



## AmerenUE 4 CSR 240-23.010 Electric Utility System Reliability Monitoring and Reporting Submission Requirements – Annual Reliability Report

### Introduction

This report details Union Electric (dba AmerenUE) Company's annual reliability metrics and worst performing circuits for calendar year 2009 as required by Missouri Public Service Commission Rule 4 CSR 240-23.010, Electric Utility System Reliability Monitoring and Reporting Submission Requirements (referred to in the remainder of this document as "the Rule"). This report is required by Sections (2) and (7) of the Rule which state, "*The information required by section (1) shall be filed annually by the last business day of April of the calendar year following the calendar year for which the information was accumulated.... The information developed in accordance with section (6) shall be reported as part of the annual report required by section (2)....*" This report will provide the reliability measures requested by the Rule, the list of Worst Performing Circuits (WPCs), and the actions taken or planned to improve the performance of these circuits.

### Definitions

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

1. System Average Interruption Frequency Index (SAIFI) – The average frequency of service interruptions in number of occurrences per customer (total number of customer interruptions divided by the total number of customers served).
2. Customer Average Interruption Frequency Index (CAIFI) – The average number of interruptions per customer interrupted (total number of customer interruptions divided by the total number of customers affected).
3. System Average Interruption Duration Index (SAIDI) – The average interruption in minutes per customer served (sum of all customer interruption durations divided by the total number of customers served).
4. Customer Average Interruption Duration Index (CAIDI) – The average interruption duration (sum of all customer interruption durations divided by the total number of customers interrupted).
5. Worst Performing Circuit (WPC) – A distribution circuit whose SAIFI value, adjusted to exclude major storm events per IEEE Standard 1366-2003, when compared to the SAIFI values for the other circuits in the AmerenUE system places it among the 5% of circuits with the highest SAIFI values in the AmerenUE system.

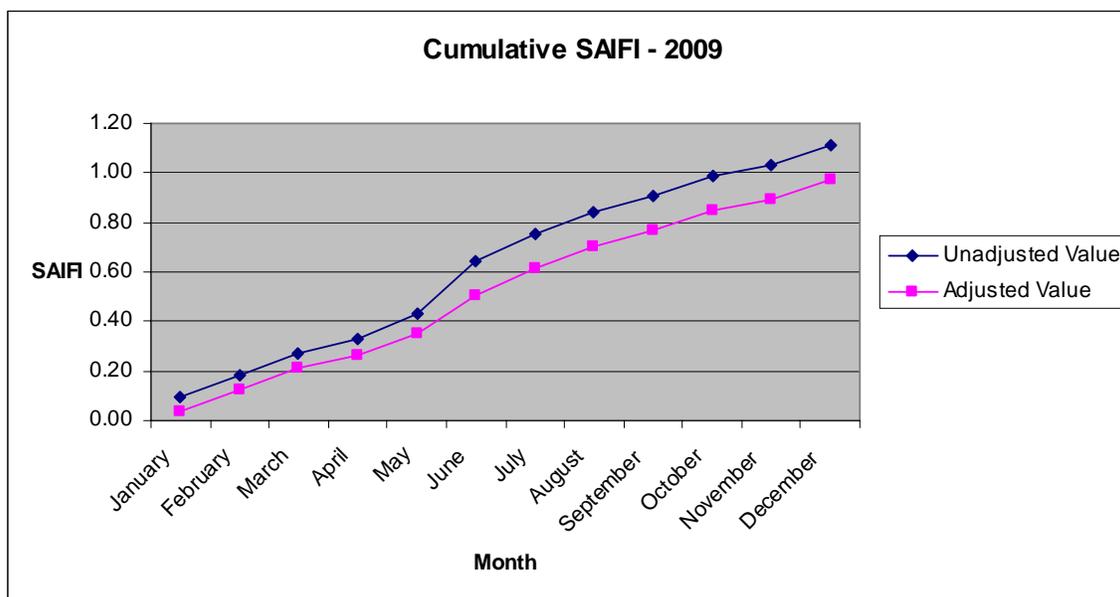


## Reliability Metrics

The following tables and graphs show AmerenUE's unadjusted and adjusted reliability metrics for calendar year 2009:

SAIFI:

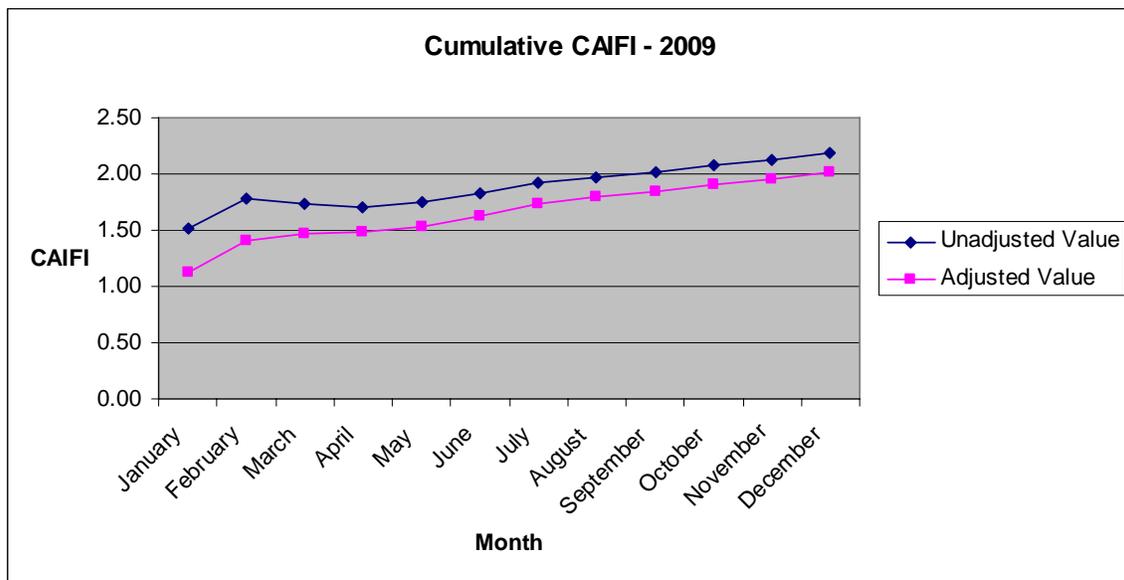
Month	Unadjusted Value	Adjusted Value
January	0.10	0.04
February	0.19	0.12
March	0.27	0.21
April	0.33	0.27
May	0.43	0.35
June	0.64	0.51
July	0.75	0.61
August	0.84	0.71
September	0.91	0.77
October	0.98	0.85
November	1.03	0.89
December	1.11	0.98





CAIFI:

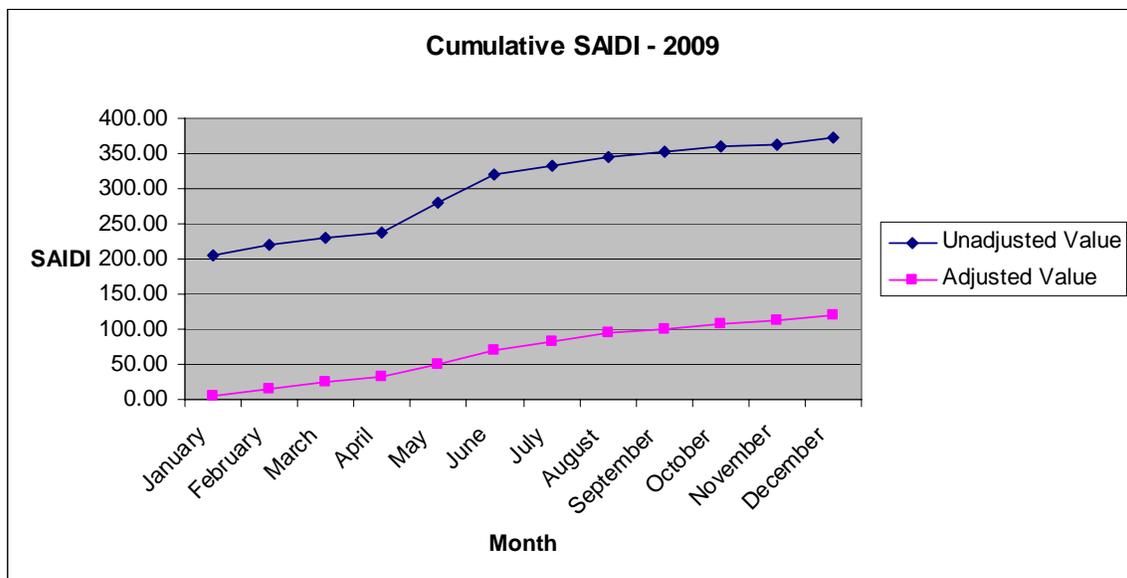
Month	Unadjusted Value	Adjusted Value
January	1.52	1.13
February	1.79	1.40
March	1.73	1.47
April	1.71	1.48
May	1.75	1.53
June	1.83	1.63
July	1.92	1.73
August	1.98	1.80
September	2.02	1.85
October	2.08	1.91
November	2.12	1.95
December	2.18	2.02





