliability is improving the threshold for MED (daily SAIDI values for 5 prior years) events, and hence exclusion of an individual storm event from the indices calculations, will tend to lag behind improvements until daily SAIDI values for those years prior to the full implementation of vegetation management program roll out of the five year averages.

Notwithstanding this statistical effect, the Company is seeing less impacts on its facilities during weather events due in large part to its the Vegetation Management Program. The number of tree inside right-of-way outages (excluding major event days) has been reduced by approximately 40%, while the customer minutes of interruption associated with these events have been reduced by about 47%.

**STITES HARBISON** PLLC  
ATTORNEYS

September 30, 2013

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**HAND DELIVERED**

Jeff R. Derouen  
Executive Director  
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SEP 30 2014

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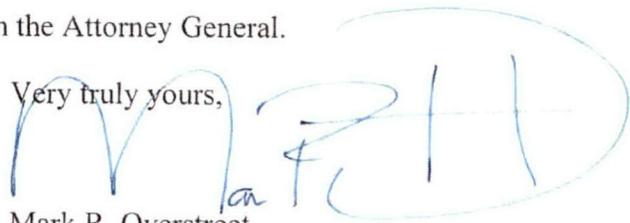
RE: P.S.C. Case No. 2009-00459

Dear Mr. Derouen:

Enclosed please find and accept for filing the original and ten copies of Kentucky Power Company's 2012 Distribution Vegetation Management Plan. The Plan is being filed in compliance with paragraph 5(c)(i) of the May 19, 2010 Unanimous Settlement Agreement in the above case.

A copy of the plan is being served on the Attorney General.

Very truly yours,

  
Mark R. Overstreet

MRO

cc: Jennifer Black Hans

**Kentucky Power Company**  
**2015 Distribution Vegetation Management Plan**

RECEIVED

SEP 30 2014

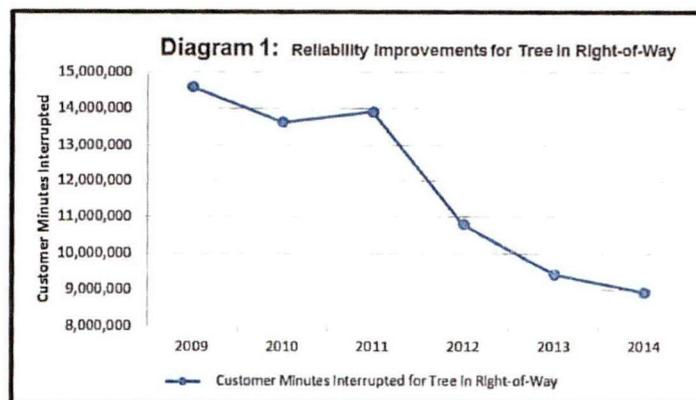
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Overview

Kentucky Power continues to transition its vegetation management program from a performance-based maintenance program to a full-circuit four year cycle-based approach. Under the Unanimous Settlement Agreement approved by the Commission in Case No. 2009-00459, Kentucky Power agreed to maintain the test-year level of distribution vegetation management O&M expenditures. In addition, under the Unanimous Settlement Agreement, Kentucky Power is to receive and is required to spend an additional \$10 million annually toward distribution vegetation management O&M expenditures. Kentucky Power also agreed to use these funds to improve the vegetation-related reliability of its distribution system. The Company has satisfied each of these commitments.

Kentucky Power is projecting that by the end of 2014, the Vegetation Management Program will total over \$77.5 million in O&M expenditures and over \$10 million in vegetation management capital expenditures since July 1, 2010. During this time the O&M expenditures produced the following results: approximately 299,117 trees will have been trimmed, 7,223 acres of brush will have been cleared, 9,934 acres will have been sprayed to help control vegetation, nearly one million (970,967) trees will have been removed, and approximately 4,120 miles of circuits will have been fully re-cleared. Over this period, the Company's efforts have reduced Customer Minutes Interrupted (CMI) for Tree Inside the Right-of-Ways by more than 34%, a significant improvement in vegetation-related reliability.

The reliability improvement in Customer Minutes Interrupted is illustrated in Diagram 1:

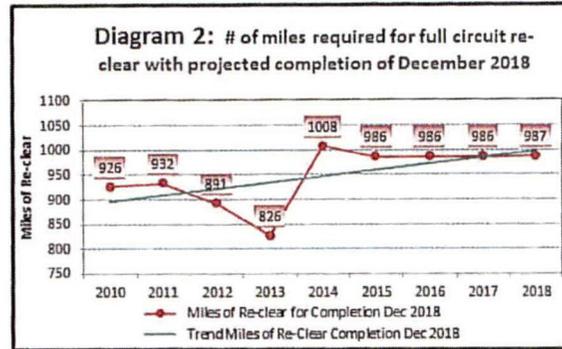


During this transition, Kentucky Power has encountered two obstacles. First, Kentucky Power found that it had significantly underestimated the amount of vegetation in and around its energized facilities. Kentucky Power predominantly has two primary distributing voltages 12.47 kV and 34.5 kV in the full circuit re-clear. The 12.47 kV circuit miles are approximately 76% of the miles in the Company's service territory and 34.5 kV circuit miles are approximately 24%. In a performance based vegetation management program, the 34.5 kV circuits require more attention. These circuits tend to be longer and clearing is more sensitive in and around these energized facilities. Shifting to a cycle based program, the Company found some of the 12.47 kV circuits requiring significantly more time to clear than originally anticipated. This additional vegetation has increased the cost and reduced the amount of miles achieved, especially in year 2012 and 2013. Second, it took much longer than originally anticipated to safely and productively increase the vegetation management workforce to full staffing levels.

