KCP&L
2011 Annual Infrastructure Compliance Report
Pursuant to 4 CSR 240-23.020

KCP&L Greater Missouri Operations Company
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Infrastructure Inspection and Maintenance Program

July 1, 2012

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Introduction and Summary

Kansas City Power & Light Company ("KCP&L" or "Company") and KCP&L Greater Missouri Operations Company ("GMO" and collectively, "Companies"), submit their 2011 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, 2011, through December 31, 2011, incorporating by reference KCP&L and GMO's infrastructure compliance plans filed July 1, 2008. The Infrastructure Compliance Plan will be re-evaluated in 2012 to align more objectively with the MoIR inspection cycles.

Distribution System Summary

KCP&L's operation and maintenance of its distribution system was influenced by KCP&L's Comprehensive Energy Plan ("CEP"), MPSC Case No. EO-2005-0329. In 2009, for all intents and purposes, KCP&L successfully completed the CEP as reflected in KCP&L's CEP quarterly reports to staff. The distribution system inventory and condition assessment programs were completed on the overhead distribution system in 2008. The requirements set forth under the CEP Inventory and Inspection Program was more aggressive and eclipsed the Detailed Inspection requirements of the MoIR.

KCP&L recognized the CEP inventory and inspection program as a best practice and incorporated the program into GMO's service territories beginning in 2009, with scheduled completion in October 2011. The CEP's schedule was more aggressive than MoIR's requirements and was completed earlier than timeframes required under the MoIR.

The Inventory program has been completed and starting in 2012 KCP&L and GMO will both transition to an inspection plan aligned with the Overhead and Underground Inspections schedule set forth in the MoIR.

Corrective action is taken immediately when conditions discovered during the course of inspections are identified as critical to safety or service reliability (P1 and P2). Corrective work on conditions not rising to that critical threshold is bundled with planned work—focusing on the priority of improving performance of poorly performing feeders and laterals. Corrective work is also completed within the normal course of construction work (P3).

In 2011, all KCP&L and GMO streetlights were inspected concurrently with the Overhead Inventory Inspection Program and corrective actions completed as required. Wood streetlight poles were also inspected as part of intrusive inspection program.

In 2009, KCP&L completed the required detailed inspection of the Distribution Network located in downtown Kansas City and the Plaza areas. This work also satisfied the Detailed Underground Manholes and Vault Inspection requirements. The aggressive inspection schedule exceeded the 12-year inspection requirement under MoIR. In 2012, future Detailed Underground Manholes and Vault Inspections will be integrated consistent with the cycle set forth in MoIR.

The Detailed Underground Structure Inspections will be completed within the required 8-year cycle. It is expected that many of the inspections will be completed during routine work and new construction. The Underground Structures not inspected during routine work and new construction will be identified and inspections completed per the 8-year requirement.

Intrusive Wood Pole Inspections began in 2009. KCP&L service area inspections were temporarily halted as inventory and pole tagging in GMO's service areas were advanced. In 2011, complete Intrusive Wood Pole Inspections were increased 11% over inspections originally planned in the 2010 report. The reason for the additional increase was because more poles were

identified during the final GMO inventory process, than originally mapped. 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 2011, their conditions were reported to our Joint Use Partners.

Tracking and Data Management Summary

KCP&L continues to develop an asset condition based database with a link to the Company's work management and AM/FM GIS programs. We are continuing to strive toward completing this program 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.

Table 1: 2011 KCP&L Inspection Corrective Action Inspections

KCP&L MO Distribution				Completed Through December 2011			
System Class	Inspection Type	Facility Type	Units	Inspections Scheduled (Original Plan)	Inspections Completed	Inspections Completed Prior to 2011 (Ahead of Plan)	Inspections Pending Outside of Plan
Distribution	Patrol	Overhead Circuits Structures & Equipment[a]	Structures			179,560	0
		Pad-mounted Equipment	Equipment Locations	15,492	15,492	63	0
		Underground Structures and Equipment	Structure Locations	505	2,875	3603	0
	Detail	Overhead Circuits Structures & Equipment	Structures			184,898	0
		Pad-mounted Equipment	Equipment Locations	16,145	16,145	43	0
		Underground Structures and Equipment	Structure Locations	505	2,875	3603	0

Table 1: 2011 KCP&L Inspection Corrective Action Inspections							
KCP&L MO Distribution				Completed Through December 2011			
System Class	Inspection Type	Facility Type	Units	Inspections Scheduled (Original Plan)	Inspections Completed	Inspections Completed Prior to 2011 (Ahead of Plan)	Inspections Pending Outside of Plan
	Intrusive	Wood Poles	Poles	45,954	45,954	2,291	0

[a] Inclusive of conductors, transformers, reclosers, regulators, capacitors, switching/protective devices as required under the MoIR.

