



**KCP&L Greater Missouri Operations Company
2009 Reliability Performance Report**

Annual reporting completed pursuant to 4 CSR 240-23.010 *et seq.*

April 30, 2010

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4 CSR 240.23.010 (1-5) – RELIABILITY STATISTICS 2009

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

Year		2008			2009		
Service Area		MPS	SJLP	GMO	MPS	SJLP	GMO
Total Customer Meter Counts		243,983	65,438	309,421	244,866	65,512	310,378
Normalized per IEEE 1366 Standard in Conjunction with Storm begin/end dates	SAIFI	1.15	1.96	1.34	1.07	1.12	1.08
	SAIDI	98.41	122.11	114.49	111.33	98.37	108.59
	CAIDI	85.05	61.59	84.94	104.36	87.71	100.70
	CAIFI	1.34	3.21	1.67	1.21	1.54	1.38
Actual	SAIFI	1.41	2.44	1.64	1.30	1.40	1.30
	SAIDI	164.18	165.14	164.38	167.08	126.62	158.54
	CAIDI	115.7	67.53	100.47	128.92	90.69	120.36
	CAIFI	1.37	3.24	1.67	1.32	1.75	1.54

4 CSR 240-23.010 (6), (7) – HIGHEST 5% SAIFI CIRCUITS ASSESSMENT

Table 2 lists circuits identified as having the highest 5% of normalized SAIFI statistics in 2009, as set forth in 4 CSR 240.23.010 (6). Three circuits—WH130, 100-501 and 282-501—were identified as poor performers in the second half of 2008. Patrols and repairs were completed on these prior to year end 2009. For the balance of circuits listed, KCP&L continues to work on them and plans to be finished by year-end 2010. On circuits where analysis is being performed, a systematic patrol plan is developed based on individual outage causes and, when possible, immediate repairs made during the initial patrols. Tree patrols were performed and, where required, spot trimming completed. Additional identified repairs, modifications, or upgrades not completed during the initial patrol will be completed in 2010.

Engineering will perform root cause analysis on chronic problems and issue corrective action jobs for construction when identified causes cannot be reduced by patrols and repairs. Engineered corrective action jobs will also be completed in 2010.

Table 2: Highest 5% SAIFI Circuits

Circuit ID	Substation	Action	SAIFI	SAIDI
216-503	216	Installed Lightning Arresters, varmint guards, replace poles, pin insulator, deadend bells	5.94	362.85
480-503	480	Varmint guards, tree trimming, installed arresters	5.41	384.86
398-505	398	Installed arresters, varmint guards, and tree trimming	4.93	541.68
658-502	658	Installed new substation breakers, added varmint proofing inside of substation, replace insulators, arresters, tree trimming	4.75	623.16
100-501	100	KCP&L Kansas Source causing this circuit to be on the MO WPC. Causes found on the source side of the system was ID and performed included new installed lightning protection	3.90	370.44
912-510	912	Varmint guards, repair galloping condition and tree trimming	3.48	172.92
216-502	216	Work done-Installed varmint guards & switches, replaced cutouts, jumpers	3.41	198.51
048-501	48	Rebuilt 34Kv subtransmission from Garden City to Blairstown	3.28	428.67
WH130	486	4th Qtr 2008 and 1st Qtr 2009 work continues setting poles, install new insulators, new 34Kv arresters	3.09	213.73
882-502	882	Varmint guards and installed arresters	3.06	296.94
282-501	282	Installed 20 new arrester installations-Tree trimming completed	3.04	346.76
398-502	398	Car hit pole, varmint guards, tree trimming	3.04	232.77
216-501	216	Installed varmint guards, & switches, replaced cutouts, dead end bells	3.00	244.31
608-501	608	Varmint guards	2.97	514.08
658-503	685	Installed new arresters, replaced cutouts, crossarms, varmint guard 3rd and 4th Qtr of 2009	2.80	346.47
ML175	486	Repair overhead wires keep from galloping, Lightning protection installed arresters	2.78	259.05
402-501	402	Tree trimming and 69Kv issues fixed	2.75	520.80
018-501	18	Repaired 69Kv issue, lightning arresters, tree trimming, and transformers	2.75	346.15
422-513	422	Repair galloping condition, tree trimming, car hit pole/replaced pole and installed lightning arresters	2.68	280.90
534-502	535	Added arresters on 34Kv system to protect against lightning	2.65	259.58
589-5506	589	Install lightning arresters, repaired galloping condition, varmint guards	2.63	281.04
170-501	170	Installed lightning arresters and repaired galloping conditions	2.60	748.16
534-503	534	Added arresters on 34Kv system to protect against lightning	2.52	262.65
54	485	Varmint guard, tree trimming, installed lightning arresters,	2.47	389.73