The Company estimates that by the end of 2014 approximately 4,120 miles of the 8,065 miles in the system will have been re-cleared. The completed miles account for 51% of the service territory miles required for full circuit re-clear within 64% of the time projected in the Unanimous Settlement Agreement. For these reasons, Kentucky Power estimates that at the current spending levels, the Company will complete the full circuit re-clear by approximately December 31, 2018.

Kentucky Power Company will continue to review its Vegetation Management Program processes to complete the re-clearing cycle in a safe, cost-efficient, and effective manner. The Company defines completion of the transition re-clear at the date when the last circuit is completed for the entire service territory. It is projected that at the current spending levels all three Kentucky Power districts (Ashland, Pikeville, and Hazard) will complete the initial re-clearing of the Company's distribution system in 2018. The actual completion will occur at different times during that year. As each district completes its re-clearing, the Company will evaluate the efficiency of transferring trained crews from the completed district to an uncompleted district, versus the completed district beginning the start of the four-year cycle.

The following Diagram illustrates the yearly miles required to complete the initial re-clearing in December 2018:



\*Note Diagram 2: The vegetation management program started in mid-2010 (2010 miles annualized).

At the end of August 2014, the Company was on track to complete 1,008 miles in 2014. To maintain the upward trend in full circuit re-clear miles, the Company has targeted the following process changes:

- Implemented changes to the Key Performance Incentive Plan. A measurement of “hours per mile for full circuit re-clear” has been added. This incentive target will vary by year and it will require a 7% improvement over the previous three year average. Kentucky Power believes that this change to the efficiency measurement more clearly aligns the incentive program to the overall goal for its vegetation management program.
- Continue to review the Company’s reactive maintenance process to ensure crews are used as efficiently as possible. Reactive maintenance is necessary, but it typically only improves short-term reliability. The line clearing is not to the same degree as the re-clearing work. However, the cost of reactive maintenance is a part of the overall vegetation management budget. This reactive work is generally not included in the total full circuit re-clear miles. Reactive maintenance may also be referred to as “hot-spotting” or “unscheduled maintenance”.
- Contractor has added a Production Superintendent. This position provides crew audits and feedback to the Crew Foreman and General Foreman on ways to increase productivity, safely and effectively. Also, Kentucky Power Foresters and the Superintendent will monitor the weekly reporting on full circuit re-cleared miles per crew.
- Continue to investigate the safest, most efficient, and effective approach of splitting the full circuit trim dollars between lump sum, unit bid or open

bid, and/or time and material. Such a large scale project has been a learning process. All three forms of pricing have advantages and disadvantages. Based on past experience, in 2015, there will be a significant increase in lump sum bidding.

- Continue to focus on the reduction of re-clearing cost per mile, particularly in the Pikeville District.
- The efficacy of shifting crews and dollars between the districts will continue to be investigated as the three districts advance toward the completion of their full circuit re-clears.
- Kentucky Power will meet with other utilities with similar terrain to discuss their Right-of-Way programs and work to implement best practices.

It is important to understand that in order to establish a four year full circuit cycle at "maintenance cost levels," circuits that were cleared in the first years of the program must be cleared a second time within the four to five year window. A longer period than that will result in additional growth that will increase the work (and cost) required to clear the circuit following the initial re-clearing. Thus, the second pass through when greater than 6 years will be at cost levels more closely approximating the initial re-clearing cost of \$15,100 per mile. Conversely, initiation of work on the (and subsequent) passes within four to five years of the initial re-clearing keeps the vegetation regrowth out of the energized lines allowing the second and subsequent passes to be conducted more rapidly and at the lower estimated maintenance cost of \$9,060 per mile.

The Company has investigated three different scenarios to complete the initial re-clearing of the entire system and to establish a four year cycle at maintenance cost levels.

### Scenario 1

Under Scenario 1, the initial re-clearing will continue at the funding levels established in the Unanimous Settlement Agreement in Case No. 2009-00459. That initial re-clearing will be completed by the end of 2018. Beginning with the completion of the initial re-clearing, the Company in 2019 will begin the second pass through on circuits cleared initially. This work will be performed on a four year cycle at estimated re-clearing cost levels (\$15,100 per mile). Beginning in



current annual spending levels. In 2023, the estimated annual cost drops to maintenance cost levels (estimated at \$9,060 per mile).

