

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

In the Matter of Union Electric Company d/b/a)
Ameren Missouri's 2013 Infrastructure)
Inspection Annual Report.) Case No. EO-2014-_____

**UNION ELECTRIC COMPANY d/b/a
AMEREN MISSOURI'S 2013 INFRASTRUCTURE
INSPECTION ANNUAL REPORT**

COMES NOW, Union Electric Company, d/b/a Ameren Missouri, and in compliance
with 4 CSR 240-23.020(3)(C) submits the attached report.

Respectfully submitted,

**UNION ELECTRIC COMPANY,
d/b/a AMEREN MISSOURI**

/s/ Wendy K. Tatro

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Dated: July 1, 2014

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been electronically mailed to all counsel of record this 1st day of July, 2014.

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Ameren Missouri 4 CSR 240-23.020 Electrical Corporation Infrastructure Standards Annual Inspection Report for Calendar Year 2013

Introduction

This document is Union Electric (dba Ameren Missouri) Company's annual report detailing its compliance with Missouri Public Service Commission Rule 4 CSR 240-23.020, Electrical Corporation Infrastructure Standards (referred to in the remainder of this document as "the Rule"). This annual report is required by Section (3) (C) of the Rule which states, "*Each electrical corporation subject to this rule shall file...an annual report detailing its compliance with this rule during the prior calendar year....*" This report details the results of the infrastructure inspections conducted in calendar year 2013.

Definitions

For the purposes of this report, the following definitions shall apply:

1. Patrol – A simple visual inspection, of applicable electrical corporation equipment and structures, which is designed to identify obvious structural problems and hazards. Patrols may be carried out in the course of other electrical corporation business.
2. Visual Inspection – A careful visual examination of equipment and structures designed to identify structural problems, hazards, and defective or improperly operating equipment. Equivalent to "Detailed Inspection" as defined in Section (2) (B) of the Rule.
3. Ground Line Inspection – A complete intrusive inspection of overhead poles whereby the pole is excavated to a depth of 18 to 24 inches, tested for internal and external decay, treated with a preservative, and then backfilled. Equivalent to "Intrusive Inspection" as defined in Section (2) (C) of the Rule.
4. Overhead Equipment – Equipment used in the operation of the transmission and distribution system mounted on overhead poles including, but not limited to, conductors, transformers, fuses, switches, insulators, and lightning arresters.
5. Underground Pad-Mounted Equipment – Underground Residential Distribution (URD) system equipment including single phase and three phase pad-mounted transformers, pad-mounted switchgear, junction boxes, non-traffic rated vaults, and pedestals. Equivalent to "Underground-direct buried and conduit" and the equipment noted under Note 3 on the table entitled, "Electrical Corporation System Inspection Cycles (Maximum Intervals in Years)" included with the Rule.
6. Transmission System – That portion of the Ameren Missouri system operated at voltages of 100 kilovolts (kV) and above.
7. Distribution System – That portion of the Ameren Missouri system operated at voltages below 100kV.
8. Streetlights – Automatically controlled lighting for lighting of streets, alleys, walkways, and other thoroughfares open to and reserved for general public use when such lighting facilities are operated and maintained as an extension of Ameren Missouri's distribution system as described in Service Classification 5(M). This definition does not apply to lighting installed on public or private premises for the purpose of providing area or security lighting (i.e., "dusk-to-dawn" lights), customer-owned street and outdoor lighting as described in Service Classification 6(M), and incandescent municipal streetlighting or private streetlighting described under Service Classifications 7(M) and 8(M).



Transmission System Inspections

Ameren Missouri conducted inspections on its Transmission System during calendar year 2013 as required by Missouri Public Service Commission Rule 4 CSR 240-23.020, Electrical Corporation Infrastructure Standards. The inspections conducted, as well as the deficiencies discovered and repaired as a result of these inspections, are described below.

Transmission Circuits Inspected in 2013:

| Inspection Type | Inspections Scheduled | Inspections Completed | Inspections Not Completed |
|-----------------|-----------------------|-----------------------|---------------------------|
| “Patrol” | 140 | 140 | 0 |
| “Detailed” | 9 | 6 | 3 |
| Ground Line | 9 | 6 | 3 |

The following lines were scheduled to be inspected in 2013 but were not:

| Inspection Type | Line Number | Reason Inspection Not Completed | Date Inspection Will be Completed |
|-----------------------------|--------------------|---|-----------------------------------|
| Detailed/ Ground Line | MTGY - OVRT | Large Construction Project planned for this line caused replacement of many poles planned for inspection. Deferred to 2014. | 12/31/14 |
| Detailed/ Ground Line | MISS SUB TAP | Levee breach flooded area and made access impossible. Deferred to 2014 | 12/31/14 |
| Detailed/ Ground Line | ST FRAN SUB TAP | Deferred to 2014 to coincide with other inspections in the area. | 12/31/14 |

