

2009 Reliability Compliance Report
Submitted to Missouri Public Service Commission



Sam McGarrah
Director of Engineering & Line Services
931 East 4th Street
Joplin, MO 64801
417-625-6526
smcgarrah@empiredistrict.com

Table of Contents

| | |
|--------------------------------------|----|
| Affidavit | 3 |
| Introduction | 4 |
| Compliance Statement | 4 |
| 2009 Inspection Plan Summary | 5 |
| Distribution | 5 |
| Transmission | 6 |
| 2009 Work Order Rating Summary | 7 |
| Distribution | 7 |
| Transmission | 8 |
| 2009 Corrective Action Summary | 9 |
| Distribution | 9 |
| Transmission | 10 |

AFFIDAVIT

State of Missouri

)ss

County of Jasper

I, Michael E. Palmer, having been duly sworn upon my oath, state that I am the Vice President of Commercial Operation of The Empire District Electric Company (Empire), that I am duly authorized to make this affidavit on behalf of Empire, and that the matters and things stated in the foregoing are true and correct to the best of my information, knowledge and belief.

M E Palmer

Subscribed and sworn before me this 29th day of June, 2010.



Patricia A Settle
Notary Public

Introduction

The Empire District Electric Company (Empire) is continuing to evolve its System Reliability Department and maintenance program to comply with requirements of Missouri's Electrical Infrastructure Standards 4 CSR 240-23.020. The System Reliability department is in its second full year of operation and continues to improve the process of managing infrastructure inspections, corrective action monitoring, data management and reporting necessary to comply with 4 CSR 240-23.020. Empire anticipates the infrastructure inspection program will continue to evolve during the first full inspection cycle. This evolution is necessary to streamline the inspection processes, data collection, maintenance crew collaboration, and reporting documentation.

Osmose Utility Services Inc. (Osmose) is currently contracted to perform infrastructure inspections on Empire facilities. They have been inspecting the Empire facilities since 2008. Empire utilizes its own electricians to perform detail inspections on padmounted equipment, three-phase reclosers, capacitors, and regulators. Empire continues to use Aerial Patrol Inc. (Aerial Patrol) to perform an annual aerial patrol inspection of the transmission system. Empire also utilizes a work management software solution (Maximo) to maintain records and track the progress associated with the infrastructure inspections and corrective actions.

Compliance Statement

The Empire District Electric Company has complied with the rules established in the State of Missouri's Electrical Corporation Infrastructure Standards, 4 CSR 240.23-020 for the 2009 calendar year.

2009 Inspection Plan Summary

Distribution

Empire completed patrol inspections on 29,574 overhead components, 3,123 streetlight components, and 3,557 underground components in 2009 using the services of Osmose. Empire completed detail inspections on 24,274 overhead components and 2,155 streetlight components using the services of Osmose. There were 3,194 detail inspections planned for underground components that were not completed due to a labor force agreement with Empire's union electricians. Recovery detail underground inspections began in 2010 along with the currently scheduled inspections. Empire completed 19,156 intrusive inspections in 2009 using the services of Osmose.

| Distribution 2009 Inspection Plan Summary | | | | | |
|---|--|--|------------------------------|-----------------------------------|-----------------------------------|
| Inspection Type | Facility Type | Components | Inspections Planned for 2009 | Inspections Completed During 2009 | Inspections Not Completed in 2009 |
| Patrol | Overhead Circuits, Structures, & Equipment | Poles, Transformers, Capacitors, Regulators, Reclosers, Switches, Fuses, Arresters | 29,574 | 29,574 | 0 |
| | Streetlight System | Structures | 3,123 | 3,123 | 0 |
| | Underground Structures & Equipment | Sectionalizing Cabinets, Vaults, Transformers, Switches | 3,557 | 3,557 | 0 |
| Detail | Overhead Circuits, Structures, & Equipment | Poles, Transformers, Capacitors, Regulators, Reclosers, Switches, Fuses, Arresters | 24,380 | 24,380 | 0 |
| | Streetlight System | Structures | 2,155 | 2,155 | 0 |
| | Underground Structures & Equipment | Sectionalizing Cabinets, Vaults, Transformers, Switches | 3,194 | 0 | 3,194 |
| Intrusive | Wood Poles | Poles | 19,156 | 19,156 | 0 |

Transmission

Empire completed an aerial patrol inspection on 18,969 poles using the services of Aerial Patrol Inc. There were 6,265 detail inspections completed out of the 6,387 planned. A section of the incomplete detail inspections was due to the line's location in an active EPA Resource and Conservation Recovery site. In order for Empire to complete inspections on that site, the land owner has to obtain the necessary permitting with various government agencies. Empire has rescheduled the inspection for 2012. The remaining incomplete detail inspections were due to inclement weather delays and are scheduled to be recovered in 2010. Empire completed 2,968 intrusive inspections using the services of Osmose.