**Diagram 4 Scenario 1: Unanimous Settlement Agreement Modification - Additional Funding for 1.5 years at Unanimous Settlement Agreement. Also considers 4 year cycle at Re-clear Cost and one year of 4 year cycle at Maintained Cost.**

Year	Adjusted Tree Out ROW Customer Minutes Interrupted	Adjusted Tree In ROW Customer Minutes Interrupted	Adjusted Total Customer Minutes Interrupted	Transition Spend (Unanimous Settlement Agreement + 1.5 yrs)	4 Yr Cycle Spend at Re-clear Cost	4 Yr Cycle Spend at Maintained Cost
2010	21,433,745	13,625,478	35,059,224	\$8,618,982		
2011	37,622,379	13,907,660	51,530,039	\$17,237,964		
2012	17,593,130	10,804,514	28,397,644	\$17,237,964		
2013	25,174,690	9,435,168	34,609,858	\$17,237,964		
2014	27,983,819	8,933,415	36,917,234	\$17,237,964		
2015	30,813,699	7,505,770	38,319,470	\$17,237,964		
2016	33,643,579	6,078,126	39,721,705	\$17,237,964		
2017	36,473,459	4,650,481	41,123,941	\$17,237,964		
2018	39,303,339	3,222,837	42,526,176	\$17,237,964		
2019	36,623,535	2,735,514	39,359,048		\$33,614,154	
2020	34,126,461	2,321,884	36,448,345		\$34,286,437	
2021	31,799,658	1,970,804	33,770,462		\$34,972,166	
2022	29,631,513	1,672,813	31,304,326		\$35,671,609	
2023	27,611,208	1,419,883	29,031,092			\$21,831,025
				\$146,522,693	\$138,544,366	\$21,831,025
				<b>Total Spend:</b>		<b>\$306,898,084</b>

### Scenario 2

Under Scenario 2, the Company continues to fund the initial re-clearing at the funding levels established in the Unanimous Settlement Agreement in Case No. 2009-00459. As in Scenario 1, the initial re-clearing will be completed by the end of 2018. However, starting in mid-2015, an interim clear begins which targets those circuits previously cleared in the latter half of 2010. Additional funds beginning in 2015 will be required to perform the interim clear. During 2015-2018 period, the vegetation management program will be working on both the initial re-clearing (at the estimated re-clear cost of \$15,100 per mile) and the interim clearing of circuits (at estimated maintenance cost \$9,060 per mile). As illustrated in Diagram 5 below, the reason for the lower interim clear costs is that the shorter time elapsed between the initial and interim clearings. The four-year interim clear cycle will begin in 2015 at the lower maintenance cost level. The total mid-2015 to 2023 estimated cost under Scenario 2 is \$195,059,732 and the overall program estimated cost by 2023 is \$281,252,668. The total projected Customer Minutes Interrupted for the year 2023 is 17,224,359 minutes.



**Diagram 6 Scenario 2: Unanimous Settlement Agreement Modification - Additional Funding at 1.5 years at Unanimous Settlement Agreement plus additional funding for Interim Re-clear at Maintained Cost. Also included is a 4 year cycle at Maintained Cost and one year of another 4 year cycle at Maintained Cost.**

Year	Adjusted Tree Out ROW Customer Minutes Interrupted	Adjusted Tree In ROW Customer Minutes Interrupted	Adjusted Total Customer Minutes Interrupted	Transition Spend (Unanimous Settlement Agreement + 1.5 yrs)	Interim Spend at Maintained Cost	4 Yr Cycle Spend at Maintained Cost
2010	21,433,745	13,625,478	35,059,224	\$8,622,100		
2011	37,622,379	13,907,660	51,530,039	\$17,237,964		
2012	17,593,130	10,804,514	28,397,644	\$17,237,964		
2013	25,174,690	9,435,168	34,609,858	\$17,237,964		
2014	27,983,819	8,933,415	36,917,234	\$17,237,964		
2015	26,613,383	7,961,326	34,574,709	\$17,237,964	\$4,278,676	
2016	24,887,929	6,814,430	31,702,358	\$17,237,964	\$8,785,054	
2017	23,305,496	4,854,792	28,160,287	\$17,237,964	\$8,605,017	
2018	21,878,071	4,175,968	26,054,039	\$17,237,964	\$8,100,466	
2019	20,386,398	3,575,555	23,961,954			\$20,168,492
2020	18,996,438	3,034,352	22,030,790			\$20,571,862
2021	17,701,255	2,575,072	20,276,326			\$20,983,300
2022	16,494,385	2,185,314	18,679,698			\$21,402,966
2023	15,369,806	1,854,553	17,224,359			\$21,831,025
				\$146,525,811	\$29,769,213	\$104,957,645
				<b>Total Spend:</b>		<b>\$281,252,668</b>

### Scenario 3

Under Scenario 3, the Company will complete the initial re-clearing in mid-2017 as initially projected in Case No. 2009-00459. To do so will require increased funding beginning in 2015. Upon completion of the initial re-clear, the Company will begin the second pass through of its circuits. This work will be performed on a four-year cycle at re-clearing cost levels (estimated at \$15,100 per mile). Beginning in mid-2021, a second four-year cycle will begin at maintenance cost levels (estimated at \$9,060 per mile). Under Scenario 3, the Company will complete the initial re-clearing (789 miles) and will then begin the second pass through (1039 miles) in 2017. The total mid-2015 to 2023 estimated cost under Scenario 3 is \$243,451,435 and the overall program estimated cost by 2023 is \$329,644,372. The total projected Customer Minutes Interrupted for the year 2023 is 20,172,006 minutes.