The results of the lines inspected are summarized as follows:

Results of Inspections

| Component | Number Inspected | Number Requiring Repairs | % |
|---------------------|------------------|--------------------------|-------|
| Wood Poles | 1,426 | 10 | 0.7 |
| Wood Structures | 14,645 | 30 | 0.2 |
| Non-Wood Structures | 5,637 | 1 | 0.02 |
| Conductors* | 20,282 | 1 | 0.005 |
| Insulators* | 20,282 | 4 | 0.02 |



The numbers of components requiring repairs in the period are summarized below:

| Component | Number Requiring Repairs in the Period | Number of Repairs Completed in the Period | % | Number of Repairs Not Completed in the Period | % |
|---------------------|--|---|-----|---|-----|
| Wood Poles | 1 | 1 | 100 | 0 | 0.0 |
| Wood Structures | 8 | 3 | 38 | 5 | 62 |
| Non-Wood Structures | 0 | 0 | 0.0 | 0 | 0.0 |
| Conductors* | 1 | 0 | 0.0 | 1 | 100 |
| Insulators* | 4 | 0 | 0.0 | 4 | 100 |

*Note: Because Ameren Missouri's Transmission System Inspection Program is carried out on a per line basis and only those components which required repair are recorded, the number of individual conductors and insulators inspected is not recorded. The number of wood structures (which includes poles) and non-wood structures inspected will be used as the reference for the percentage of equipment requiring corrective action in this annual report.

The following equipment was not repaired as scheduled:

| Component | Component Number | Reason Repairs Not Completed | Date Repairs Will be Completed |
|-----------------|------------------|--|--------------------------------|
| Wood Structures | GSCO-O | Crew resource allocated to other high priority work. | 7/31/14 |
| Wood Structures | PLMY-VIEL | Crew resource allocated to other high priority work. | 7/31/14 |
| Wood Structures | SPCK-SUBT_1 | Deferred to coincide with other construction work planned for this line. | 9/30/14 |
| Wood Structures | SPCK-SUBT_2 | Deferred to coincide with other construction work planned for this line. | 9/30/14 |
| Wood Structures | SPCK-SUBT_3 | Deferred to coincide with other construction work planned for this line. | 7/31/14 |
| Conductor | MINR-SKST | Difficulty obtaining necessary outage. | 12/31/14 |
| Insulator | R-STFR_1 | Difficulty obtaining necessary outage. | 9/30/14 |
| Insulator | R-STFR_2 | Difficulty obtaining necessary outage. | 9/30/14 |
| Insulator | MAS-MER | Difficulty obtaining necessary outage. | 9/30/14 |
| Insulator | SPCK-SUBT | Difficulty obtaining necessary outage. | 9/30/14 |



The following equipment was scheduled for repairs outside the reporting period:

| Component | Total Number Requiring Repairs Outside the Reporting Period | Number of Open Repairs Outside the Reporting Period | Corrective Action Scheduled Complete | | | | | | | Percent of Equipment in Need of Corrective Action, but with a Scheduled Date Beyond the Reporting Period |
|----------------------|---|---|--------------------------------------|------|------|------|------|------|-------|--|
| | | | 3Q14 | 4Q14 | 1Q15 | 2Q15 | 3Q15 | 4Q15 | Later | |
| Wood Poles* | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 100 |
| Wood Structures* | 22 | 22 | 0 | 16 | 0 | 0 | 0 | 0 | 6 | 100 |
| Non-Wood Structures* | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 100 |
| Conductors* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Insulators* | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |

*Note: Wood pole changes scheduled beyond 4Q15 are being deferred to coincide with the NERC ground clearance study and remediation effort. The NERC effort is expected to be completed by the end of 2018. Other repair activities deferred beyond 4Q15 are low priority items such as monitoring structures near creeks that could wash out.



Distribution System Inspections

Ameren Missouri conducted inspections on its Distribution System during calendar year 2013 as required by Missouri Public Service Commission Rule 4 CSR 240-23.020, Electrical Corporation Infrastructure Standards. The inspections conducted, as well as the deficiencies discovered and repaired as a result of these inspections, are described below.

