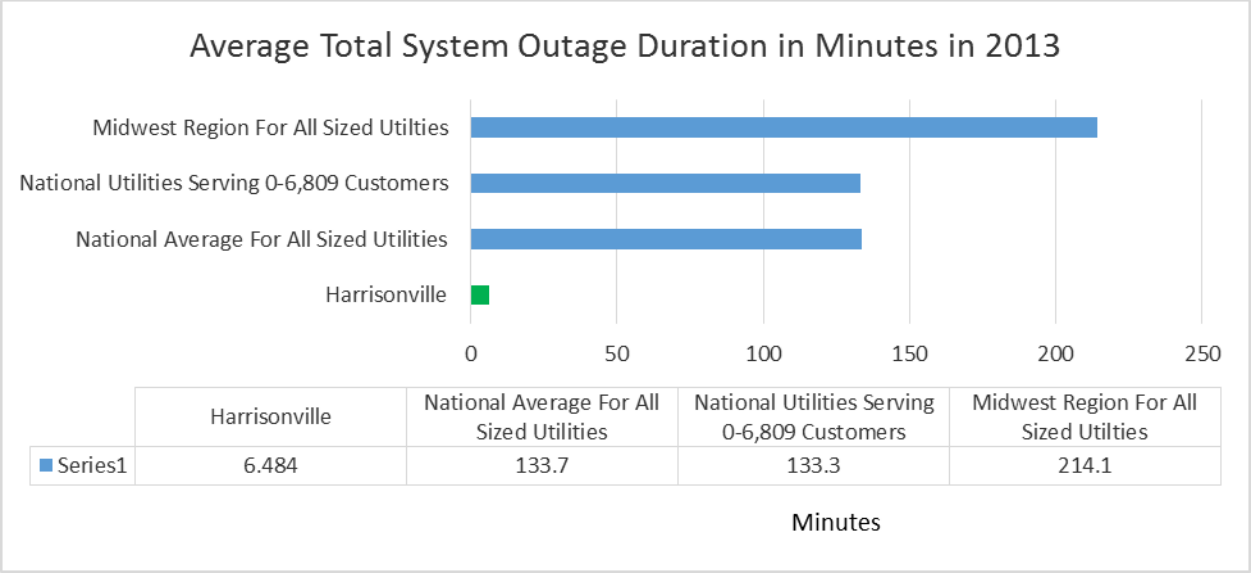
Electric Department System Reliability

The Harrisonville Electric Department has recently received the evaluation of its first eReliability Tracker for the year 2013 from the American Public Power Association and is pleased to note that it is demonstrating some truly impressive results in service reliability, compared to other systems in the Midwest and the nation as a whole.

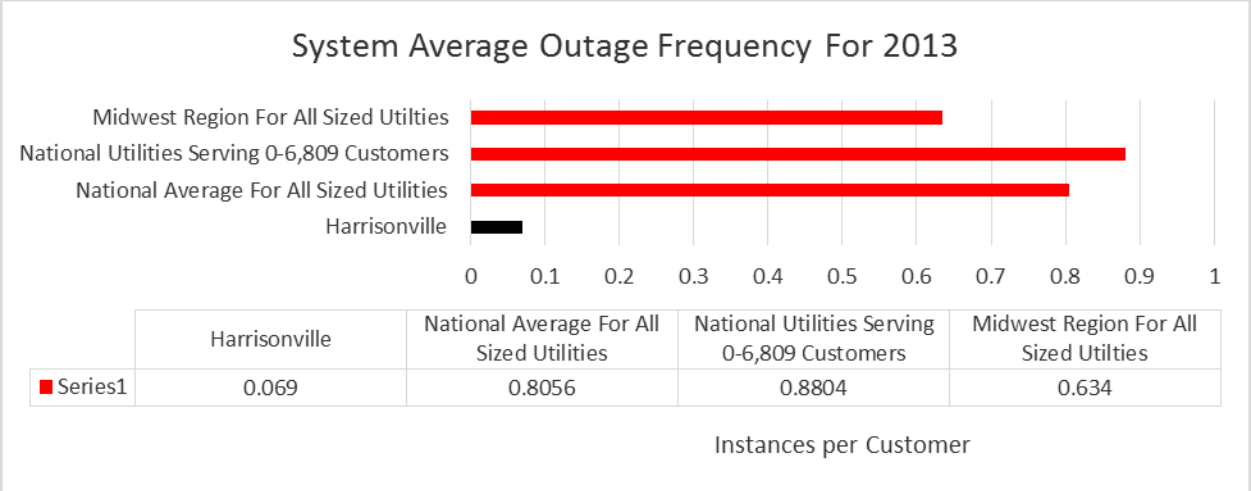
The tracker analyzes outage information supplied by a distribution system from several different perspectives to determine its reliability compared with other distribution systems across the country. "Not only does this report show we are well above average for similar sized utilities in our region, but we are also well above average for all electric utilities across the United States," Keith Thomas, Electric Department Director, said.