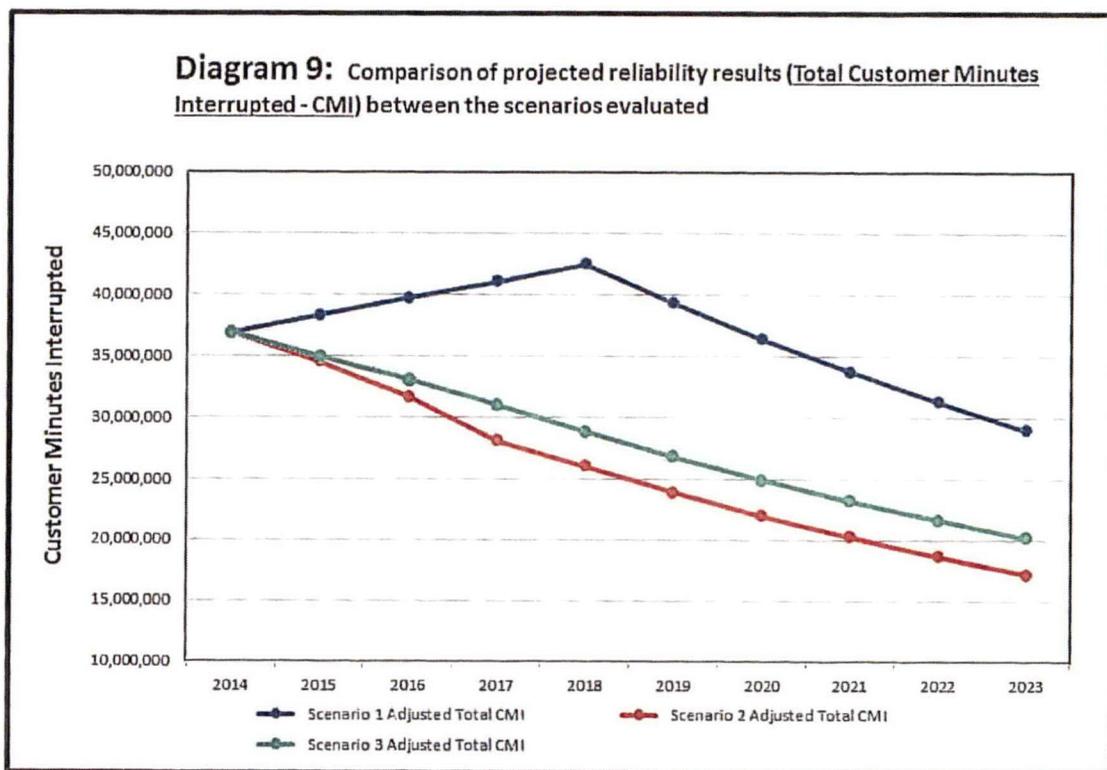
The work to be performed under Scenario 3 is graphically illustrated in Diagram 7 below:



vegetation in and around energized facilities. (Note: that estimated re-clear cost do not include total spray, aerial saw, contract foresters, stump grinding program, tree replacement program, Key Performance Incentive Plan, or unscheduled/reactive maintenance cost – See Exhibit 3 below for 2015 break-down).

- Maintenance costs are estimated at \$9,060 per mile (60% of re-clear cost), and assigned to circuits cleared within 5 years, at lower cost due to less vegetation in and around energized facilities. (Note: like re-clear cost, maintenance level costs do not include total spray, aerial saw, contract foresters, stump grinding program, tree replacement program, Key Performance Incentive Plan, or unscheduled/reactive maintenance costs).
- An annual inflation rate of 2% has been added at the start of 2015 for any subsequent circuit trim cycles (re-clear or maintenance cost) for all three scenarios.

The three scenarios yield differing reliability results over time as illustrated in Diagram 9 below:



The Company recommends Scenario 2 as the best alternative for improving vegetation-related reliability and completing the transition to a 4 year cycle at maintenance cost levels. This scenario will get the vegetation management program over to a four year cycle based program most efficiently, at the least cost, and requires the fewest additional forestry employees over the long range plan. Most importantly, it produces the best reliability levels as measured by Customer Minutes Interrupted.

## 2015 Kentucky Power Distribution Vegetation Management Plan

The 2015 Vegetation Management Plan will continue to focus on full circuit re-clearing at current approved funding levels. Full circuit re-clearing is an integral part of our efforts to transition from a reactive-based maintenance program to a cycle-based maintenance approach that the Company began in July of 2010. Re-clearing work will be prioritized and scheduled based on past tree-related reliability performance, field inspection of the right-of-way conditions, and the number of customers impacted. \$458,913 will be budgeted to address reliability issues that develop throughout the year. This Unscheduled/Reactive funding represents 2.6 percent of the total Vegetation Management O&M Budget.

Kentucky Power's service territory covers one of the most heavily forested areas of the country. The Company's spray program is a vital component of the Vegetation Management Plan. ULV (Ultra Low Volume), high-volume foliar, basal, cut-surface, and aerial application techniques will be utilized depending on the brush conditions. The goal is to treat 2,100 acres of brush in 2015.

The 2015 Vegetation Management Plan also includes \$2,550,000 of forestry capital. This funding will be utilized to remove trees larger than 18 inches in diameter, widen rights-of-way, and for TGR (Tree Growth Regulator) application.

