

Conquering Copper Theft with OPTEX Battery-Powered Detectors



The Site

Multiple electrical substations operated by a major electric power holding company in the Midwestern United States. These remote and expansive sites contain critical infrastructure and are often unstaffed, making them vulnerable to theft and environmental challenges.

The Challenge

Due to rising copper prices, the company faced a surge in copper theft, resulting in extensive damage, service interruptions, and hazardous grounding conditions. Each theft, while yielding only a small amount of copper, caused hundreds of thousands of dollars in repairs and downtime. With changing site conditions, large perimeters, and a no-trenching requirement, finding a flexible and reliable security solution was critical.

The Solution

A regional integrator partnered with OPTEX to implement a wireless perimeter security solution tailored to the unique challenges of the substations. Pairs of OPTEX SL-350QFRI photoelectric beam sensors were mounted inside beam towers to form 350-foot point-to-point protection lines along the fence line and around automatic gates. These battery-powered, wireless sensors required no trenching or external power, enabling fast and flexible deployment across the sites.

Added OPTEX Value

When provided with a site plan, OPTEX will custom-build and pre-install photoelectric beam sensors into towers based on exact job site specifications — at no extra charge. Each tower is labeled and shipped directly to the job site, ready for quick installation, saving integrators time and effort.