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. Therefore, no planned inspections were recorded in 2011. The next inspection cycle is planned for 2012.

Detailed inspections of pad-mounted equipment in the KCP&L service area was completed by the end of 2011, when the Inventory inspection was completed in the GMO service areas. The strategy was to suspend the planned cycle and accelerate completion of the pad-mounted inspections for completion at the same time as the inventory. The Detailed underground equipment inspections for KCP&L and GMO service areas will be scheduled and completed within the required 8-year cycle, as will meeting the underground equipment patrol inspection requirements.

The Manhole and Vault Patrol Inspections will be completed at the same time and scheduled as part of the underground equipment detailed inspections. Structuring an inspection process for the Below Grade Manhole and Vault Detailed Inspections has impacted the schedule. Random inspections along with the normal work schedule did not yield the desired efficiencies in 2010. The inspection process was re-evaluated in 2011 and new procedures were put in place to complete the detailed inspections of the remaining manholes and vaults on the system ahead

of schedule. Network Inspections were completed in 2008 and 2009. Future inspections will be aligned with the MoIR schedule.

The Intrusive Wood Pole Inspections plan continued in KCP&L's service areas in 2011 based on the MoIR 12-year cycle reaching above the 30% level to meet the 12-year cycle goal.

GMO Area Inspections

Patrol and Detailed Overhead pole and equipment inventory inspections began in the GMO area in 2009 and were completed in October of 2011— ahead of the 4 and 8-year cycles required under the MoIR.

The underground pad-mounted equipment and Below Grade Patrol Inspections were completed at the same time as the overhead inventory inspections. These inspections were all completed by the end of 2011 ahead of the MoIR plan.

Intrusive wood pole inspections were completed in the GMO service areas between 2001 and 2007—prior to the MoIR. These records are kept manually. In light of the recent completion of intrusive wood pole inspections, the Company accelerated the pole inventory and numbering program in the GMO areas. The Company believes completion of the pole inventory will enhance the future intrusive inspection process in the GMO area without detriment to reliability or infrastructure management. The intrusive wood pole inspections will start based on the MoIR 12-year cycle in 2012.

Table 2: GMO 2011 Inspection Corrective Action Inspections							
GMO Distribution					Completed in 2011		
System Class	Inspection Type	Facility Type	Units	Inspections Scheduled (Original Plan)	Inspections Completed	Inspections Completed Prior to 2011 (Ahead of Plan)	Inspections Pending Outside of Plan
Distribution	Patrol	Overhead Structures, Circuits, Equipment and Street Lights	Structures	76,836	76,836	215,123	0
		Pad Mounted Equipment	Pads	31,590	31,590	46,658	0
		Underground Structures and Equipment	Structures	80	29	589	0
	Detailed	Overhead Structures, Circuits, Equipment and Street Lights	Structures	76,836	76,836	215,123	0
		Padmount Equipment	Pads	31,590	31,590	46,658	0
		Underground Structures and Equipment	Structures	80	29	589	0
	Intrusive	Wood Poles	Poles	1,603	1,603	281,959	0

Priority

During the course of inspections, the condition of equipment is prioritized as P1, P2, P3, or P4—highest to lowest.

- P1 and P2 Conditions are scheduled for completion within one week.
- P3 Conditions are bundled with work on the same structures or in the same general area.

- P4 Conditions are not scheduled for remediation. Inspection reports are maintained for information purposes.

Table 3: 2011 Distribution Equipment Rating Summary

Dist	Inspection Type	Facility Type	Units	Conditions P1 and P2: Immediate Repair or Next Day	Condition P3: Unscheduled, Bundled for Future Work	Condition P4: No Planned Corrective Action
	Detail	Overhead Circuits Structures & Equipment[a]	Structures	179 (.08%)	101,398 (45.6%)	120,850 (54.30%)
		Pad-mounted Equipment	Equipment Locations	34 (.02%)	16,985 (62.51%)	27,172 (37.37%)
		Underground Structures and Equipment	Structure Locations	7 .003%	245 (94.59%)	249 (2.70%)
	Intrusive	Wood Poles	Poles	50 (.02%)	1,908 (84.76%)	293 (13.02)

[a] Inclusive of conductors, transformers, reclosers, regulators, capacitors, switching/protective devices as required under the MoIR.

Table 4: 2011 Distribution Corrective Action Summary

System Class	Inspection Type	Facility Type	Component	CA Scheduled in 2011	CA Completed in 2011	CA Planned in 2012	CA Planned after 2012[1]
Distribution	Patrol and Detailed Patrol	Overhead Circuits Structures & Equipment, Street Lights	Structures	2350	2350	2360	2360
		Pad-mounted Equipment	Pads	789	789	522	522
		Underground Structures and Equipment	Structures	125	21[a]	25	25
	Intrusive	Wood Poles	Poles	120	716	120	120

[1] CA Planned after 2011 reflects the number of Corrective Actions planned on an annual basis through 2023.
[a] Work not completed due to scheduling issues

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.