The 2015 Kentucky Power Distribution Management Plan projected expenditures for the three districts in its service territory are:

### 2015 KENTUCKY POWER DISTRIBUTION VEGETATION MANAGEMENT PLAN

AREA	PLANNED MILES RE-CLEARING	UNSCHEDULED REACTIVE O&M FUNDING	SCHEDULED O&M FUNDING	TOTAL O&M FUNDING	FORESTRY CAPITAL FUNDING
HAZARD	234	\$250,000	\$3,087,414	\$3,337,414	\$1,550,242
PIKEVILLE	401	\$173,913	\$8,436,304	\$8,610,217	\$617,998
ASHLAND	351	\$35,000	\$5,255,334	\$5,290,334	\$381,760
TOTALS	986	\$458,913	\$16,779,052	\$17,237,965	\$2,550,000

### Exhibit Description

A circuit-by-circuit description of the proposed distribution vegetation management work plan for 2015, along with the associated O&M expenditures, is provided as Exhibit 1 to this overview. Exhibit 2 to the overview sets out, by district, the projected spraying expenditures during 2015. Exhibit 3 to the overview provides a district-by-district basis for the total projected O&M expenditures during 2015. Finally, Exhibit 4 to the overview provides a projected circuit-by-circuit completion year, miles planned, and projected O&M cost for those circuits remaining for full circuit re-cleared.

2015 KYPCO DISTRIBUTION VEGETATION MANAGEMENT PLAN  
 RECLEARING PLAN

revised 9/24/14

DISTRICT	STATION NAME	CIRCUIT NAME	CIRCUIT NUMBER	CIRCUIT LINE MILES	MILES PLANNED	PROJECTED O&M COST per MILE	O&M	Forestry Capital associated with Reclearing	TOTAL COST	COMMENTS
PKV	Johns Creek	Meta	3411801	167.0	17.0	\$18,000	\$306,000	\$24,480	\$330,480	Partial Reclear-This will complete the circuit
PKV	Keyser	Mullins	3402003	30.0	30.0	\$22,341	\$670,230	\$63,618	\$723,848	Full Circuit Reclear
PKV	Pikeville	Cedar Creek	3403003	28.0	28.0	\$20,000	\$660,000	\$44,800	\$604,800	Full Circuit Reclear
PKV	Pikeville	City	3403001	20.0	20.0	\$18,000	\$360,000	\$28,800	\$388,800	Full Circuit Reclear
PKV	Johns Creek	Raccoon	3411802	84.0	19.2	\$19,000	\$364,800	\$29,184	\$393,984	Partial Reclear-To be completed in 2016
PKV	Topmost	Caney	3407102	4.4	4.4	\$16,830	\$74,058	\$6,925	\$79,983	Full Circuit Reclear
PKV	Garrott	Garrett	3413401	38.0	38.0	\$19,000	\$722,000	\$67,760	\$779,760	Full Circuit Reclear
PKV	Beefhido	Beefhido	3451201	5.4	5.4	\$16,830	\$90,982	\$7,271	\$98,153	Full Circuit Reclear
PKV	Spring Fork	Single Phase	3404002	11.0	11.0	\$20,000	\$220,000	\$17,600	\$237,600	Full Circuit Reclear
PKV	Coleman	Peter Creek	3408303	40.0	40.0	\$19,000	\$760,000	\$60,800	\$820,800	Full Circuit Reclear
PKV	Coleman	Caloway	3408304	36.0	36.0	\$19,000	\$684,000	\$54,720	\$738,720	Full Circuit Reclear
PKV	Barronsho	Pounding Mill	3200204	15.0	15.0	\$18,000	\$270,000	\$21,600	\$291,600	Full Circuit Reclear
PKV	E.Prostonsburg	Lancer	3410602	25.0	25.0	\$19,000	\$475,000	\$38,000	\$513,000	Full Circuit Reclear
PKV	Falcon	Burning Fork	3401103	72.0	72.0	\$19,000	\$1,368,000	\$109,440	\$1,477,440	Full Circuit Reclear
PKV	Kenwood	Auxier	3409302	40.0	40.0	\$20,000	\$800,000	\$64,000	\$864,000	Full Circuit Reclear
ASH	Coalton	US 60	3003701	88.0	38.5	\$13,500	\$518,600	\$41,488	\$560,088	Full Circuit Reclear
ASH	Busseyville	Torchlight	3007904	94.0	94.4	\$15,000	\$1,415,400	\$113,232	\$1,528,632	Full Circuit Reclear
ASH	Big Sandy	Burnaugh-North	3000202	84.4	72.4	\$13,800	\$999,120	\$79,930	\$1,079,050	start Full Circuit Reclear-to be completed in 2016
ASH	Busseyville	Walbridge	3000303	95.0	12.0	\$12,000	\$144,000	\$11,520	\$155,520	finish Full Circuit Reclear
ASH	Highland	Flatwoods	3000902	13.9	13.9	\$12,000	\$167,280	\$13,382	\$180,662	Full Circuit Reclear
ASH	47th Street	Catlettsburg	3008003	26.8	26.8	\$15,000	\$401,850	\$32,148	\$433,998	Full Circuit Reclear
ASH	Howard Collins	Floyd	3001203	11.1	11.1	\$12,000	\$132,960	\$10,637	\$143,597	Full Circuit Reclear
ASH	Howard Collins	13th St	3001201	13.2	13.2	\$12,000	\$158,040	\$12,643	\$170,683	Full Circuit Reclear
ASH	Siloam	Distribution	3004301	22.0	5.0	\$12,000	\$60,000	\$4,800	\$64,800	finish Full Circuit Reclear
ASH	Highland	Russell	3000901	14.0	14.0	\$12,000	\$168,360	\$13,469	\$181,829	Full Circuit Reclear
ASH	Highland	Wurtland	3000903	13.4	13.4	\$12,000	\$160,320	\$12,826	\$173,146	Full Circuit Reclear
ASH	Wurtland	Wurtland	3110901	2.9	2.9	\$12,000	\$34,440	\$2,755	\$37,195	Full Circuit Reclear
ASH	Louisa	City	3001401	9.9	9.9	\$13,000	\$128,310	\$10,266	\$138,576	Full Circuit Reclear
ASH	10th St	6th St	3002101	0.6	0.6	\$12,000	\$7,680	\$614	\$8,294	Full Circuit Reclear
ASH	10th St	12th St	3002103	6.9	6.8	\$12,000	\$81,720	\$6,538	\$88,258	Full Circuit Reclear
ASH	10th St	10-3	3002104	2.9	3.0	\$12,000	\$36,400	\$2,832	\$39,232	Full Circuit Reclear
ASH	10th St	Midtown	3002105	3.7	3.7	\$12,000	\$44,280	\$3,542	\$47,822	Full Circuit Reclear
ASH	10th St	Front St	3002106	1.8	1.8	\$12,000	\$21,960	\$1,757	\$23,717	Full Circuit Reclear
ASH	Cannonsburg	Cannonsburg	3008701	64.0	5.0	\$12,000	\$60,000	\$4,800	\$64,800	Full Circuit Reclear
ASH	Ballofont	Town Center	300304	2.7	2.7	\$12,000	\$32,280	\$2,582	\$34,862	Full Circuit Reclear
HAZ	Whitesburg	Cowan	3309103	42.7	42.7	\$10,000	\$427,000	\$34,160	\$461,160	Full Circuit Reclear
HAZ	Bluegrass	Hazard	3300602	11.4	11.4	\$10,000	\$114,000	\$9,120	\$123,120	Full Circuit Reclear
HAZ	Leslie	Hyden	3303801	85.6	85.6	\$11,050	\$944,080	\$75,526	\$1,019,606	Full Circuit Reclear
HAZ	Softshoal	Leburn	3420002	49.5	44.0	\$10,000	\$440,000	\$35,200	\$475,200	begin Full Circuit Reclear
HAZ	Vicco	Jeff	3309302	81.6	18.0	\$10,000	\$180,000	\$14,400	\$194,400	begin Full Circuit Reclear-2nd Zone
HAZ	Haddix	Canoo	3301502	122.5	20.0	\$10,000	\$200,000	\$16,000	\$216,000	begin Full Circuit Reclear-2nd Zone
HAZ	Haddix	Quicksand	3301501	210.4	12.3	\$10,000	\$123,000	\$9,840	\$132,840	begin Full Circuit Reclear-Hwy 476
RECLEARING TOTALS			Totals		986		\$14,925,050	\$1,194,004	\$16,119,054	

