

Securing Utility Sites

Protecting substations, facilities, and remote sites from intrusion and unauthorized access



Advanced security solutions for utility sites: from fence line to control zones

Electric utilities, water treatment facilities, and other critical infrastructure depend on continuous, secure operation. Substations, in particular, are high-risk targets for intrusion, vandalism, and disruption, yet many utility sites contend with remote locations, extreme environments, and limited on-site personnel. PCSC provides intelligent, multi-layered detection solutions designed specifically for these challenges, offering reliable protection that scales with the needs of utility environments.

Layered security for high-risk utility areas

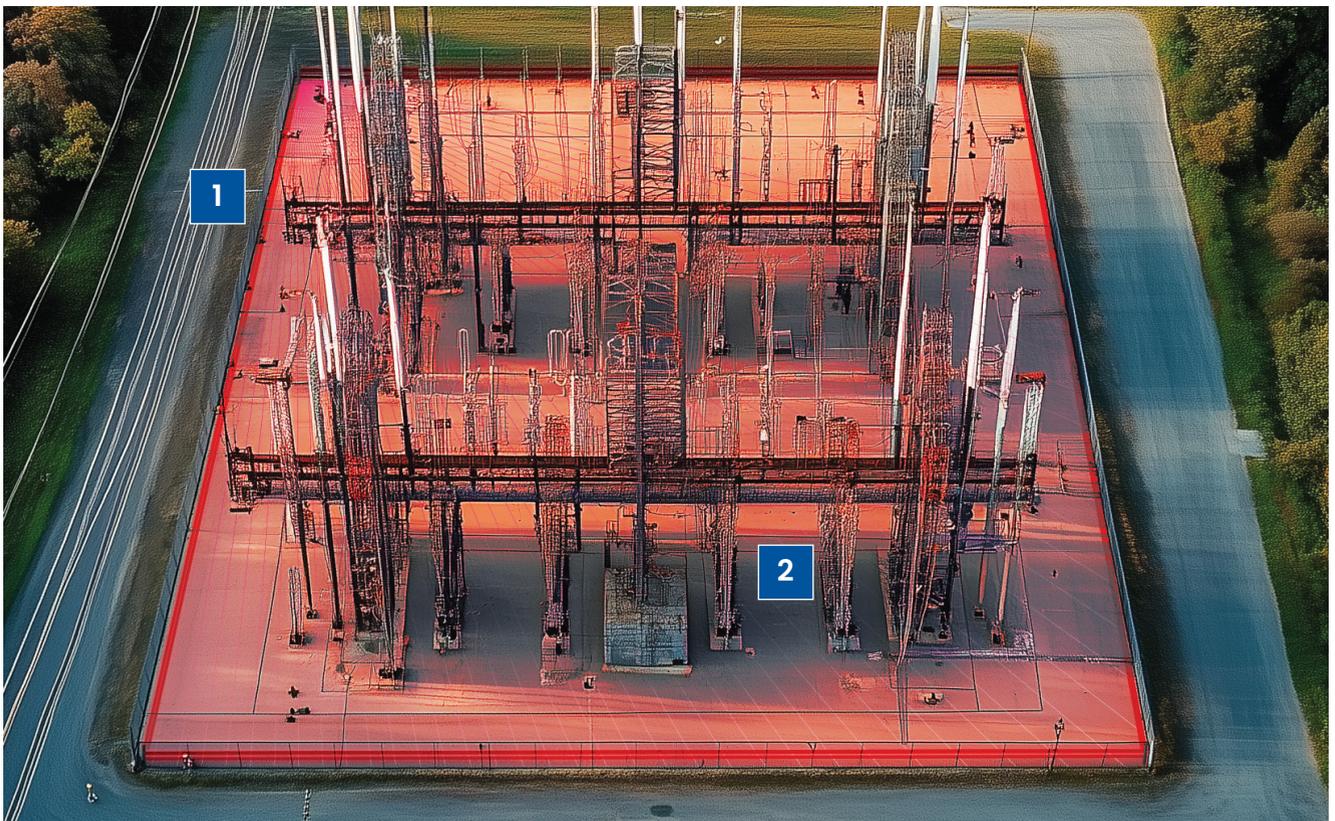
Substations require constant vigilance against both external and internal security threats. Unauthorized access to critical zones, such as control panels, high-voltage equipment, and operational areas, can lead to safety risks and service disruptions. The solutions, including the SL Photoelectric Beam Series and REDSCAN Advanced LiDAR Series, provide layered protection inside substations. The SL beams create virtual tripwires around key areas, while REDSCAN LiDAR can deliver precise detection, tracking movement in real time to ensure rapid response and prevent unauthorized activities.