| Transmission 2009 Inspection Plan Summary | | | | | |
|--|---------------------------------|-------------------|-------------------------------------|--|--|
| Inspection Type | Facility Type | Components | Inspections Planned for 2009 | Inspections Completed During 2009 | Inspections Not Completed in 2009 |
| Patrol | Overhead Structures & Equipment | Poles | 18,969 | 18,969 | 0 |
| Detail | Overhead Structures & Equipment | Poles, Switches | 6,387 | 6,265 | 122 |
| Intrusive | Overhead Structures & Equipment | Poles | 2,968 | 2,968 | 0 |

2009 Work Order Rating Summary

Empire has developed a priority rating system to classify corrective actions and provide appropriate remediation schedules. The priority rating system allows Empire to balance its resources to remediate corrective actions in a timely and economical manner while improving the service reliability to its customers. Only items identified during the course of infrastructure inspections will be rated using this system. A listing of the priority ratings description and corresponding scheduling period are detailed in the table below.

| Priority Rating | Description | Corrective Action Scheduling Period |
|-----------------|--|-------------------------------------|
| 5 | Emergency/Safety/Load Limiting/Customer Outage | Immediate |
| 4 | Urgent/May Affect Load | 180 days |
| 3 | Time Critical/Seasonal | 365 days |
| 2 | Routine/Non-Critical | 365 days |
| 1 | Project/Operational Improvements | Empire's discretion |

Distribution

| Distribution 2009 Work Order Rating Summary | | | | | | | |
|---|---|---|------------|------------|------------|------------|------------|
| Inspection Type | Facility Type | Components | Priority 5 | Priority 4 | Priority 3 | Priority 2 | Priority 1 |
| Patrol | Overhead Circuits, Structures, & Equipment | Poles, Transformers, Capacitors, Regulators, Reclosers, Switches, Fuses, Arresters | 0 | 37 | 0 | 2,029 | 3 |
| | Underground Structures & Equipment | Sectionalizing Cabinets, Vaults, Transformers, Switches, | 3 | 43 | 0 | 208 | 120 |
| Detail | Overhead Circuits, Structures, & Equipment | Poles, Transformers, Capacitors, Regulators, Reclosers, Switches, Fuses, Arresters | 0 | 36 | 0 | 1,727 | 1 |
| | Underground Structures & Equipment | Sectionalizing Cabinets, Vaults, Transformers, Switches, | 0 | 0 | 0 | 0 | 0 |
| Intrusive | Wood Poles & Equipment | Poles | 1 | 305 | 0 | 3,307 | 82 |

Transmission

| Transmission 2009 Work Order Rating Summary | | | | | | | |
|---|---------------------------------|------------------|------------|------------|------------|------------|------------|
| Inspection Type | Facility Type | Components | Priority 5 | Priority 4 | Priority 3 | Priority 2 | Priority 1 |
| Patrol | Overhead Structures & Equipment | Poles | 0 | 0 | 0 | 208 | 1890 |
| Detail | Overhead Structures & Equipment | Poles & Switches | 0 | 1 | 0 | 414 | 0 |
| Intrusive | Overhead Structures & Equipment | Poles | 0 | 70 | 0 | 488 | 0 |

2009 Corrective Action Summary

Distribution

Empire completed 243 work orders of 278 that were planned in 2009. Incomplete work orders are scheduled to be completed in 2010.

| Distribution 2009 Corrective Action Summary | | | | | |
|---|--|--|-----------------------------------|-------------------------------------|--------------------------------------|
| Inspection Type | Facility Type | Components | Corrective Action Planned in 2009 | Corrective Action Completed in 2009 | Corrective Action Incomplete in 2009 |
| Patrol | Overhead Circuits, Structures, & Equipment | Poles, Transformers, Capacitors, Regulators, Reclosers, Switches, Fuses, Arresters | 203 | 201 | 2 |
| | Underground Structures & Equipment | Sectionalizing Cabinets, Vaults, Transformers, Switches | 25 | 12 | 13 |
| Detail | Overhead Circuits, Structures, & Equipment | Poles, Transformers, Capacitors, Regulators, Reclosers, Switches, Fuses, Arresters | 5 | 0 | 5 |
| | Underground Structures & Equipment | Sectionalizing Cabinets, Vaults, Transformers, Switches | 0 | 0 | 0 |
| Intrusive | Wood Poles & Equipment | Poles | 45 | 30 | 15 |

Transmission

Empire completed 39 work orders of the 76 that were planned in 2009. Incomplete work orders are scheduled be completed in 2010.

| Transmission 2009 Corrective Action Summary | | | | | |
|---|---------------------------------|------------------|-----------------------------------|-------------------------------------|--------------------------------------|
| Inspection Type | Facility Type | Components | Corrective Action Planned in 2009 | Corrective Action Completed in 2009 | Corrective Action Incomplete in 2009 |
| Patrol | Overhead Structures & Equipment | Poles | 24 | 10 | 14 |
| Detail | Overhead Structures & Equipment | Poles & Switches | 0 | 0 | 0 |
| Intrusive | Overhead Structures & Equipment | Poles | 52 | 29 | 23 |