



**KCP&L Greater Missouri Operations Company  
2014 Reliability Performance Report**

Annual reporting completed pursuant to 4 CSR 240-23.010

April 30, 2015

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#### **4 CSR 240.23.010 (1)(A), (B), (C), (D), and (3) – Reliability Statistics 2014**

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

2014		MPS	SJLP	GMO
Total Customers (Meter Counts)		245,402	64,051	309,453
Adjusted	SAIFI	1.33	1.69	1.40
	SAIDI	138.89	160.11	143.29
	CAIDI	104.74	94.57	102.08
	CAIFI	1.14	1.20	1.15
Unadjusted	SAIFI	1.50	1.82	1.50
	SAIDI	176.81	191.57	176.81
	CAIDI	118.11	105.03	118.11
	CAIFI	1.15	1.19	1.16

June 4, June 15, July 7, August 6, and August 31 are excluded from the KCP&L-GMO adjusted 2014 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 3<sup>rd</sup> and 4<sup>th</sup> Quarters 2014. 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 are made during the initial patrol. Tree patrols were performed and where indicated spot trimming was completed. Other maintenance, modifications or upgrades not completed during the initial patrol are scheduled for completion by the 2<sup>nd</sup> Quarter 2015. Additionally, Engineering performed root cause analyses on recurring problems and issued corrective action jobs with scheduled completion during 2<sup>nd</sup> Quarter of 2015. Table 2 lists circuits identified as having the highest 5% of adjusted SAIFI statistics in 2014 as set forth in 4 CSR 240.23.010 (6).

**Table 2: Highest 5% SAIFI Circuits**

<b>Center</b>	<b>Circuit ID</b>	<b>Substations ID</b>	<b>Action Plan</b>	<b>SAIFI</b>	<b>SAIDI</b>
PLCT	31911	319	Replace Reclosers at 4 locations/Perform Coordination Study and verified lateral fuse sizes/Ultrasonnd Inspections and replace insulators/Tree trimming	6.79	706.08
HNRT	33322	333	Replace recloser/Install line arresters/jumpers/Trim trees	5.09	390.25
TRTN	21612	216	Pole replacements/Install lightning line arresters/Tree trimming	5.00	646.72
BLSP	21521	215	Replace lightning arresters/Infrared and replace jumpers connectors	3.98	584.05
NVD	35012	350	Replace jumper connectors and jumpers/In-Recloser repair/Install line lightning arresters	3.83	1131.85
HNRT	28512	285	Replace lightning arresters/replace jumper connectors/Varmint proof equipment	3.70	408.95
BLTN	20311	203	Replace lightning line arresters and fuse mounts	3.53	238.81
MRYV	40782	407	Trim trees/Replace fuse mounts/Varmint proof equipment	3.37	98.58
BLSP	35111	351	Replace poles and Insulators/Repair overhead conductors/Replace fuse mounts/Varmint proof equipment	3.20	476.35
STJO	40122	401	Replace Insulators/Varmint proof equipment/Replace and install lightning arresters	3.10	247.11
STJO	42611	426	Varmint proof equipment/ Replace lighting arresters/Insulators/Trim trees	2.97	308.18
STJO	41611	416	Trim trees/ Replace lightning arresters/Repair overhead conductors/Varmint proof equipment	2.88	141.85
STJO	41641	416	Trim trees/ Replace lighting arresters/Repair overhead conductors, jumper connectors, and insulators	2.86	146.67

Center	Circuit ID	Substations ID	Action Plan	SAIFI	SAIDI
STJO	41621	416	Trim trees/Replace Insulators, Jumper connectors/Repair overhead conductors/Varmint proof equipment	2.85	292.68
STJO	38241	382	Varmint proof equipment/ Trim trees/Repair overhead wires and insulators	2.48	166.32
HNRT	31311	313	Replace lightning arresters/Trim trees/Replace regulator station/Replace poles/Repair overhead conductors	2.46	413.58
PLCT	32111	321	Repair insulators/Trim trees/Replace lightning arresters/Varmint proof equipment	2.44	303.94
HNRT	28511	285	Install line arresters/Varmint proof equipment/Replaced poles/Trim trees	2.42	218.01
HNRT	31312	313	Replace fuse mounts, Replace and install line lightning arresters, and Varmint proof equipment	2.39	1309.06
SDL	34212	342	Repair insulators/Trim trees/Replace lightning arresters/Varmint proof equipment	2.24	102.32
STJO	40413	404	Repair insulators and overhead wires	2.14	84.48

June 4, June 15, July 7, August 6, and August 31 are excluded from the KCP&L-GMO adjusted 2014 statistics per IEEE 1366 in conjunction with storm begin and end dates.

#### **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. Table 3 reflects the action plans implemented and completed in 2014 to lower the SAIFI metric for these circuits. Additional patrols and root-cause analysis, where required, will be completed in 2<sup>nd</sup> Quarter 2015.

**Table 3: Multi-Year Worst Performing Circuit Report**

Year	Centers	Circuit ID	Substations	Action Plan	SAIFI	SAIDI
2011 2013 2014	NLND	31911	319	Planned Work and Schedules for Circuits 31911 – Work was completed in 2011. Additional work was performed on this circuit in 2012 and 2013. Based on the timing (2 <sup>nd</sup> half of 2014) of work shown in Table 2, these past efforts are expected to mitigate historical performance issues. Exhaustive system re-design is in planning stage. Install additional automated reclosers. Ultrasound and infrared the system. Additional tree trimming. Reconfigured the system where practical.	6.79	706.08
2012 2014	HNRT	33322	333	Scheduled plan is to replace recloser, install line arresters, jumpers, and trim trees.	5.09	390.25
2013 2014	STJO	42611	426	Scheduled plan is to varmint proof equipment, replace lighting arresters, and trim trees.	2.97	308.18
2012 2014	STJO	41641	416	Scheduled plan is to trimmed trees, replace lighting arresters, and repair overhead conductors, jumper connectors, and insulators.	2.86	146.67
2013 2014	HNRT	31312	313	Scheduled plan is to replace fuse mounts, replace and install lightning arresters, and varmint proof equipment.	2.39	1309.06
2012 2014	BLNT	20311	203	Scheduled plan is to replace lightning arresters and fuse mounts.	3.53	238.81