SAIDI:

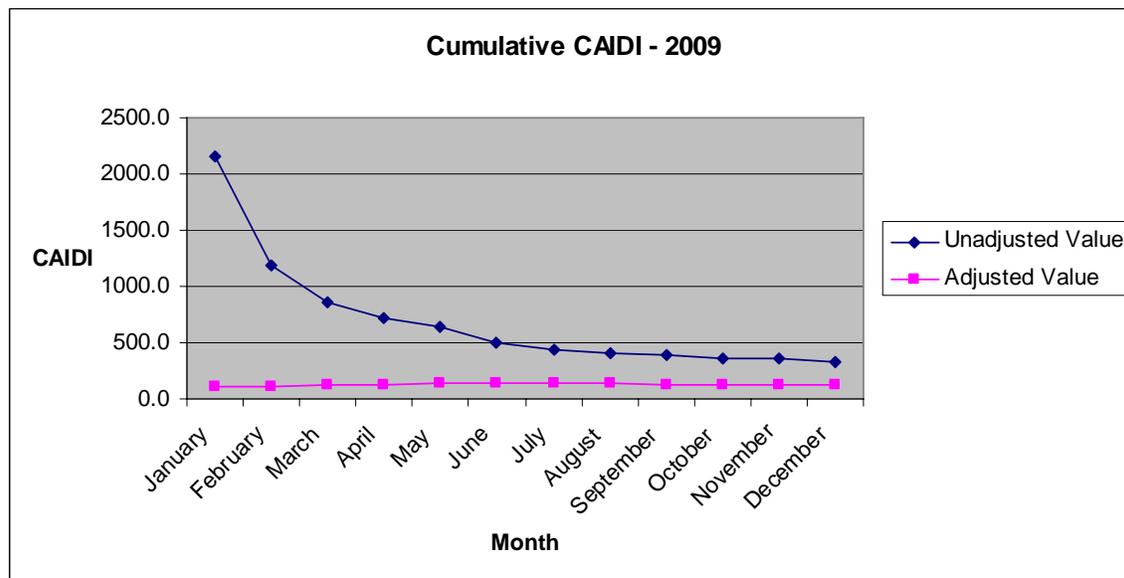
Month	Unadjusted Value	Adjusted Value
January	205.62	4.4
February	219.62	14.2
March	231.21	25.8
April	237.13	31.7
May	280.05	49.4
June	320.92	70.0
July	332.71	81.8
August	345.25	94.3
September	351.77	100.8
October	358.96	108.0
November	362.90	112.0
December	372.09	121.1





CAIDI:

Month	Unadjusted Value	Adjusted Value
January	2157.4	113.8
February	1184.5	113.5
March	855.3	122.8
April	726.3	119.1
May	646.7	141.8
June	500.4	138.6
July	443.6	133.2
August	410.0	133.6
September	388.4	131.1
October	364.7	127.4
November	352.7	125.4
December	334.3	124.1



### Worst Performing Circuits

AmerenUE has performed SAIFI calculations on all of its distribution circuits in accordance with section (6) of the Rule. The circuits have been ranked in order of descending SAIFI value and the 5 percent of the circuits with the highest SAIFI values have been designated as Worst Performing Circuits (WPCs). The list of WPCs based on 2009 SAIFI values has been included in Appendix A.

AmerenUE has analyzed each of these WPCs and the reasons why the circuit qualifies as a WPC and the actions planned or taken to improve the WPC's performance have been included in Appendix B.



## Conclusion

This report details AmerenUE's annual reliability metrics as well as providing a list of AmerenUEs worst performing circuits and the actions planned and/or taken to improve the reliability of these circuits. The report clearly demonstrates that AmerenUE is aware of those circuits considered "worst performers" and has either taken or planned aggressive actions to improve the reliability of these circuits in order to better serve our customers.