Distribution Circuits and Components Inspected in 2013

| Inspection | Inspection Units | Inspections Scheduled | Inspections Completed | Inspections Not Completed |
|--------------------------------|------------------|-----------------------|-----------------------|---------------------------|
| Overhead Visual* | Circuit | 641 | 641 | 0 |
| Overhead Ground Line* | Circuit | 283 | 283 | 0 |
| Capacitors | Equipment | 1,838 | 1,838 | 0 |
| Voltage Regulators | Equipment | 237 | 237 | 0 |
| Underground Patrol* # | Circuit | 472 | 472 | 0 |
| Underground Detailed* # | Circuit | 510 | 510 | 0 |
| Network Vaults | Equipment | 112 | 112 | 0 |
| Manholes | Equipment | 1,681 | 1,681 | 0 |
| Other Underground Structures** | Equipment | 95 | 95 | 0 |

*Note: Streetlight inspections were performed in conjunction with Overhead Visual and Ground Line inspections, as well as the Underground Patrol and Detailed inspections.

**Note: Other Underground Structures include Indoor Rooms and Manhole Transformers.

#Note: During the Underground Patrol and Detailed circuit inspections, Ameren Missouri inspectors encountered various obstructions that prevented inspection of some individual pieces of equipment such as pad-mounted transformers. The obstructions encountered were customer facilities such as fences or landscaping in close proximity to equipment, thereby preventing its full inspection. Many of these situations require negotiations with customers to determine the best remedy for the customer and Ameren Missouri. Ameren Missouri has resolved most of the issues and continues to work with customers to resolve the remaining obstructions in order to complete the inspections of the equipment.



The results of the inspections are summarized as follows:

Results of Inspections

| Component | Number Inspected | Number Requiring Repairs | Percentage |
|---------------------------------|------------------|--------------------------|------------|
| Poles/Towers | 173,084 | 5,440 | 3.1 |
| Lightning Arresters* | 173,084 | 265 | 0.2 |
| Crossarms* | 173,084 | 1,312 | 0.8 |
| Crossarm Braces* | 173,084 | 791 | 0.5 |
| Fuses* | 173,084 | 33 | 0.02 |
| Insulators* | 173,084 | 1,104 | 0.6 |
| Overhead Transformers* | 173,084 | 4,597 | 2.7 |
| Conductors* | 173,084 | 1,143 | 0.7 |
| Switches* | 173,084 | 9 | 0.01 |
| Guy Wires* | 173,084 | 9,839 | 5.7 |
| Grounding* | 173,084 | 4,071 | 2.4 |
| Anchors* | 173,084 | 43 | 0.02 |
| Minor Hardware*# | 173,084 | 6,923 | 4.0 |
| Reclosers* | 173,084 | 3 | 0 |
| Sectionalizers* | 173,084 | 1 | 0 |
| Capacitors | 1,838 | 224 | 12.2 |
| Voltage Regulators | 237 | 20 | 8.4 |
| UG Pad-Mounted Equipment** | 37,161 | 2,590 | 7.0 |
| Vaults | 112 | 2 | 1.8 |
| Manholes | 1,681 | 129 | 7.7 |
| Other Underground Structures*** | 95 | 0 | 0 |
| Streetlights | 56,043 | 2,296 | 4.1 |

*Note: Because Ameren Missouri's Distribution System Circuit Inspection and Ground Line Inspection programs were performed on a per circuit basis and only those components which required repair were recorded, the numbers of these individual devices inspected were not recorded. For these components, the number of poles where problems were identified divided by the number of poles inspected was used as the reference for the percentage of equipment requiring corrective action. Where the actual number of components inspected, such as voltage regulators and capacitors could be ascertained, these numbers were used to calculate the percentage of equipment requiring corrective action.

#Note: Minor Hardware includes risers, pins, jumpers, connectors, splices, terminations, and spacer cable brackets.



**Note: Underground Pad-Mounted Equipment includes pad-mounted transformers, switchgear, junction boxes, non-traffic rated vaults, and pedestals.

***Note: Other Underground Structures includes indoor rooms and manhole transformers.

The numbers of components requiring repairs in the period are summarized below:

| Component | Number of Repairs Scheduled in the Period | Number of Repairs Completed in the Period | % | Number of Repairs Not Completed in the Period | % |
|------------------------------|---|---|-----|---|-----|
| Poles/Towers | 1,716 | 1,716 | 100 | 0 | 0.0 |
| Lightning Arresters | 69 | 62 | 100 | 0 | 0.0 |
| Crossarms | 286 | 286 | 100 | 0 | 0.0 |
| Crossarm Braces | 118 | 118 | 100 | 0 | 0.0 |
| Fuses | 10 | 10 | 100 | 0 | 0.0 |
| Insulators | 119 | 119 | 100 | 0 | 0.0 |
| Overhead Transformers | 443 | 443 | 100 | 0 | 0.0 |
| Conductors | 185 | 185 | 100 | 0 | 0.0 |
| Switches | 4 | 4 | 100 | 0 | 0.0 |
| Guy Wires | 1,307 | 1,307 | 100 | 0 | 0.0 |
| Grounding | 557 | 557 | 100 | 0 | 0.0 |
| Anchors | 19 | 19 | 100 | 0 | 0.0 |
| Minor Hardware | 594 | 594 | 100 | 0 | 0.0 |
| Reclosers | 1 | 1 | 100 | 0 | 0.0 |
| Sectionalizers | 0 | 0 | 100 | 0 | 0.0 |
| Capacitors | 99 | 99 | 100 | 0 | 0.0 |
| Voltage Regulators | 11 | 11 | 100 | 0 | 0.0 |
| UG Pad-Mounted Equipment | 1,477 | 1,447 | 100 | 0 | 0.0 |
| Vaults | 2 | 2 | 100 | 0 | 0.0 |
| Manholes | 129 | 129 | 100 | 0 | 0.0 |
| Other Underground Structures | 0 | 0 | 100 | 0 | 0.0 |
| Streetlights | 546 | 546 | 100 | 0 | 0.0 |

All equipment repairs required in the reporting period were completed in the period.



The following equipment was scheduled for repairs outside the reporting period:


| Component | Total Number Requiring Repairs Outside the Reporting Period (Completed or Scheduled) | Number of Open Repairs Outside the Reporting Period | Corrective Action Scheduled To Be Completed | | | | | | Percent of Equipment in Need of Corrective Action, but with a Scheduled Date Beyond the Reporting Period |
|------------------------------|--|---|---|-------|-------|-------|------|------|--|
| | | | 1Q14 | 2Q14 | 3Q14 | 4Q14 | 2015 | 2016 | |
| Poles/Towers | 3,724 | 2,029 | 154 | 580 | 633 | 647 | 15 | 0 | 54.5 |
| Lightning Arresters | 196 | 121 | 22 | 53 | 32 | 14 | 0 | 0 | 61.7 |
| Crossarms | 1,026 | 820 | 213 | 167 | 226 | 214 | 0 | 0 | 79.9 |
| Crossarm Braces | 673 | 496 | 114 | 62 | 176 | 144 | 0 | 0 | 73.7 |
| Fuses | 23 | 17 | 3 | 1 | 3 | 10 | 0 | 0 | 73.9 |
| Insulators | 985 | 693 | 120 | 84 | 157 | 332 | 0 | 0 | 70.3 |
| Overhead Transformers | 4,154 | 3,171 | 511 | 291 | 1,160 | 1,209 | 0 | 0 | 76.3 |
| Conductors | 958 | 795 | 206 | 84 | 306 | 199 | 0 | 0 | 83.0 |
| Switches | 5 | 5 | 0 | 0 | 1 | 4 | 0 | 0 | 100 |
| Guy Wires | 8,532 | 5,764 | 1,054 | 1,134 | 1,678 | 1,898 | 0 | 0 | 67.6 |
| Grounding | 3,514 | 2,780 | 517 | 461 | 920 | 882 | 0 | 0 | 79.1 |
| Anchors | 24 | 15 | 0 | 10 | 4 | 1 | 0 | 0 | 62.5 |
| Minor Hardware | 6,329 | 4,799 | 600 | 477 | 1,547 | 2,175 | 0 | 0 | 75.8 |
| Reclosers | 2 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 100 |
| Sectionalizers | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 100 |
| Capacitors | 125 | 97 | 5 | 6 | 39 | 45 | 2 | 0 | 77.6 |
| Voltage Regulators | 9 | 8 | 1 | 0 | 4 | 3 | 0 | 0 | 88.9 |
| UG Pad-Mounted Equipment | 1,113 | 553 | 218 | 95 | 92 | 148 | 0 | 0 | 49.7 |
| Vaults | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Manholes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Other Underground Structures | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Streetlights | 1,750 | 219 | 2 | 17 | 153 | 47 | 0 | 0 | 12.5 |

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STATE OF MISSOURI)
) ss
CITY OF ST. LOUIS)

1. My name is David N. Wakeman. I work in the City of St. Louis, Missouri, and I am employed by Union Electric Company d/b/a Ameren Missouri as Senior Vice President, Operations & Technical Services.

David N. Wakeman
David N. Wakeman


Notary Public

Julie Irby - Notary Public
Notary Seal, State of
Missouri - St. Louis County
Commission #13753418
My Commission Expires 1/15/2017