## Kentucky Power Forestry Plan Terminology

### Feeder Breaker Zone

Synonymous with Station Zone. Segment of line extending from the circuit station breaker to the first operating device. This zone includes unfused taps, but does not include fused taps.

### Full Circuit Reclear

Entire circuit from the station breaker to the end of the circuit.

### Recloser Zone

Line segment extending from a specific recloser to the next operating device. This zone includes unfused taps, but does not include fused taps.

### Partial Reclear

A portion of the circuit is planned for reclearing.

### BID JOB

Planned reclearing work released as an open, lump-sum bid for competing contractors.

### Finish Full Circuit Reclear

Reclearing scheduled to complete Full Circuit Reclear that began in the previous year.

### 2<sup>nd</sup> Recloser Zone

Line segment beginning at the second operating device beyond the station circuit breaker extending to the next operating device. This zone includes unfused taps, but does not include fused taps.

### Quality-of-Service Work

Tree trimming or removal work scheduled for a line segment to address reliability issues. This work does not conform to reclearing specifications (e.g.-Hotspotting).

### Cycle Buster Tree

A tree that has to be revisited before the circuit is due for its next cycle trim.

<b><i>DISTRIBUTION VEGETATION MANAGEMENT SPRAY PLAN KYPCO 2015</i></b>		
<b>DISTRICT</b>	<b>ACRES</b>	<b>O&amp;M BUDGET</b>
PKV	750	\$360,000
HAZ	900	\$432,000
ASH	450	\$216,000
<b>Totals</b>	<b>2100</b>	<b>\$1,008,000</b>

Kentucky Power Company 2015 Distribution Vegetation Management O&M Forestry Plan-Summary				
<i>ACTIVITY</i>	<i>Total O&amp;M</i>	<i>Pikeville</i>	<i>Hazard</i>	<i>Ashland</i>
RECLEARING	\$14,925,050	\$7,724,970	\$2,428,080	\$4,772,000
TOTAL SPRAY	\$1,008,000	\$360,000	\$432,000	\$216,000
AERIAL SAW	\$0	\$0	\$0	\$0
CONTRACT FORESTERS	\$240,000	\$100,000	\$60,000	\$80,000
STUMP GRINDING PROGRAM	\$0	\$0	\$0	\$0
TREE REPLACEMENT PROGRAM	\$0	\$0	\$0	\$0
KPI INCENTIVE PROGRAM - Contractor Field Per	\$350,000	\$166,000	\$82,000	\$102,000
INTERNAL-Existing KY Forestry Staff	\$256,002	\$85,334	\$85,334	\$85,334
Sub Total	\$16,779,052	\$8,436,304	\$3,087,414	\$5,255,334
Unscheduled/Reactive Maintenance	\$458,913	\$173,913	\$250,000	\$35,000
Total O&M	\$17,237,965	\$8,610,217	\$3,337,414	\$5,290,334
September 30, 2009 O&M Test Year Level	\$7,237,965			
Settlement O&M Incremental Level	\$10,000,000			
Total Annual O&M Distribution Vegetation	\$17,237,965			
Forestry Capital	\$2,550,000			
Total KYPCO Forestry Budget	\$19,787,965			
	Reclearing			
Pikeville	401			
Hazard	234			
Ashland	351			
Totals	986			

