



**Evergy Missouri Metro  
2020 Reliability Performance Report**

Annual reporting completed pursuant to 20 CSR 4240-23.010

April 30, 2021

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**20 CSR 4240.23.010 (1)(A), (B), (C), (D), and (3) – Reliability Statistics 2020**

**Table 1: 2020 Evergy Missouri Metro Reliability Indices**

Total Customers (Meter Counts)		313,681
Adjusted	SAIFI	1.15
	SAIDI	120.82
	CAIDI	105.38
	CAIFI	1.89
Unadjusted	SAIFI	1.47
	SAIDI	247.95
	CAIDI	168.73
	CAIFI	2.23

Excludes the following 2020 storm dates from the normalized data:  
Jan 10, May 4, Jun 4, Jun 5, Jun 27, Dec 29

**20 CSR 4240-23.010 (6), (7) – Highest 5% SAIFI Circuits Assessment**

Patrols and repairs are planned to complete in the 2nd and 3rd Quarters of 2021. For circuits where analysis is required, a systematic patrol plan is developed based on identified outage causes. When and where feasible, repairs are made during the initial patrol. Additionally, Evergy Engineering will work with an external provider to perform predictive diagnostic testing (ultrasound) on some recurring problems and issue corrective action jobs for completion during the 2nd and 3rd Quarters of 2021. Tree patrols will be performed where indicated and spot trimming performed as needed. Other maintenance, modifications, or upgrades not completed during the initial patrols will be completed by the end of the 3rd Quarter of 2021. Table 2 lists circuits identified as having the highest 5% of adjusted SAIFI statistics in 2020, as outlined in 20 CSR 4240.23.010 (6).

**Table 2: Highest 5% SAIFI Circuits**

Centers	Circuit	Substation	Action Plan	SAIFI	SAIDI
EDST	104101	104	Outages related to lighting; ultrasound test the feeder and install arrestors.	72.00	7407.00
EDST	104202	104	Outages related to failed equipment; ultrasound test the feeder and replace failed equipment	206.00	33855.00
EDST	12211	122	Outages related to equipment failure, lightning, and varmints; ultrasound test the feeder, install varmint protection, install arrestors, and replace failed equipment	3.88	515.25
EDST	12212	122	Outages related to equipment failure and weather; ultrasound test the feeder and replace failed equipment.	4.73	614.96
EDST	127202	127	Outages related to failed equipment; ultrasound test the feeder and replace failed equipment	7.87	840.12
EDST	127203	127	Outages related failed equipment and weather; ultrasound test the feeder and replace failed equipment	5.13	1198.75
EDST	14001	140	Outages related to failed equipment; ultrasound test the feeder and replace failed equipment	4.17	317.33
EDST	14002	140	Outages related to failed equipment; ultrasound test the feeder and replace failed equipment	4.00	376.00
FM	2433	24	Outages related to failed equipment; ultrasound test the feeder and replace failed equipment	3.81	448.37

Centers	Circuit	Substation	Action Plan	SAIFI	SAIDI
EDST	2821	104	Outages related to weather, lightning, vegetation, and equipment failures; ultrasound test the feeder, trim trees, install arrestors, and replace failed equipment.	3.71	654.46
EDST	2822	104	Outages related to equipment failure, varmints, and weather; ultrasound test the feeder, install varmint protection, and replace failed equipment.	4.47	638.45
DOD	3143	122	Outages related to weather, vegetation, and equipment failures; ultrasound test the feeder, trim trees, and replace failed equipment.	4.29	694.45
EDST	42105	122	Outages related to weather and varmints; ultrasound test the feeder and installed varmint protection.	10.80	646.69
EDST	42106	421	Outages related to failed equipment; ultrasound test the feeder and replace failed equipment.	62.50	1192.00
EDST	5912	59	Outages related to weather, lightning, vegetation, and equipment failures; ultrasound test the feeder, trim trees, install arrestors and replace failed equipment.	4.99	747.92
DOD	6152	61	Outages related to varmints, vegetation, and equipment failures; ultrasound test the feeder, install varmint protection, trim trees, and replace failed equipment.	3.77	258.17
DOD	6164	61	Outages related to equipment failure, vegetation, varmints, and weather; ultrasound test the feeder, install varmint protection, trim trees, and replace failed equipment.	3.83	361.37
DOD	7563	75	Outages related to equipment failure and varmints; ultrasound test the feeder, install varmint protection, and replace failed equipment.	3.83	262.12

Centers	Circuit	Substation	Action Plan	SAIFI	SAIDI
DOD	7573	75	Outages related to varmints, vegetation, weather, and equipment failures; ultrasound test the feeder, install varmint protection, trim trees, and replace failed equipment.	4.07	267.49

Excludes the following 2020 storm dates from the normalized data: Jan 10, May 4, Jun 4, Jun 5, Jun 27, Dec 29

### **20 CSR 4240-23.010 (8) – Multi-Year Worst Performing Circuit Reporting**

The referenced rule requires a plan and schedule to lower SAIFI metrics on circuits that are listed on the highest 5% SAIFI list for two out of three of the preceding years. Table 3 reflects the action plans identified to lower the SAIFI metric for these circuits. Additional patrols and root-cause analysis, where required, are planned to complete in 3<sup>rd</sup> Quarter 2021.

**Table 3: Multi-Year Worst Performing Circuit Report**

<b>Year</b>	<b>Centers</b>	<b>Circuits</b>	<b>Substation</b>	<b>Action Plan</b>	<b>SAIFI</b>	<b>SAIDI</b>
2019 2020	EDST	127203	127	Outages related to failed equipment and weather; ultrasound test the feeder and replace failed equipment.	5.13	1198.75