

**Kansas City Power & Light Company  
2012 Annual Infrastructure Compliance Report  
Pursuant to 4 CSR 240-23.020**

**KCP&L Greater Missouri Operations Company  
2012 Annual Infrastructure Compliance Report  
Pursuant to 4 CSR 240-23.020**

**Infrastructure Inspection and Maintenance Program**

**July 1, 2013**

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## **Introduction**

Kansas City Power & Light Company (“KCP&L”) and KCP&L Greater Missouri Operations Company (“GMO”) (collectively, “Companies”), submit their 2012 Annual Infrastructure Compliance Reports as required under the State of Missouri’s *Electrical Corporation Infrastructure Standards*, 4 CSR 240-23.020 (“MoIR”). This report covers the period January 1, 2012, through December 31, 2012, incorporating by reference KCP&L and GMO’s infrastructure compliance plans filed July 1, 2008.

## **Distribution System Summary**

Since the completion of the inspection schedule outlined in the Comprehensive Energy Plan, the Companies both transitioned to an Inspection Plan aligned with the Overhead and Underground schedule set forth in the MoIR.

Corrective action is taken immediately when conditions discovered during the course of inspection are identified as critical to safety or service reliability. Corrective work on conditions not rising to that critical threshold are bundled with future work—focusing on the urgency of improving performance of poorly performing feeders and laterals. No corrective action is taken when inspection reports are for information purposes only. Corrective work is also completed within the normal course of construction work.

In 2012, all KCP&L and GMO streetlights (including wood poles) were inspected concurrently with the Overhead Inspection Program and corrective action completed as required. This work satisfied the Patrol and Detailed Street Light Inspection requirements.

Between 2009 and 2012, KCP&L completed the required patrol and detailed inspection of the Distribution Network located in downtown Kansas City and the Plaza areas satisfying the Patrol and Detailed Underground Manholes and Vault Inspection requirements. The aggressive inspection schedule exceeded the 4-year and 8-year patrol and detailed requirements under MoIR.

Intrusive Wood Pole Inspections began in 2009 for KCP&L and 2011 for GMO service territories. In 2012, Intrusive Wood Pole Inspections were increased in the GMO area to align with the Overhead Inspection schedule set forth in the MoIR. All of the poles identified as “reinforceable rejects” were reinforced. Work started on replacement of non-reinforceable rejects and is planned to be completed on a pace to keep up with the continuing inspections.

The Companies continue to inspect poles owned by Joint Use Partners. In 2012, their conditions were reported to our Joint Use Partners.

### **Tracking and Data Management Summary**

KCP&L and GMO continue to develop an asset condition based database with a link to the Company's work management and AM/FM GIS programs. The Companies are continuing to strive toward completing these programs but progress remains dependent on other overlapping IT projects that will help facilitate recording, tracking and reporting of the MoIR inspection and corrective work process for the future.

### **KCP&L Area Inspections**

All Overhead Patrol and Overhead Detailed Equipment inspections in the KCP&L service area were completed ahead of the required cycle. KCP&L began the second 4-year patrol cycle in 2012 as set forth in the MoIR. In 2012 KCP&L completed the first 4-year patrol cycle and 8-year detailed cycle of the Below Grade Manholes and Vault Inspections. Future inspections will be aligned with the MoIR schedule. The Intrusive Wood Pole Inspection plan continued in KCP&L's service areas in 2012 to meet the mandate of the 12-year cycle.

**Table 1: KCP&L Inspection Corrective Action Inspections**

KCP&L MO Distribution				Completed Through December 2012			
System Class	Inspection Type	Facility Type	Units	Inspections Scheduled (Annual Plan)	Inspections Completed	Inspections Completed Prior to 2012 (Ahead of Cycle Plan)	Inspections Pending Outside of Plan
Distribution	Patrol	Overhead Circuits Structures & Equipment <sup>1</sup>	Structures	7,962	15,338	179,560	0
		Pad-mounted Equipment	Equipment Locations	0 <sup>2</sup>	0	15,555	0
		Underground Structures and Equipment	Structure Locations	0 <sup>3</sup>	0	3,603	0
	Detail	Overhead Circuits Structures & Equipment	Structures	0 <sup>4</sup>	5,274	184,898	0
		Pad-mounted Equipment	Equipment Locations	0 <sup>5</sup>	0	15,555	0
		Underground Structures and Equipment	Structure Locations	0 <sup>6</sup>	0	3,603	0
	Intrusive	Wood Poles	Poles	7,962	7,982	48,785	0

**GMO Area Inspections**

All Overhead Patrol and Overhead Detailed Equipment inspections in the GMO service area were completed ahead of the required cycle. In 2012, GMO completed the first 4-year patrol cycle and 8-year detailed cycle of the Below Grade Manholes and Vault Inspections. Future inspections will be aligned with the MoIR schedule. The Intrusive Wood Pole Inspection plan continued in GMO's service areas in 2012 to meet the mandate of the 12-year cycle.

