



**KCP&L Greater Missouri Operations Company
2012 Reliability Performance Report**

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

April 30, 2013

Table of Contents

4 CSR 240.23.010 (1), (2), (3), (4), (5) – Reliability Statistics 2012	2
Table 1: KCP&L Greater Missouri Operations Co. 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 Reporting.....	4

4 CSR 240.23.010 (1), (2), (3), (4), (5) – Reliability Statistics 2012

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

2012		MPS	SJLP	GMO
Total Customers (Meter Counts)		242,752	64,193	306,945
Adjusted	SAIFI	0.61	0.52	0.59
	SAIDI	66.85	42.88	61.83
	CAIDI	109.42	81.87	104.33
	CAIFI	1.017	1.01	1.013
Unadjusted	SAIFI	0.94	0.80	0.91
	SAIDI	117.79	86.35	110.70
	CAIDI	124.61	107.54	121.46
	CAIFI	1.064	1.025	1.057

Event days excluded from the KCP&L-GMO adjusted 2012 statistics: August 8, 2012, December 20, 2012

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

Table 2 lists circuits identified as having the highest 5% of adjusted SAIFI statistics in 2012 as set forth in 4 CSR 240.23.010 (6). Patrols and repairs scheduled were completed the 3rd Quarter 2012. For circuits where an analysis is being completed, a systematic patrol plan is developed based on identified outage causes and, when and where feasible, repairs made during the initial patrol. Tree patrols were performed and spot trimming completed. Other maintenance, modifications or upgrades not completed during the initial patrol were completed by the 2nd Quarter 2013. Additionally, engineering will perform root cause analysis on recurrent problems and issue corrective action jobs to be completed by the end of 2013.

Table 2: Highest 5% SAIFI Circuits

Center	Circuit ID	Substations ID	Action Plan	SAIFI	SAIDI
Maryville/Mound City	43021	Tarkio (430)	Replaced Poles\Hardware	4.59	537.22
Warrensburg	21911	Calhoun (219)	Replaced Poles\ Repaired Damage OH wire	3.82	249.17
Blue Springs	28122	Lakewood (281)	Repaired Underground Cables\Dig Ins	3.71	85.59
Clinton	31511	Osceola (315)	Trimmed Trees	3.53	259.43
St. Joseph	42612	Rushville (426)	Trimmed Trees	3.21	428.12
Lee's Summit	33011	Raytown No. 1 (330)	Replaced Poles\Arrester/Trimmed trees	2.93	152.44
St. Joseph	42611	Rushville (426)	Repaired OH wire\ Trimmed trees	2.93	343.23
Lee's Summit	27711	Lake Winnebago (277)	Repaired Underground Cables	2.80	140.39
St. Joseph	42511	Rosecrans (425)	Repaired OH wire\Installed lightning arresters\Trimmed trees	2.79	519.78
Liberty	29011	Liberty (290)	Underground Cables\OH wire connectors	2.54	52.84
Sedalia	37511	Warsaw (375)	Repaired OH wire\ install lightning arresters and trimmed trees	2.46	179.35
Belton	20312	Adrian (203)	Trimmed trees\ Installed Arresters\Replaced Pole Insulators\Pole	2.43	424.84
Clinton	22313	Clinton Plant (223)	Replaced Poles\Trimmed Trees\ Varmint Proof -Animal Raptor\	2.34	69.75
Sedalia	37521	Warsaw (375)	Repaired OH wire\Varmint Proof - Animals\Replaced OH connectors\Trimmed trees	2.31	270.23
Maryville/Mound City	41311	Mound City (413)	Human Factor-Car\Plan switching to make repairs when car hit pole	2.23	248.69
Blue Springs	21422	Blue Springs East (214)	Replaced Switches \Plan switching to make repairs	2.12	119.41

Event days excluded from the KCP&L-GMO adjusted 2012 statistics: August 8, 2012, December 20, 2012.

4 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. Circuits 31911 and 31912 have met this reporting requirement. Table 3 reflects the work plan and schedule to lower the SAIFI metric for these circuits. The work plan was 100% completed mid-year 2012. We are monitoring those circuits and will report reliability improvements at the end of 2013.