1 Security starts at the perimeter

The perimeter is the first layer of defense for substations and utility sites. The SL Series photoelectric beam sensors create invisible barriers along fence lines, instantly detecting intrusion attempts such as climbing, cutting, or scaling. Built to withstand extreme weather and environmental noise, the SL Series is ideal for remote installations, providing reliable performance with minimal maintenance requirements.

2 Controlled access within restricted zones

Substations and utility facilities require strong internal security. Unauthorized access to sensitive areas, such as control panels, high-voltage equipment, and walkways, can lead to safety risks and operational disruptions. The REDSCAN Advanced LiDAR Detection Series provides precise, real-time detection to monitor these zones, ensuring rapid response and continuous protection of critical infrastructure.



Strengthening Access Control and Compliance

Preventing tailgating and piggybacking risks

Utility facilities often rely on secure, badge-based entry points—but these alone can't prevent tailgating. The Accurance OV-102 Anti-Tailgating System uses stereo vision and intelligence to detect unauthorized entry attempts in real time, ensuring that only one individual enters per credential scan. Ideal for control rooms or fenced gate areas, it adds a critical access control layer to utility-grade security.

Enhancing Security Through CIP-014 Compliance

Federal standard CIP-014 requires transmission owners to assess and protect substations that, if compromised, could impact grid reliability. The detection technologies support compliance efforts by enabling early detection, intrusion tracking, and real-time alerts—all essential for substations identified as critical under CIP-014.



SL Series

Active infrared technology

The SmartLine (SL) Series photoelectric beam solutions create a powerful first line of defense for data centers, using long-range active infrared technology to detect potential threats before they reach critical infrastructure. Designed for harsh environments and seamless integration, the SL Series strengthens perimeter protection by enabling early, accurate detection and swift security response.

Key features

- Accurate detection through precise beam alignment
- Operates reliably in rain, fog, and snow
- Integrates easily with cameras and alarm systems



REDSCAN Series

LiDAR technology

2D LiDAR solutions create a high-resolution virtual laser wall ideal to protect perimeters, buildings, roofs, narrow spaces and assets. REDSCAN LiDAR offers ultra-fast detection, stable operation unaffected by light or temperature, and can detect a moving or loitering object's size and location with a unique built-in algorithm, resulting in high-reliability detection with minimal false alarms.

Key features

- Onboard analytics including X / Y coordinates and target size
- Independent detection zones
- Thrown object detection
- EN-Grade 3 and enhanced network security

Accurance OV-102

Anti-tailgating system

An anti-tailgating system alerts security if an authorized person is followed by another one and can help to deter an attempted intrusion by preventing access to the secured area. OV-102 solution is equipped with human tracking technology and direction-determining capability to reliably detect tailgating entry and cross entry.

Key features

- Detects tailgating, cross entry, & multiple occupants in real time
- Customizable detection areas & adjustable sensitivity settings
- Seamlessly integrates with existing access control systems