### Ashland District Plan for completing full circuit re-clears

FULL CIRCUIT RECLEAR - Ashland					2016		2017		2018	
Area	Circuit Number	Station	Circuit	Overhead Primary Circuit Miles	Miles Planned	Projected O&M Cost	Miles Planned	Projected O&M Cost	Miles Planned	Projected O&M Cost
ASHLAND	000105	Ashland	25-1	1.67		0	1.67	19,292		0
ASHLAND	000103	Ashland	25-14	1.30		0	1.3	15,078		0
ASHLAND	000104	Ashland	25-2-3	0.20		0	0.2	2,310		0
ASHLAND	000101	Ashland	25-25	1.37		0	1.37	15,826		0
ASHLAND	000102	Ashland	25-29	6.82		0		0	6.82	78,785
ASHLAND	116703	Belhaven	Argillite	33.61	33.61	398,263	0	0		0
ASHLAND	116701	Belhaven	Diederich	8.91		0	8.91	102,928		0
ASHLAND	116702	Belhaven	Indian Run	25.78		0	25.78	297,811		0
ASHLAND	000303	Bellefonte	Bellefonte	56.19		0	0	0	56.19	649,107
ASHLAND	000302	Bellefonte	Flatwoods	3.24		0	3.24	37,428		0
ASHLAND	000202	Big Sandy	Burnaugh - North	84.45	34.05	393,346		0		0
ASHLAND	007903	Busseyville	Louisa	42.83		0		0	42.83	494,772
ASHLAND	007905	Busseyville	Maltie	92.14	62.8	725,456	29.34	338,936		0
ASHLAND	003702	Coalton	Cannonsburg	23.25	23.25	268,584		0		0
ASHLAND	003703	Coalton	Trace Creek	82.47	82.47	952,693		0		0
ASHLAND	000601	Grahn	Pleasantville	45.31		0	0	0	45.31	523,421
ASHLAND	116102	Grayson	Dixie Park	32.03	32.03	370,011		0		0
ASHLAND	116101	Grayson	Lansdowne	36.40	36.4	420,493		0		0
ASHLAND	000802	Hayward	Lawton	36.31		0	30.31	350,141	6	69,312
ASHLAND	001001	Hitchins	Denton	46.21		0	36.63	423,150	9.58	110,668
ASHLAND	001004	Hitchins	EK Road	31.43	0	0		0	31.43	363,079
ASHLAND	001003	Hitchins	Grayson	48.43		0		0	48.43	559,463
ASHLAND	001002	Hitchins	Willard	151.28		0	11	127,072	95	1,097,440
ASHLAND	001102	Hoods Creek	Rural	46.96	40	462,080		6.96	80,402	0
ASHLAND	001204	Howard Collins	Summitt	24.66		0	24.66	284,872		0
ASHLAND	200171	Kenova	Callettsburg	0.17		0		0	0.17	1,964
ASHLAND	001402	Louisa	High Bottom	13.22		0	13.22	152,717		0
ASHLAND	103201	Mansbach	Shredder	0.01		0		0	0.01	116
ASHLAND	103103	Olive Hill	West Carter Elem	38.04		0	38.04	439,438		0
ASHLAND	117601	Princess	Meade Station	45.00		0	45	519,840		0
ASHLAND	117602	Princess	Rt 190	22.51		0	22.51	260,036		0
ASHLAND	101701	Raceland	CSX	0.01		0		0	0.01	116
ASHLAND	010503	Russell	Ashland Oil	1.11		0		0	1.11	12,823
ASHLAND	010602	Russell	Bear Run	12.41		0	12.41	143,360		0
ASHLAND	004302	Siloam	Hooker Chemical	0.14		0		0	0.14	1,617
ASHLAND	206403	South Neal	Buchanan	38.76		0	38.76	447,756		0
ASHLAND	113601	Worthington	CSX	0.01		0		0	0.01	116
				<b>2,456.71</b>	<b>344.61</b>	<b>3,960,935</b>	<b>351.31</b>	<b>4,058,333</b>	<b>343.04</b>	<b>3,962,798</b>

