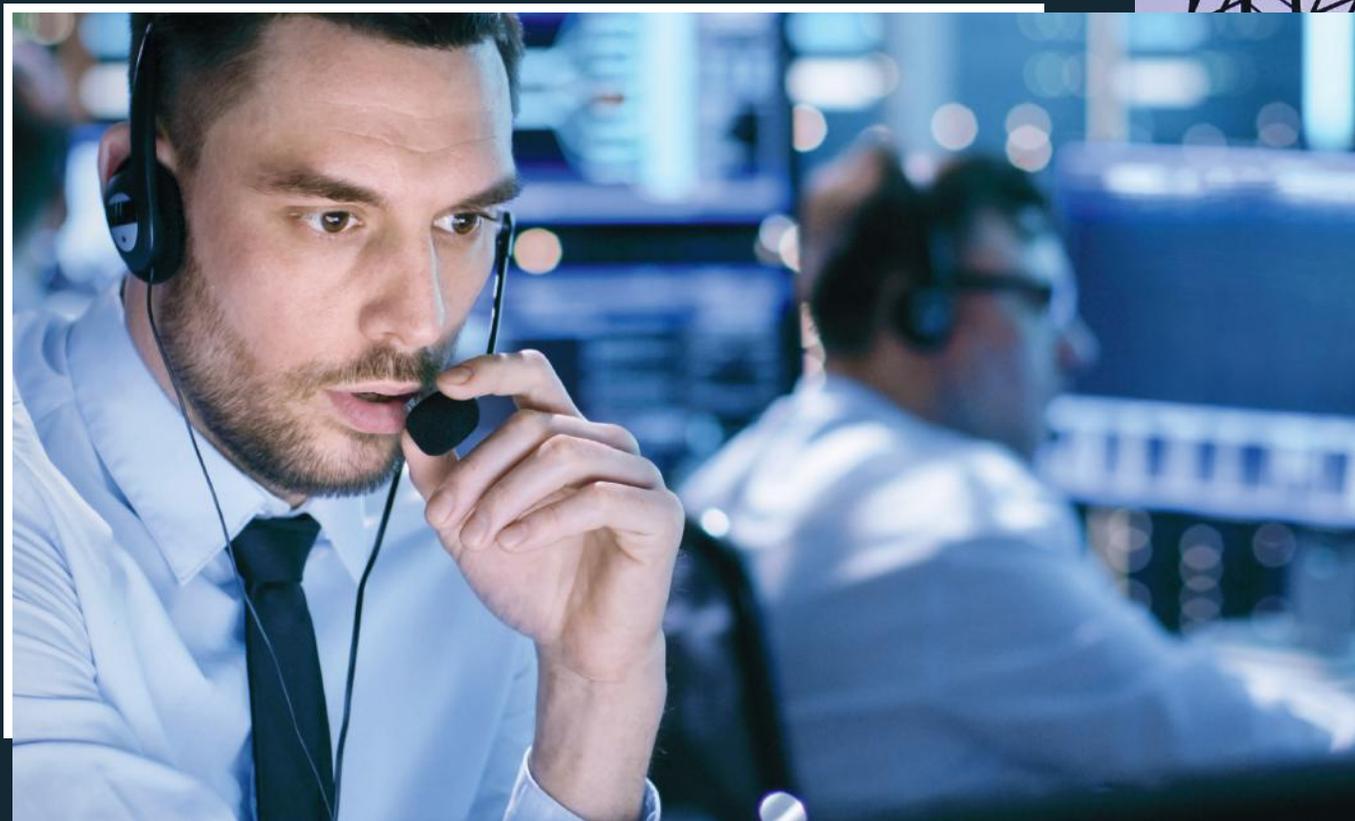


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# AI-Assisted Substation Security Monitoring: Three Case Studies



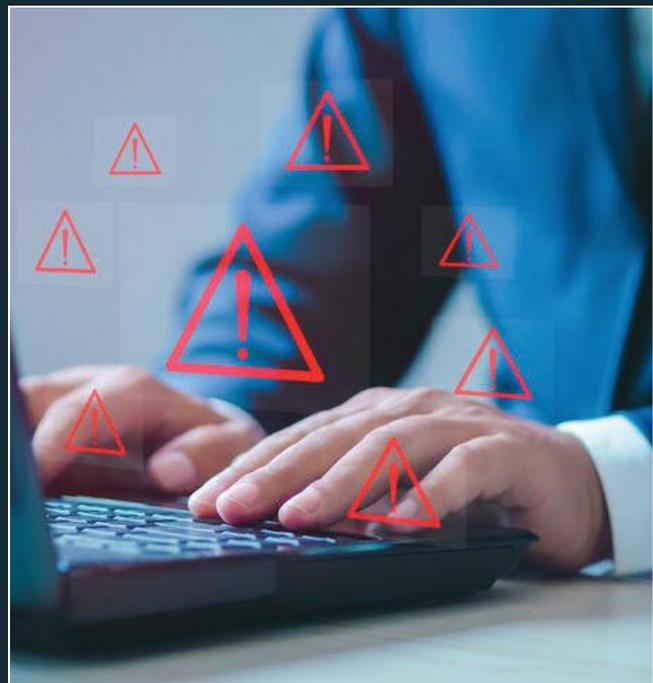
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# Protecting Utility Assets: The Hidden Costs of Inadequate Security Measures

Every day across North America, utilities suffer damage and losses to assets that are protected with inadequate security measures. Copper theft continues to be a major problem, causing repairs that range from \$1,500 per incident, all the way up to several million dollars. Replacing stolen catalytic converters can cost thousands of dollars and put vehicles out of service, not to mention the cost of vehicles that are stolen all together. Even cleaning up graffiti can cost thousands of dollars in material and labor. Plus, some utilities face municipal fines if they're unable to remediate graffiti quickly enough.

