



**KCP&L Greater Missouri Operations Company
2015 Reliability Performance Report**

Annual reporting completed pursuant to 4 CSR 240-23.010

April 29, 2016

Table of Contents

4 CSR 240.23.010 (1), (2), (3), (4), (5) – Reliability Statistics 2015	2
Table 1: KCP&L Greater Missouri Operations Company Reliability Indices	2
4 CSR 240-23.010 (6), (7) – Highest 5% SAIFI Circuits Assessment.....	2
Table 2: Highest 5% SAIFI Circuit	3-4
CSR 240-23.010 (8) - Multi Year Worst Performing Circuit Reporting	4
Table 3: Multi-Year Worst Performing Circuit Report	5

4 CSR 240.23.010 (1)(A), (B), (C), (D), and (3) – Reliability Statistics 2015

Table 1: KCP&L Greater Missouri Operations Co. Reliability Indices

2015		MPS	SJLP	GMO
Total Customers (Meter Counts)		246,270	63,770	310,040
Adjusted	SAIFI	1.20	1.19	1.20
	SAIDI	105.24	123.01	108.91
	CAIDI	87.63	103.81	90.89
	CAIFI	1.35	1.16	1.31
Unadjusted	SAIFI	1.60	1.34	1.55
	SAIDI	220.25	143.16	204.37
	CAIDI	137.48	106.52	131.90
	CAIFI	1.37	1.16	1.34

16-May, 17-May, 26-Jun, 27-Jun, 28-Jun, 1-Jul, 2-Jul, 6-Jul, 7-Jul, 20-Jul, 11-Nov, 12-Nov, are excluded from the KCP&L-GMO adjusted 2015 statistics per IEEE 1366 in conjunction with storm begin and end dates.

4 CSR 240-23.010 (6), (7) – Highest 5% SAIFI Circuits Assessment

Patrols and repairs were completed in the 3rd and 4th Quarters of 2015. For circuits where an analysis is being completed, a systematic patrol plan is developed based on identified outage causes. When and where feasible, repairs are made during the initial patrol. Additionally, KCP&L Engineering worked with an external provider to perform predictive diagnostic testing (Ultrasound) on some recurring problems, and issued corrective action jobs with scheduled completion during the 2nd Quarter of 2016. Tree patrols were performed where indicated and spot trimming was completed as needed. Other maintenance, modifications or upgrades not completed during the initial patrol are scheduled for completion by the 2nd Quarter of 2016. Table 2 lists circuits identified as having the highest 5% of adjusted SAIFI statistics in 2015 as set forth in 4 CSR 240.23.010 (6).

Table 2: Highest 5% SAIFI Circuits

Center	Circuit ID	Substations ID	Action Plan	SAIFI	SAIDI
St Joseph	42731	427	Crew patrolled circuit and replaced damaged equipment, trimmed trees and cleared vegetation.	3.88	319.70
Belton	20311	203	Contractor ultrasound tested and patrolled circuit and crew replaced damaged equipment, trimmed trees, varmint proofed equipment and installed line arresters at various locations on the circuit.	3.86	370.04
Blue Springs	21423	214	Service personnel patrolled circuit and crew installed line arresters and trimmed trees.	3.79	936.22
Lee's Summit	37622	376	Contractor ultrasound tested and patrolled circuit, crew trimmed trees and replaced damaged equipment due to weather.	3.59	504.92
St Joseph	41641	416	Contractor ultrasound tested and patrolled circuit. Crew replaced damaged equipment, replaced conductor and varmint proofed equipment.	3.51	353.98
Platte City	32111	321	Service personnel patrolled circuit. Crew replaced small conductor on a lateral due to weather and installed line arresters.	3.50	225.11
Lee's Summit	32611	326	Contractor ultrasound tested and patrolled circuit. Crew replaced damaged equipment, trimmed trees and cleared vegetation issues.	3.48	618.68
St. Joseph	39511	395	Crew patrolled circuit and replaced damaged equipment, replaced conductor on lateral due to weather and trimmed trees.	3.36	353.53
Nevada	30711	307	Contractor ultrasound tested and patrolled circuit. Crew replaced various equipment found through testing, trimmed trees and installed additional line arresters on this circuit.	3.28	779.13
Clinton	21711	217	Crew patrolled circuit, replaced damaged equipment and trimmed trees	3.12	483.79
Lee's Summit	37631	376	Crew patrolled circuit, trimmed trees and varmint proofed equipment	2.92	257.02
St Joseph	38211	383	Contractor ultrasound tested and patrolled circuit and crew replaced damaged equipment.	2.83	305.18
Liberty	29112	291	Crew personnel patrolled circuit, replaced damaged equipment and trimmed trees.	2.72	47.35

Table 2: Highest 5% SAIFI Circuits Continued

Center	Circuit ID	Substations ID	Action Plan	SAIFI	SAIDI
Blue Springs	24513	245	Crew patrolled circuit and replaced damaged equipment, trimmed trees and varmint proofed equipment.	2.38	300.57
Trenton	21611	216	Contractor ultrasound tested and patrolled circuit and crew replaced damaged equipment.	2.17	578.79
St Joseph	42612	426	Crew patrolled circuit and replaced damaged equipment due to weather events, replaced conductor on laterals and trimmed trees	2.04	621.64

16-May, 17-May, 26-Jun, 27-Jun, 28-Jun, 1-Jul, 2-Jul, 6-Jul, 7-Jul, 20-Jul, 11-Nov, 12-Nov, are excluded from the KCP&L-GMO adjusted 2015 statistics per IEEE 1366 in conjunction with storm begin and end dates.

CSR 240-23.010 (8) – Multi-Year Worst Performing Circuit Reporting

The referenced rule requires the plan and schedule to lower SAIFI metrics on circuits that are listed on the highest 5% SAIFI list for two out of three of the preceding years. Table 3 reflects the action plans implemented and completed in 2015 to lower the SAIFI metric for these circuits. Additional patrols and root-cause analysis, where required, will be completed in 2nd Quarter of 2016.

Table 3: Multi-Year Worst Performing Circuit Report

Year	Centers	Circuit ID	Substations	Action Plan	SAIFI	SAIDI
2013 2014 2015	Belton	20311	203	Contractor ultrasound tested and patrolled circuit and crew replaced damaged equipment, trimmed trees, varmint proofed equipment and installed line arresters at various locations on the circuit.	3.86	370.04
2013 2014	STJO	42611	426	Results from previous year replacements and repairs were to trim trees, varmint proof equipment, replace insulators and line arresters.	2.01	157.15
2014 2015	STJO	41641	416	Contractor ultrasound tested and patrolled circuit. Crew replaced damaged equipment, replaced conductor and varmint proofed equipment.	3.51	353.98
2013 2014	HNRT	31312	313	Results from previous year replacements and repairs were to trim trees, varmint proof equipment, replace insulators and line arresters.	0.28	19.25
2014 2015	Platte City	32111	321	Service personnel patrolled circuit. Crew replaced small conductor on a lateral due to weather and installed line arresters.	3.50	225.11