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<sup>1</sup> Inclusive of conductors, transformers, reclosers, regulators, capacitors, switching/protective devices as required under the MoIR.

<sup>2</sup> (0) indicates the inspection cycle is complete

<sup>3</sup> (0) indicates the inspection cycle is complete

<sup>4</sup> (0) indicates the inspection cycle is complete

<sup>5</sup> (0) indicates the inspection cycle is complete

<sup>6</sup> (0) indicates the inspection cycle is complete

**Table 2: GMO Inspection Corrective Action Inspections**

GMO Distribution					Completed Through December 2012		
System Class	Inspection Type	Facility Type	Units	Inspections Scheduled (Annual Plan)	Inspections Completed	Inspections Completed Prior to 2012 (Ahead of Plan)	Inspections Pending Outside of Plan
Distribution	Patrol	Overhead Circuits, Structures, Equipment and Street Lights	Structures	48,511	64,582	291,959	0
		Pad Mounted Equipment	Pads	0 <sup>7</sup>	0	78,248	0
		Underground Structures and Equipment	Structures	150	150	589	0
	Detailed	Overhead Structures, Circuits, Equipment and Street Lights	Structures	39,674	52,321	291,959	0
		Padmount Equipment	Pads	0 <sup>8</sup>	0	78,248	0
		Underground Structures and Equipment	Structures	74	74	589	0
	Intrusive	Wood Poles	Poles	39,674	52,321	2,359	0

<sup>7</sup> (0) indicates the inspection cycle is complete

<sup>8</sup> (0) indicates the inspection cycle is complete

**Table 3: Distribution Equipment Rating Summary**

System Class	Inspection Type	Facility Type	Units	Immediate Repair or Next Day	Bundled for Future Work	Corrective Action not Required
Distribution	Detail	Overhead Circuits Structures & Equipment <sup>a</sup>	Structures	0 (0.00%)	51,210 (25.7%)	169,925 (74.2%)
		Pad-mounted Equipment	Equipment Locations	22 (0.0012%)	14,300 (78.2%)	3,989 (21.6%)
		Underground Structures and Equipment	Structure Locations	2 0.09%	207 (95.8%)	9 (4.2%)
	Intrusive	Wood Poles	Poles	0 (0.00%)	946 (95.6%)	44 (4.4%)

<sup>a</sup> Inclusive of conductors, transformers, reclosers, regulators, capacitors, switching/protective devices as required under the MoIR.

**Table 4: Distribution Corrective Action Summary**

System Class	Inspection Type	Facility Type	Component	CA Scheduled in 2012	CA Completed in 2012	CA Planned in 2013	CA Planned after 2013 <sup>9</sup>
Distribution	Patrol and Detailed Patrol	Overhead Circuits Structures & Equipment, Street Lights	Structures	2,350	9013	4350	4350
		Pad-mounted Equipment	Pads	789	789	522	522
		Underground Structures and Equipment	Structures	125	98 <sup>a</sup>	80	80
	Intrusive	Wood Poles	Poles	120	240	950	950

Corrective Actions Completed: The number of corrective actions completed on worst performing circuits and is inclusive of corrective efforts such as: infrared inspections of splices, ground wire repairs, riser conduit repairs, arrester replacements, and, additionally, critical pole and cross arm replacements.

<sup>9</sup> CA Planned after 2013 reflects the number of Corrective Actions planned on an annual basis through 2020.

<sup>a</sup> Work not completed due to scheduling issues will be completed by the second quarter of 2013



Corrective Actions Scheduled in 2012: The number of noncritical or minor conditions; Noncritical or minor conditions are corrected in the regular course of operations.

Corrective Actions Planned after 2013: The number represents conditions noted during previous inspections and placed in the queue for corrective action.

### **Transmission System Summary**

All KCP&L and GMO transmission lines are inspected annually by aerial and ground patrol, as was the case in spring 2012. This schedule is more vigorous than that required under the MoIR. There were 996 combined corrective actions, based on patrols, completed in 2012, including one item originally scheduled in 2011. One combined corrective action is scheduled for 2013 completion.