Note: In 2007 and 2008, KCP&L, prior to the effective date of the MoIR, was already engaged in inventory activities, inspections, identification of deficiencies, and corrective action work. The 2007 and 2008 work was captured in a database that did not subsequently interface with systems put in place in 2009. Although all 2007 and 2008 deficiencies were remediated by the conclusion of 2008, they are not clearly represented in the 2009 system. Incorporation of 2007 and 2008 data is slated for integration into the current systems. Past records from our work management system is being reviewed to capture those deficiencies not recorded in the Inspection Database prior to 2009 to true-up records not found in the Inspection Database.

Corrective Actions Scheduled in 2011: The number of noncritical or minor conditions. Noncritical or minor conditions are corrected in the regular course of operations.

Corrective Actions Scheduled after 2011: 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 the Spring of 2011. This schedule is more vigorous than that required under the MoIR. Based on the patrols, there were 90 combined corrective actions completed in the second half of 2011, including three items originally scheduled in 2010. There are 6 combined corrective actions scheduled for 2012 completion.

Detailed and intrusive inspections were completed on transmission lines in both KCP&L and GMO service areas. In 2011, 3,835 combined poles were inspected, 137 poles are in need of corrective action, including 38 from 2009-2010, 29 were scheduled for completion in 2011, and 15 were completed in 2011, 53 are scheduled to be completed in 2012, including 14 that rolled over from 2011, and 69 are scheduled for completion after 2012.

Table 5: KCP&L Transmission Corrective Action and Equipment Conditions							
KCP&L Transmission				Completed Through December 2011			
System Class	Inspection Type	Facility Type	Units	Inspections Planned for 2011	Inspections Completed During 2011	Inspections Completed Prior to 2011 (Ahead of Plan)	Inspections Pending in 2011 Outside of Plan
Transmission	Aerial and Ground Patrol[a]	Overhead Circuits Structures & Equipment	Structures	7,434	7,434	-	0
		Underground Structures and Equipment	Structures	30	30	-	0
	Detail and Intrusive	Wood/Steel Poles	Poles	2,800	2,800	-	0

[a]Aerial patrols of the transmission system are completed annually.

Table 6: GMO Transmission Corrective Action and Equipment Conditions							
GMO Transmission				Completed Through December 2011			
System Class	Inspection Type	Facility Type	Units	Inspections Planned for 2011	Inspections Completed During 2011	Inspections Completed Prior to 2011 (Ahead of Plan)	Inspections Pending in 2011 Outside of Plan
Transmission	Aerial and Ground Patrol[a]	Overhead Circuits Structures & Equipment	Structures	14,182	14,182	-	0
		Underground Structures and Equipment	Structures	1	1	-	0
	Detail and Intrusive	Wood/Steel Poles	Poles	1,035	1,035	-	0

[a]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.	8 (0.11%)	159 (2.14%)	7,267 (97.75%)
		Underground Structures	Manholes.	-	-	30
Transmission	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	3 (0.11%)	71 (2.54%)	2,726 (97.36%)

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.	17 (0.12%)	494 (3.48%)	13,671 (96.40%)
		Underground Structures	Manholes.	-	-	1
Transmission	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	- (0.00%)	25 (2.42%)	1010 (97.58%)

Table 9: KCP&L Transmission Corrective Action (CA) Summary							
System Class	Inspection Type	Facility Type	Component	CA Planned in 2011	CA Completed in 2011	CA Planned in 2012	CA Planned after 2012
Transmission	(Aerial and Ground Patrol)	Overhead Structures & Equipment	Poles, Switches	43	43	2	141
Transmission	(Aerial and Ground Patrol)	Underground Structures and Equipment	Manhole	-	-	-	0
Transmission	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	12	9	22	46

Table 10: GMO Transmission Corrective Action (CA) Summary							
System Class	Inspection Type	Facility Type	Component	CA Planned in 2011	CA Completed in 2011	CA Planned in 2012	CA Planned after 2012
Transmission	(Aerial and Ground Patrol)	Overhead Structures & Equipment	Poles, Switches	48	48	3	471
Transmission	(Aerial and Ground Patrol)	Underground Structures and Equipment	Manhole	-	-	-	0
Transmission	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles (treated or replaced)	17	7	37	16

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

4 CSR 240-23.020 Electrical Corporation
Infrastructure Standards

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.

Scott Heidtbrink
Kansas City Power & Light Co.

Subscribed and affirmed before me this ~~30th~~ 25th day of June, ~~2011~~ 2012.

Notary Public

My Commission Expires:

January 20, 2013

LANA S JENNINGS
Notary Public - Notary Seal
State of Missouri, Jackson County
Commission # 09446956
My Commission Expires Jan 20, 2013