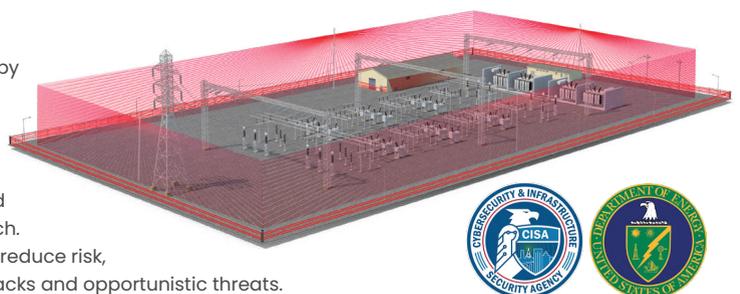


OPTEX Site Security Solutions

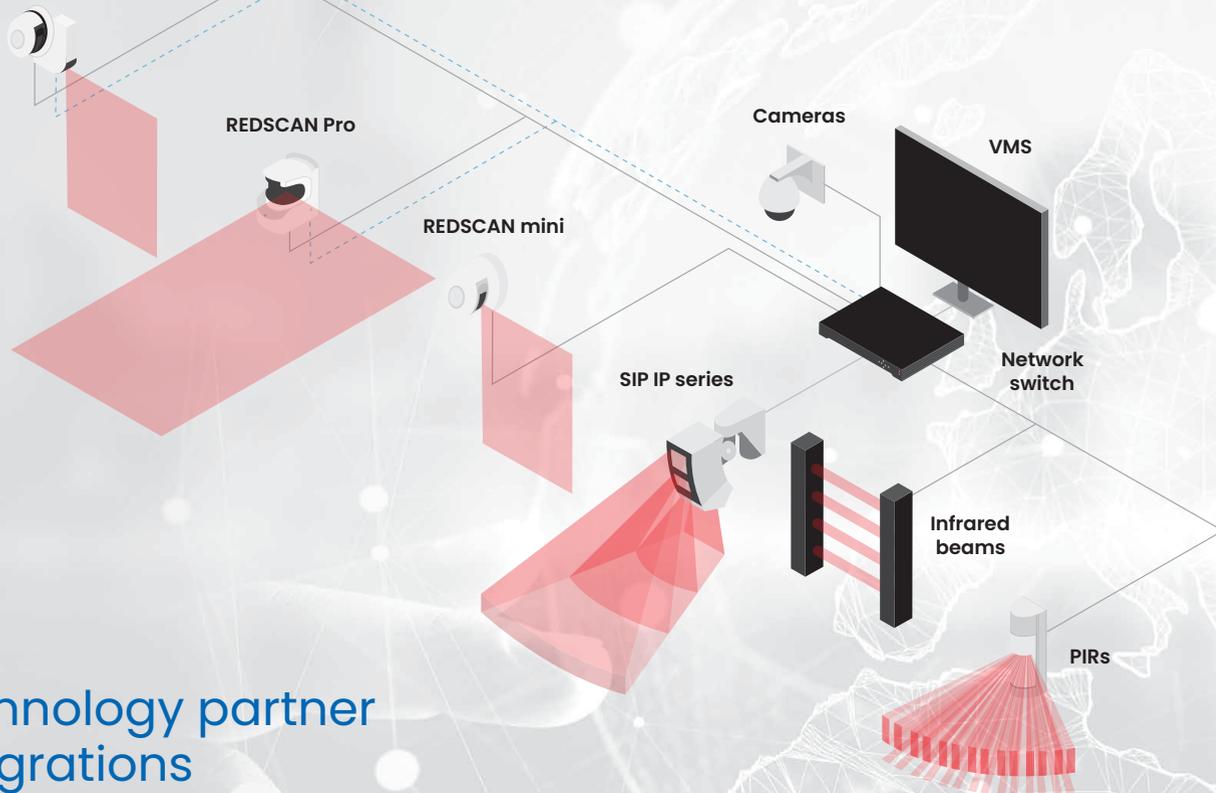
Supporting CIP-014 and Substation Resiliency

With growing threats of physical attacks, theft, and vandalism at substations, utilities must take proactive steps to protect critical infrastructure. The CIP-014 physical security standard, developed by NERC, requires transmission owners to identify and secure substations whose loss could impact grid stability.

Detection technologies support CIP-014 compliance by enabling early intrusion detection, real-time monitoring, and rapid response—all essential components of a layered security approach. By reinforcing perimeter and internal zone protection, utilities can reduce risk, improve safety, and increase resiliency against both targeted attacks and opportunistic threats.



REDSCAN mini-Pro



Technology partner integrations

Wide range of solutions can be fully-integrated with IP cameras, Network Video Recorders and other security devices, providing users a complete security system where local or remote monitoring stations will be reliably and immediately alerted in the event of an unwanted intrusion. Some deeper integration with VMS platforms delivers unique tracking and point location capabilities.



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