Reliability is an emergent property that reflects historic and ongoing engineering investment decisions with a utility. Proper use of reliability metrics ensures the utility is not only performing its intended function, but also is providing service in a consistent and effective manner. We can use this information to compare with data from similar utilities and this report endeavors to group utilities by size and region to improve comparative analyses while reducing difference. To limit the comparison of utilities of truly different sizes, this report separates utilities into groups according to the number of customers served. Also, since the utilities considered in this report represent a wide variety of locations across the United States, each utility is grouped with all others located in their corresponding APPA region. Harrisonville, as might be expected, is grouped with the Midwest region.

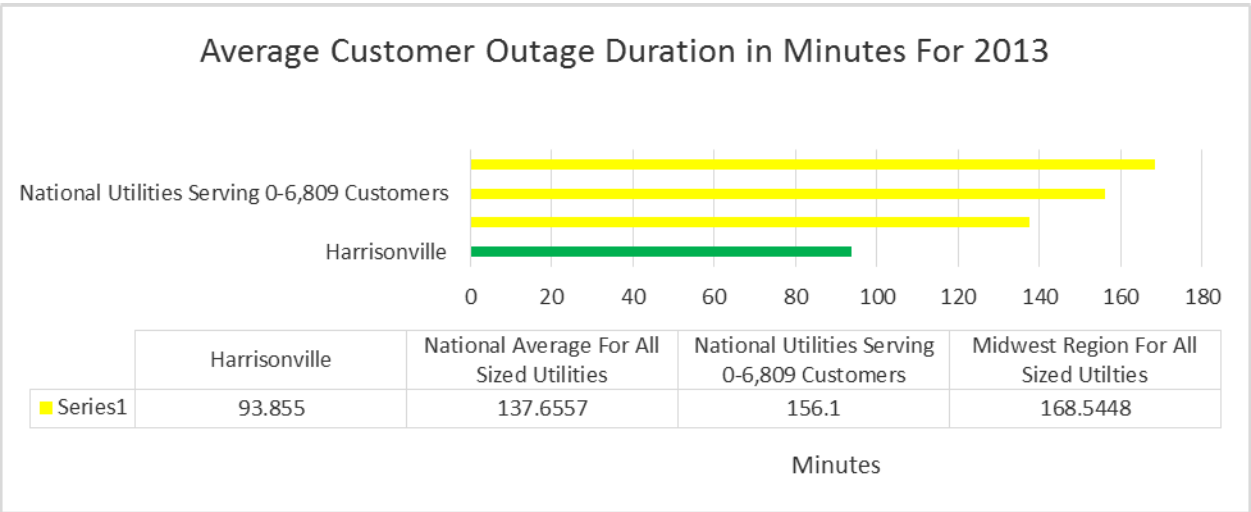
System Average Interruption Duration Index (SAIDI) is tracked through the program data. It is defined as the average interruption duration in minutes for customers served by the utility system during a twelve month period. It is calculated by dividing the sum of all customers' interruption durations by the average number of customers served by the utility during that period. Our SAIDI is 6.484 minutes. The average for all utilities is 133.6884, utilities in our region 214.0614, and across the United States for utilities of our size 133.3058.



System Average Interruption Frequency Index (SAIFI) is tracked through the program data. It is defined as the average number of instances a customer on the utility system will experience an interruption during a twelve month period. It is calculated by dividing the total number of served during the twelve month period. Our SAIFI is 0.069 instances per customer. The average for all utilities is 0.8056, utilities in our region 0.6304, and across the United States for utilities of our size 0.8804.



Customer Average Interruption Duration Index (CAIDI) is tracked through the program data. It is defined as the average duration in minutes of an interruption experienced by customers during a twelve month period. It is calculated by dividing the sum of all customer interruption durations during the twelve month period by the total number of customers that experienced one or more interruptions during that time period. Our CAIDI is 93.855 minutes. The average for all utilities is 137.6557, utilities in our region 168.5448, and across the United States for utilities of our size 156.1164.



The report also shows our wildlife outages outnumber all other causes by a 10 to 1 ratio. All other causes such as weather, equipment failure, and trees were negligible in comparison.

Staff at the electric department will continue to enter the outage data each week so that the eReliability Tracker will become a living document.

“I believe this report shows the impact of the positive support the Electric Department has received from the Mayor and Board of Aldermen over the last twenty years,” Electric Department Director Keith Thomas says. “I can assure you, twenty years ago, the utility would have scored at the far opposite end of the spectrum.”