Detailed and intrusive inspections were completed on transmission lines in both KCP&L GMO service areas. In 2012, 4,214 combined poles were inspected. 134 poles are in need of corrective action, including 10 from 2008-2011, 69 were scheduled for completion in 2012, and 57 were completed in 2012. There are 66 poles scheduled to be completed in 2013, including 12 that rolled over from 2012, 68 are scheduled for completion after 2013.

**Table 5: KCP&L Transmission Corrective Action and Equipment Conditions**

KCP&L Transmission				Completed Through December 2012			
System Class	Inspection Type	Facility Type	Units	Inspections Planned for 2012	Inspections Completed During 2012	Inspections Completed Prior to 2012 (Ahead of Plan)	Inspections Pending in 2012 Outside of Plan
Transmission	Aerial and Ground Patrol <sup>a</sup>	Overhead Circuits Structures & Equipment	Structures	7,316	7,316	-	0
		Underground Structures and Equipment	Structures	34	34	-	0
	Detail and Intrusive	Wood/Steel Poles	Poles	1,991	1,991	-	0

<sup>a</sup>Aerial patrols of the transmission system are completed annually.

**Table 6: GMO Transmission Corrective Action and Equipment Conditions**

GMO Transmission				Completed Through December 2012			
System Class	Inspection Type	Facility Type	Units	Inspections Planned for 2012	Inspections Completed During 2012	Inspections Completed Prior to 2012 (Ahead of Plan)	Inspections Pending in 2012 Outside of Plan
Transmission	Aerial and Ground Patrol <sup>a</sup>	Overhead Circuits Structures & Equipment	Structures	14,773	14,773	-	0
		Underground Structures and Equipment	Structures	1	1	-	0
	Detail and Intrusive	Wood/Steel Poles	Poles	2,223	2,223	-	0

<sup>a</sup>Aerial and ground patrols of the transmission system are completed annually.

**Table 7: KCP&L Transmission Equipment Condition Rating Summary**

System Class	Inspection Type	Facility Type	Component	Repairs Completed Within 12-Months	Schedule for Repair Within 12 to 36 Months	Corrective Action Not Required
Transmission	(Aerial and Ground Patrol)	Overhead	Poles, Switches	3 (0.04%)	204 (2.79%)	7,109 (97.17%)
		Underground Structures	Manholes	-	-	34
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	0 (0.00%)	47 (2.36%)	1,944 (97.64%)

**Table 8: GMO Transmission Equipment Condition Rating Summary**

System Class	Inspection Type	Facility Type	Component	Repairs Completed Within 12-Months	Schedule for Repair Within 12 to 36 Months	Corrective Action Not Required
Transmission	(Aerial and Ground Patrol)	Overhead	Poles, Switches	22 (0.15%)	912 (6.17%)	13,839 (93.68%)
		Underground Structures	Manholes	-	-	1
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	- (0.00%)	21 (0.94%)	2,202 (99.06%)

**Table 9: KCP&L Transmission Corrective Action (CA) Summary**

System Class	Inspection Type	Facility Type	Component	CA Planned in 2012	CA Completed in 2012	CA Planned in 2013	CA Planned after 2013
Transmission	(Aerial and Ground Patrol)	Overhead Structures & Equipment	Poles, Switches	3	288	-	140
	(Aerial and Ground Patrol)	Underground Structures and Equipment	Manhole	-	-	-	0
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	19	17	41	47

**Table 10: GMO Transmission Corrective Action (CA) Summary**

System Class	Inspection Type	Facility Type	Component	CA Planned in 2012	CA Completed in 2012	CA Planned in 2013	CA Planned after 2013
Transmission	(Aerial and Ground Patrol)	Overhead Structures & Equipment	Poles, Switches	21	708	1	459
	(Aerial and Ground Patrol)	Underground Structures and Equipment	Manhole	-	-	-	0
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles (treated or replaced)	50	40	25	21

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

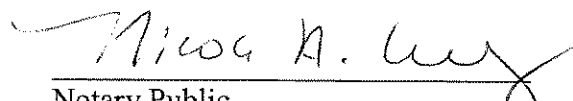
VERIFICATION

State of Missouri                    )  
  ) ss  
County of Jackson                )

I, Scott Heidtbrink, being duly affirmed according to law, depose and hereby state that I am authorized to make this affidavit on behalf of Kansas City Power & Light Company and KCP&L Greater Missouri Operations Company, as Executive Vice President and Chief Operating Officer, and that the facts above set forth are true and correct to the best of my knowledge, information and belief.

  
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Scott Heidtbrink  
Kansas City Power & Light Company

Subscribed and affirmed before me this 1<sup>st</sup> day of July, 2013.

  
\_\_\_\_\_  
Notary Public

My Commission Expires:

