



**Evergy Missouri Metro
2021 Reliability Performance Report**

Annual reporting completed pursuant to 20 CSR 4240-23.010

April 29, 2022

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20 CSR 4240.23.010 (1)(A), (B), (C), (D), and (3) – Reliability Statistics 2021

Table 1: Evergy Missouri Metro Reliability Indices

2021		MO Metro
Total Customers (Meter Counts)		302,942
Adjusted	SAIFI	1.00
	SAIDI	97.97
	CAIDI	97.94
	CAIFI	1.86
Unadjusted	SAIFI	1.81
	SAIDI	288.90
	CAIDI	159.23
	CAIFI	2.36

Excludes the following 2021 storm dates from the normalized data:

Jan 1, Feb 16, May 9, Jun 11, Jul 10, Aug 10, Aug 12, Aug 20, Dec 15

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

Patrols and repairs are planned to complete in the 2nd, 3rd, and 4th Quarters of 2022. 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. Tree patrols will be performed where indicated and spot trimming performed as needed. Other maintenance, modifications, or upgrades not completed during the initial patrol will be completed by the end of the 4th Quarter of 2022. Table 2 lists circuits identified as having the highest 5% of adjusted SAIFI statistics in 2021, as outlined in 20 CSR 4240.23.010 (6).

Table 2: Highest 5% SAIFI Circuits

Center	Substation	Circuit	Action Plan	SAIFI	SAIDI
NTLD	10	10012023	Outages related to varmints, weather, and vegetation; varmint protection applied and tree trimming required. Work in progress.	16.78	2,738.78
EDST	42	42034106	Outages related to equipment failure; equipment repaired. No further action required.	7.00	105.00
FM	74	74013032	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	5.45	376.42
FM	24	24013044	Outages related to varmints, equipment failures, and vegetation; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	5.44	498.14
NTLD	78	78012051	Outages related to varmints, equipment failures, and vegetation; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	5.34	285.20
DOD	61	61013052	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	4.99	300.82
NTLD	78	78012052	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	4.85	288.00
DOD	23	23013043	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	4.67	353.82
FM	37	37013021	Outages related to equipment failure and vegetation; equipment repaired, and tree trimming required. Work in progress.	4.61	288.36
DOD	61	61013051	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	4.42	422.82
DOD	31	31013022	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	4.21	290.46
DOD	31	31013014	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.62	508.16

Center	Substation	Circuit	Action Plan	SAIFI	SAIDI
FM	74	74013092	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.52	219.23
FM	74	74013001	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.47	188.12
NTLD	78	78012031	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.34	195.25
DOD	23	23013054	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.33	217.66
NTLD	98	98012013	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.22	399.50
FM	79	79012031	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.19	428.27
EDST	26	26012013	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.15	192.14

Excludes the following 2021 storm dates from the normalized data: Jan 1, Feb 16, May 9, Jun 11, Jul 10, Aug 10, Aug 12, Aug 20, Dec 15

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

The referenced rule requires the 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. Evergy Engineering plans to work with an external provider to perform predictive diagnostic testing (ultrasound) on some recurring problems and issued corrective action jobs scheduled for completion during the 3rd and 4th Quarters of 2022. Additional patrols and root-cause analysis, where required, are planned to complete in 4th Quarter 2022.

Table 3: Multi-Year Worst Performing Circuit Report

Years	Center	Substation	Circuit	Action Plan	SAIFI	SAIDI
2020 2021	EDST	42	42034106	Outages related to equipment failure; equipment repaired. No further action required.	7.00	105.00
2020 2021	DOD	61	61013052	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	4.99	300.82
2019 2021	NTLD	98	98012013	Outages related to varmints, equipment failures, vegetation, and weather; varmint protection applied, equipment repaired, and tree trimming required. Work in progress.	3.22	399.50