The threat to utilities also goes beyond financial loss. Vandalism and graffiti can cause brand damage, and unauthorized access to facilities poses risks to reliability, safety and liability, as well as negative media exposure.

Conventional security systems often fail to protect utility equipment for numerous reasons. Motion sensors work well for turning on lights, but they create too many false alarms for busy control-room staff to effectively confirm and manage. It would make sense, in many cases, to outsource the responsibility. But to whom? Commercial security firms typically don't understand the hazards associated with your facilities, and their staff lack the training needed to keep people and assets safe.



# A Purpose-Built Solution for the Utility Industry

Util-Assist, which provides professional services and fully managed services only to the utility industry, developed SecureAssist exclusively for the needs of utilities. The system uses artificial intelligence (AI) to monitor camera feeds for threats and alert live agents the moment suspicious activity is detected. Agents who are trained in the specifics of utility equipment and processes, confirm the threat, initiate site-specific defensive actions, such as talk-downs, and dispatch the local authorities, if needed.



The following cases are examples of just a few of the many successful implementations since the release of **SecureAssist** in 2021.

# #1: Troubled History Requires Strategic Urban Deployment

A large, urban electric distribution utility in Ontario had a long and costly history of property crime. In one service area, the utility was losing between \$50,000 to \$250,000 annually in damage to substations. In another, a commercial service was monitoring door and window contacts, but failed to recognize when the systems weren't functioning. In some years, would-be thieves even electrocuted themselves attempting to steal copper from premise utility vaults.

After an organizational merger, the utility's new administration implemented a more proactive security-management program, which began with a risk-assessment of 172 substations. The utility piloted SecureAssist at the four substations deemed most at-risk, and intruders triggered the system numerous times within a matter of weeks.



On each occasion, SecureAssist's AI algorithms identified the would-be intruders before they gained access to the substations. The system alerted the remote agent on duty and immediately presented site-specific instructions for the agent to follow, which included a series of verbal warnings delivered via intercom, as well as strobe lights and klaxon alarms. The actions successfully deterred the intruders, and the attempts soon ceased.

The utility has gradually expanded monitoring with SecureAssist and will have 14 substations under protection by the end of 2024.

## #2: Suburban Substation Needs Security ASAP

In the spring of 2024, a relatively small electric distribution utility in the Golden Horseshoe region surrounding Lake Ontario began retrofit construction on a secluded suburban substation. Soon, they were having to pay a security service to sit onsite around the clock to prevent recurring thefts and mischief.



The utility was already aware of the SecureAssist solution and contacted Util-Assist to see how quickly it could be implemented. Util-Assist worked with its hardware partner to design and install the necessary equipment within 48 hours. SecureAssist monitoring was up and running within just 72 hours of the initial call.

Talk-downs and other defensive measures thwarted intruders over the next several nights. On only one occasion, the remote SecureAssist agent needed to call in local police when the intruders showed signs of persistence. Over the remainder of the construction schedule, the intruder activity dwindled away, and the utility is now in discussions with Util-Assist regarding future SecureAssist deployments.

# #3: False Alarms Leave a Rural Windfarm Vulnerable

A renewable energy company with projects around the globe was incurring tens of thousands of dollars in expenditures due to copper thieves in rural Ontario. Hoping to stop the steady drain of repair costs, the company installed motion sensors and closed-circuit cameras at the sprawling 200-megawatt windfarm that was being targeted.



However, because the system continually produced false alarms caused by animals and passing vehicles, control-room staff hundreds of miles away began ignoring the alerts. Intruders eventually realized the sites remained unprotected and resumed stealing expensive copper grounding equipment.

One of the two local law enforcement agencies serving the region suggested the windfarm operator consider SecureAssist.

SecureAssist deployed its AI hub at the windfarm's substation sites and agents soon began receiving only qualified alerts, without all the false alarms. In addition, Util-Assist coordinated response procedures and information-sharing with the two law enforcement agencies, supporting efforts that led to the arrests of several suspects.

Since deployment of SecureAssist in early 2023, the number of successful thefts at the windfarm has dropped to zero, and the renewable energy generator has contracted for SecureAssist deployments at other sites.

# Deter, Detect and Defend

The unique challenges of safeguarding remotely operated substations and other mission-critical utility infrastructure demand a proactive approach. SecureAssist provides real-time deterrence and response without the high cost often associated with effective security.



Our AI algorithms accurately distinguish between animals, people and even different types of vehicles to eliminate false alerts.



Working with our preferred monitoring-equipment partner, the cameras, video recorders, servers, networking equipment and storage devices, are designed to perform reliably in harsh environments.



Our AI hub can also ingest feeds from thermal cameras to detect objects at all light levels.



Our security operations software (SOC) incorporates customizable procedures to process security events faster and more consistently.

SecureAssist can integrate with your existing or preferred monitoring equipment. Or, with our turnkey service, we'll handle every aspect of solution deployment for you, from system design through daily monitoring.

# Ready to take the next step?

The modern utility faces all kinds of threats to its ability to deliver reliable power to its customers. SecureAssist is a comprehensive, proactive protection solution tailored to safeguard your facilities at a cost-effective price. Let us handle the challenges, so you can focus on delivering uninterrupted service. Contact us today for more information and to schedule a free demo.

## Contact Us



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## About Util-Assist

Util-Assist's solutions merge technology with strategy to streamline processes, boost productivity, enable data-driven business decisions, and deliver enhanced customer experiences, transforming how utilities operate and deliver value to their customers. Driving digital innovation with [professional services](#) and [managed services](#) for electric, water, and gas, Util-Assist is shaping the utility of the future.

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