Table 3: Multi-Year Worst Performing Circuit Reporting						
Year	Centers	Circuit ID	Substations	Action Plan	SAIFI	SAIDI
2010 2011	Nevada	10011	Nevada	Replace equipment, pole top hardware and poles	5.57	1,297.11
2010 2011	Trenton	21611	Trenton	Replace arresters, pole top hardware, and trim trees	3.91	811.03
2010 2011 2012	Northland	31911 31912	Platte City	Planned Work and Schedules for Circuits 31911 and 31912 – Completed in 2011	7.09 2.94	620.17 278.67
Completed Jan 2011	Northland	31911 31912	Platte City	Install Equipment: S&C Tripsaver Dropout Reclosers added to overhead laterals with recurring interruptions in Platte City. Completed in 2011	7.09 2.94	620.17 278.67
Completed Jan 2011	Northland	31911 31912	Platte City	Install Equipment: Varmint proofing for Main St. west of 2 nd St. customers. Completed in 2011	7.09 2.94	620.17 278.67
Completed June 2011	Northland	31911 31912	Platte City	Balance Loads and Reduce Feeder Exposure: Transfer approximately 11MW from Circuit 503 (31912) to Circuit 502 (31911). Completed in 2011	7.09 2.94	620.17 278.67
Completed August 2012	Northland	31911 31912	Platte City	Install Automation: Two 34kV Cooper Nova automated reclosers will allow remote switching to toggle Weston loads between 31912 and 31911. Completed in 2012	7.09 2.94	620.17 278.67
Completed August 2012	Northland	31911 31912	Platte City	Continue analysis of recurring interruptions on laterals Completed in 2012	7.09 2.94	620.17 278.67
Completed July 2011	Northland	31911 31912	Platte City	Install Automation: Two automated fault indicators to assist operations to quickly identify OCR lockouts of two laterals feeding City of Weston. Completed in 2012	7.09 2.94	620.17 278.67

Table 3: Multi-Year Worst Performing Circuit Reporting

Year	Centers	Circuit ID	Substations	Action Plan	SAIFI	SAIDI
Completed Study August 2012	Northland	31911 31912	Platte City	Review potential conductor issues on line segment north of existing OCR 501 to Weston at First St. & Hwy 371. (266 Aluminum Conductor—Steel Reinforced Cable 93% capacity at peak.)-Results; We determined the appropriate size and confirm the capacity of the wire at that location due to the newly transferred Weston load onto that line section. Completed in 2012	7.09 2.94	620.17 278.67
Study Completed –No regulators were needed Oct 2012	Northland	31911 31912	Platte City	Install Equipment: Upgrade 219 Amp voltage regulator south of Hwy 371 on First St. in anticipation of new loadings of 255Amps. Results; The existing voltage regulator was sufficiently sized for the expected newly transferred load. The new load on the regulator was going to be less than originally anticipated according to our load flow model and the existing regulator size was deemed sufficiently sized for the proposed re-configuration of the feeders 31911 & 31912. In fact, this regulator is the same size as the regulator that served the Weston branch of the feeder in the old feeder configuration. Completed in 2012	7.09 2.94	620.17 278.67

Table 3: Multi-Year Worst Performing Circuit Reporting

Year	Centers	Circuit ID	Substations	Action Plan	SAIFI	SAIDI
Completed July 2011	Northland	31911 31912	Platte City	Install Automation: Two automated fault indicators to assist operations to quickly identify OCR lockouts of two laterals feeding City of Weston. Completed in 2012	7.09 2.94	620.17 278.67
Completed Study August 2012	Northland	31911 31912	Platte City	Review potential conductor issues on line segment north of existing OCR 501 to Weston at First St. & Hwy 371. (266 Aluminum Conductor—Steel Reinforced Cable 93% capacity at peak.)-Results; We determined the appropriate size and confirm the capacity of the wire at that location due to the newly transferred Weston load onto that line section. Completed in 2012	7.09 2.94	620.17 278.67
Study Completed –No regulators were needed Oct 2012	Northland	31911 31912	Platte City	Install Equipment: Upgrade 219 Amp voltage regulator south of Hwy 371 on First St. in anticipation of new loadings of 255Amps. Results; The existing voltage regulator was sufficiently sized for the expected newly transferred load. The new load on the regulator was going to be less than originally anticipated according to our load flow model and the existing regulator size was deemed sufficiently sized for the proposed re-configuration of the feeders 31911 & 31912. In fact, this regulator is the same size as the regulator that served the Weston branch of the feeder in the old feeder configuration. Completed in 2012	7.09 2.94	620.17 278.67