### Hazard District Plan for completing full circuit re-clears

<b>FULL CIRCUIT RECLEAR - Hazard</b>					<b>2016</b>		<b>2017</b>		<b>2018</b>	
<b>Area</b>	<b>Circuit Number</b>	<b>Station</b>	<b>Circuit</b>	<b>Overhead Primary Circuit Miles</b>	<b>Miles Planned</b>	<b>Projected O&amp;M Cost</b>	<b>Miles Planned</b>	<b>Projected O&amp;M Cost</b>	<b>Miles Planned</b>	<b>Projected O&amp;M Cost</b>
HAZARD	300601	Bluegrass	Walkertown	28.71	2	21,644		0		0
HAZARD	301101	Chavies	Chavies	68.51	34	367,948	35	378,770	0	0
HAZARD	308601	Collier	Upper Rockhouse	19.75		0	20	216,440	0	0
HAZARD	401302	Fleming	McRoberts	30.21	30.2	326,824		0	0	0
HAZARD	401301	Fleming	Neon	20.31	20.1	217,522		0	0	0
HAZARD	310502	Haddix	Canoe	124.53	20	216,440	88	952,336	17	183,974
HAZARD	310501	Haddix	Quicksand	212.06	54	584,388	40	432,880	104	1,125,488
HAZARD	302703	Hazard	Hazard	10.97		0		0	11	119,042
HAZARD	309901	Slemp	Defeated Creek	22.97		0	23	248,906		0
HAZARD	309902	Slemp	Leatherwood	44.57	15	162,330	30	324,660		0
HAZARD	420002	Soft Shell	Leburn	49.54	6	64,932		0		0
HAZARD	420001	Soft Shell	Vest	65.68	56	606,032	0	0		0
HAZARD	309302	Vicco	Jeff	83.27	0	0		0	62	670,964
HAZARD	309301	Vicco	Red Fox	48.56	0	0		0	49	530,278
				<b>2,616.93</b>	<b>237.30</b>	<b>2,568,061</b>	<b>236.00</b>	<b>2,553,992</b>	<b>243.00</b>	<b>2,629,746</b>

### Pikeville District Plan for completing full circuit re-clears

FULL CIRCUIT RECLEAR - Pikeville					2016		2017		2018	
Area	Circuit Number	Station	Circuit	Overhead Primary Circuit Miles	Miles Planned	Projected O&M Cost	Miles Planned	Projected O&M Cost	Miles Planned	Projected O&M Cost
PIKEVILLE	200201	Barrenshe	Freeburn	11.69		0	13	203,918		0
PIKEVILLE	200203	Barrenshe	Slate Branch	5.61		0		0	6	94,116
PIKEVILLE	200301	Belfry	Belfry	17.39		0	17	266,662		0
PIKEVILLE	200302	Belfry	Toler	29.00		0		0	29	454,894
PIKEVILLE	400302	Betsy Layne	Tram	34.52		0	35	549,010		0
PIKEVILLE	400303	Betsy Layne	Harold	45.67		0	24	376,464	24	376,464
PIKEVILLE	160502	Borderland	Chattaroy	10.12		0	0	0	10	156,860
PIKEVILLE	411401	Dewey	Inez	170.99	171	2,682,306		0		0
PIKEVILLE	410601	East Prestonsburg	Prestonsburg	7.07	7.1	111,371		0		0
PIKEVILLE	400902	Elkhorn City	Grassy	7.91	4	62,744		0		0
PIKEVILLE	401102	Falcon	Salyersville	43.59		0		0	44	690,184
PIKEVILLE	413402	Garrett	Lackey	34.66		0	35	549,010		0
PIKEVILLE	401703	Henry Clay	Ashcamp	43.76		0		0	44	690,184
PIKEVILLE	401702	Henry Clay	Regina	109.60	11	172,546	99	1,552,914		0
PIKEVILLE	401801	Index	Distribution	54.07		0	13	203,918	41	643,126
PIKEVILLE	401802	Index	Hospital	19.68		0		0	19	298,034
PIKEVILLE	411801	Johns Creek	Meta	166.41	17	266,662	58	909,788		0
PIKEVILLE	411002	Johns Creek	Raccoon	62.53	65	1,019,590		0		0
PIKEVILLE	409301	Kenwood	West Van Lear	19.00		0	19	298,034		0
PIKEVILLE	402003	Keyser	Thompson Road	17.00		0	17	266,662		0
PIKEVILLE	402002	Keyser	Stone Coal	42.89	37	580,382		0		0
PIKEVILLE	408402	Kimper	Grapevine	35.39		0	0	0	35	549,010
PIKEVILLE	420103	Mayo Trail	Davis Branch	33.10		0		0	33	517,638
PIKEVILLE	420102	Mayo Trail	Euclid	19.60		0		0	20	313,720
PIKEVILLE	420101	Mayo Trail	Nippa	22.50		0		0	23	360,778
PIKEVILLE	402204	McKinney	Maytown	35.89	36	564,696		0		0
PIKEVILLE	402501	Middle Creek	Distribution	5.73	6	94,116		0		0
PIKEVILLE	417602	New Camp	ARH	21.85		0	9	141,174	8	125,489
PIKEVILLE	403301	Prestonsburg	City	6.68	7	109,602		0		0
PIKEVILLE	403701	Russell Fork	Little Beaver	11.17	14	219,604		0		0
PIKEVILLE	403801	Second Fork	Distribution	7.13		0		0	7	109,602
PIKEVILLE	404301	Sidney	Big Creek	29.11	29	454,894		0		0
PIKEVILLE	410501	South Pikeville	Pikeville	9.92		0		0	10	156,860
PIKEVILLE	201001	Tomwalkin	Distribution	28.77		0		0	29	454,894
PIKEVILLE	407101	Topmost	Dema	36.85		0	36.85	578,029		0
PIKEVILLE	407103	Topmost	Kite	24.98		0	24.98	391,836		0
PIKEVILLE	409001	West Paintsville	Paintsville	3.44		0		0	3.4	53,332
PIKEVILLE	409003	West Paintsville	Plaza	22.19		0		0	23	360,778
				2,941.75	404.10	6,338,713	400.83	6,287,419	408.40	6,406,162