

Spotting Line Disruptions Without Disrupting Power

Eastern Kansas/Western Missouri | *Deployed on 4G LTE*

SCENARIO

Evergy's service territory includes many rural areas where trees grow into power lines and cause problems. To indicate where tree growth needs a maintenance crew to trim it, the utility has installed thousands of TripSaver reclosers.

But often when these reclosers operate, there is no communications link back to the utility letting them know the event occurred. Repeated operation of the recloser signals that there is a vegetation management issue on that circuit that the utility is unaware of, exposing the utility to more frequent power outages in these areas and leaving Evergy in the dark about where and when issues needed attention.

SOLUTION

Evergy partnered with Ubicquia for a solution. The utility deployed the company's Ubicell lighting control nodes onto lighting fixtures near TripSaver reclosers, leveraging existing LTE networks for the essential connectivity piece.

The Ubicells, equipped with onboard GPS for location awareness and high-accuracy functionality, proved a cost-effective way of detecting and reporting brief power disturbances. Ubicells placed behind non-communicating reclosers improved circuit visibility, allowing Evergy to become aware of voltage and power fluctuations in real time.

RESULTS

This solution has proven promising for future deployments. Because the system uses existing LTE networks, Ubicells can be placed on streetlights or local area/security fixtures such as barn lights on customer properties, anywhere in the service territory. Ubicells can also be programmed to differentiate between momentary and full power outages.

Evergy is using the data these nodes collect to optimize the deployment of its field crews. This further increases grid resiliency while lowering operation and maintenance costs.

