

In the Matter of Evergy Metro, Inc. d/b/a Evergy )  
Missouri Metro's Infrastructure Standards ) Case No. EO-2020-\_\_\_\_\_  
Compliance Plan Pursuant to 20 CSR 4240-23.020 )

Roger W. Steiner

**Evergy Missouri Metro  
2019 Annual Infrastructure Compliance Report  
Pursuant to 20 CSR 4240-23.020**

**Evergy Missouri West  
2019 Annual Infrastructure Compliance Report  
Pursuant to 20 CSR 4240-23.020**

**Infrastructure Inspection and Maintenance Program**

**June 18, 2020**

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## **Introduction**

Evergy Missouri Metro and Evergy Missouri West (collectively, “Evergy”), submit their 2019 Annual Infrastructure Compliance Reports as required under the State of Missouri’s *Electrical Corporation Infrastructure Standards*, 20 CSR 4240-23.020 (“MoIR”). This report covers the period January 1, 2019, through December 31, 2019, incorporating by reference Evergy’s infrastructure compliance plans filed July 1, 2008.

## **Distribution System Summary**

Evergy is aligned with the Overhead and Underground Infrastructure Inspection schedule set forth in the MoIR. Immediate corrective action is taken when conditions are identified as critical to safety and/or service reliability. Whenever possible, corrective work on non-critical conditions is bundled with future reliability work targeting underperforming feeders and laterals.

In 2019, Intrusive Wood Pole, Overhead Circuit Structure Patrol, Detail & Patrol of Underground Structure and Equipment, and Detail & Patrol of Pad-mounted Equipment were scheduled in Evergy territories. Inspections are on schedule to be completed by the end of the cycle.

## **Evergy Missouri Metro Area Inspections**

Intrusive Wood Pole, Overhead Circuit Structure Patrol, Detail & Patrol of Underground Structure and Equipment, and Detail & Patrol of Pad-mounted Equipment were scheduled for Evergy Missouri Metro's service area in 2019.

Evergy Missouri Metro is currently on schedule for all inspection types with the first 12-year cycle spanning from 2009-2020. The current schedule for inspections is as follows:

- 1) Overhead Patrols (Cycle 2, Rural 2015-2020) (Cycle 3 Urban 2017-2020)
- 2) Pad-mount Patrols (Cycle 3, 2019-2022)
- 3) Manhole Patrols (Cycle 4, 2019-2022)
- 4) Pad-mount Detailed (Cycle 2, 2015-2022)
- 5) Manhole Detailed (Cycle 2, 2015-2022)
- 6) Overhead Detailed and Wood Pole Intrusive (Cycle 1, 2009-2020)

<b>Table 1: Evergy Missouri Metro Inspection Corrective Action Inspections</b>							
Evergy Missouri Metro Distribution				Completed Through December 2019			
System Class	Inspection Type	Facility Type	Units	Inspections Scheduled (Annual Plan)	Inspections Completed	Inspections Completed Prior to 2019 (Ahead of Cycle Plan)	Inspections Pending Outside of Plan
Distribution	Patrol	Overhead Circuits Structures & Equipment <sup>1</sup>	Structures	25,675	25,675	0	0
		Pad-mounted Equipment	Equipment Locations	609	609	0	0
		Underground Structures and Equipment	Structure Locations	453	453	0	0
	Detail	Overhead Circuits Structures & Equipment	Structures	3,947	3,947	0	0
		Pad-mounted Equipment	Equipment Locations	609	609	0	0
		Underground Structures and Equipment	Structure Locations	453	453	0	0
	Intrusive	Wood Poles	Poles	3,947	3,947	0	0

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

## **Evergy Missouri West Area Inspections**

Intrusive Wood Pole, Overhead Circuit Structure Patrol, Patrol of Underground Structure and Equipment, and Detail & Patrol of Pad-mounted Equipment were scheduled for Evergy Missouri West service area in 2019.

Evergy Missouri West is currently on schedule for all inspection types with the first 12-year cycle spanning from 2009-2020. The current schedule for inspections is as follows:

- 1) Overhead Patrols (Cycle 2 Rural 2015-2020) (Cycle 3 Urban 2017-2020)
- 2) Pad-mount Patrols (Cycle 4, 2019-2022)
- 3) Manhole Patrols (Cycle 4, 2019-2022)
- 4) Pad-mount Detailed (Cycle 2, 2015-2022)
- 5) Manhole Detailed (Cycle 2, 2015-2022)
- 6) Overhead Detailed and Wood Pole Intrusive (Cycle 1, 2009-2020)

<b>Table 2: Evergy Missouri West Inspection Corrective Action Inspections</b>							
Evergy Missouri West Distribution				Completed Through December 2019			
System Class	Inspection Type	Facility Type	Units	Inspections Scheduled (Annual Plan)	Inspections Completed	Inspections Completed Prior to 2019 (Ahead of Cycle Plan)	Inspections Pending Outside of Plan
Distribution	Patrol	Overhead Circuits, Structures, Equipment and Street Lights <sup>2</sup>	Structures	43,501	43,501	0	0
		Pad-Mounted Equipment	Pads	23,704	23,704	0	0
		Underground Structures and Equipment	Structures	0	0	0	0
	Detailed	Overhead Structures, Circuits, Equipment and Street Lights	Structures	37,523	37,523	0	0
		Pad-mount Equipment	Pads	23,704	23,704	0	0
		Underground Structures and Equipment	Structures	0	0	0	0
	Intrusive	Wood Poles	Poles	37,523	37,523	0	0

<sup>2</sup> Inclusive of conductors, transformers, reclosers, regulators, capacitors, switching/protective devices as required under the MoIR.

## Distribution Equipment Rating Summary

Table 3: Combined 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	Structures	0 (0%)	3,053 (92.21%)	258 (7.79%)
		Pad-mounted Equipment	Equipment Locations	538 6.01%	7,826 (87.49%)	581 (6.49 %)
		Underground Structures and Equipment	Structure Locations	78 (19.69%)	295 (74.49%)	23 (5.808%)
	Intrusive	Wood Poles	Poles	817 (48.54%)	608 (36.12%)	258 (15.33%)

## Distribution Corrective Action Summary

The number of corrective actions completed as the result of facility inspection concerns or in conjunction with Worst Performing Circuit and Lateral Improvement jobs are included in Table 4. Corrective efforts include infrared inspections of splices, ultrasound detection of insulators, ground wire repairs, varmint guards, riser conduit repairs, arrester replacements, critical pole and cross arm replacements, repair/replace transformers, and reinforce or replace wood poles, etc.

Table 4: Combined Distribution Corrective Action Summary							
System Class	Inspection Type	Facility Type	Component	CA Scheduled in 2019	CA Completed in 2019	CA Planned in 2020	CA Planned after 2020
Distribution	Patrol and Detailed Patrol	Overhead Circuits Structures & Equipment, Street Lights	Structures	5,000	5,552	5,000	4,500
		Pad-mounted Equipment	Pads	500	531	500	300
		Underground Structures and Equipment	Structures	30	80 <sup>3</sup>	60	60
	Intrusive	Wood Poles	Poles	1,235	817	900	900

<sup>3</sup> Structural Integrity work takes up to 2-years to schedule and complete due to the complexity of the remediation necessary. Includes splice fixes, structural replacements and secondary network manhole remediations jobs.

## **Transmission System Summary**

All Evergy transmission lines are inspected annually by aerial and/or ground patrol, as was the case in the spring of 2019. This schedule is more rigorous than that required under the MoIR. There were 147 combined corrective actions, based on aerial and ground patrols, completed in 2019. There are 62 combined corrective actions scheduled for 2020 completion.

Detailed and intrusive inspections were completed on transmission lines in both Evergy service areas in 2019. A total of 3,057 poles were inspected in the combined service areas, of which, 36 were found in need of corrective action. There were 40 combined corrective actions, based on detailed and intrusive inspections, completed in 2019. There are 32 poles scheduled for completion in 2020.

<b>Table 5: Evergy Missouri Metro Transmission Facility Inspection Summary</b>							
<b>Evergy Missouri Metro Transmission</b>				<b>Completed Through December 2019</b>			
<b>System Class</b>	<b>Inspection Type</b>	<b>Facility Type</b>	<b>Units</b>	<b>Inspections Planned for 2019</b>	<b>Inspections Completed During 2019</b>	<b>Inspections Completed Prior to 2019 (Ahead of Plan)</b>	<b>Inspections Pending in 2019 Outside of Plan</b>
Transmission	Aerial and Ground Patrol	Overhead Circuits Structures & Equipment	Structures	7,215	7,215	0	0
		Underground Structures and Equipment	Structures	22	22	0	0
	Detail and Intrusive	Wood/Steel Poles	Poles	6	6	0	0



<b>Table 6: Evergy Missouri West Transmission Facility Inspection Summary</b>							
Evergy Missouri West Transmission				Completed Through December 2019			
System Class	Inspection Type	Facility Type	Units	Inspections Planned for 2019	Inspections Completed During 2019	Inspections Completed Prior to 2019 (Ahead of Plan)	Inspections Pending in 2019 Outside of Plan
Transmission	Aerial and Ground Patrol	Overhead Circuits Structures & Equipment	Structures	14,779	14,779	0	0
		Underground Structures and Equipment	Structures	1	1	0	0
	Detail and Intrusive	Wood/Steel Poles	Poles	3,020	3,051	0	0

<b>Table 7: Evergy Missouri Metro Transmission Equipment Condition Rating Summary</b>						
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	18 (0.25%)	41 (0.57%)	7,156 (99.18%)
		Underground Structures	Manholes	0 (0.00%)	0 (0.00%)	22 (100.00%)
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	35 (4.25%)	26 (3.16%)	763 (92.60%)

<b>Table 8: Evergy Missouri West Transmission Equipment Condition Rating Summary</b>						
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.	44 (0.30%)	75 (0.51%)	14,660 (99.19%)
		Underground Structures	Manholes.	0 (0.00%)	0 (0.00%)	1 (100%)
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	5 (0.17%)	17 (0.59%)	2,851 (99.23%)

<b>Table 9: Evergy Missouri Metro Transmission Corrective Action (CA) Summary</b>							
System Class	Inspection Type	Facility Type	Component	CA Planned in 2019	CA Completed in 2019	CA Planned in 2020	CA Planned after 2020
Transmission	Aerial and Ground Patrol	Overhead Structures & Equipment	Poles, Switches	18	30	18	23
	Aerial and Ground Patrol	Underground Structures and Equipment	Manhole	0	0	0	0
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	15	69	22	4

<b>Table 10: Evergy Missouri West Transmission Corrective Action (CA) Summary</b>							
System Class	Inspection Type	Facility Type	Component	CA Planned in 2019	CA Completed in 2019	CA Planned in 2020	CA Planned after 2020
Transmission	Aerial and Ground Patrol	Overhead Structures & Equipment	Poles, Switches	44	117	44	31
	Aerial and Ground Patrol	Underground Structures and Equipment	Manhole	0	0	0	0
	Detail and Intrusive	Poles and Structures - Wood/Steel	Poles	1	13	10	7

**VERIFICATION**

STATE OF MISSOURI     )  
                                      ) ss.  
COUNTY OF JACKSON    )

I, Kevin Noblet, being duly affirmed according to law, depose and hereby state that I am authorized to make this affidavit on behalf of Evergy Missouri Metro and Evergy Missouri West, as Vice President, and that the facts above set forth are true and correct to the best of my knowledge, information and belief.



Kevin Noblet  
Evergy, INC.

Subscribed and affirmed before me this 17<sup>th</sup> day of June 2020.

  
NOTARY PUBLIC

My Commission Expires:

4/26/2021

