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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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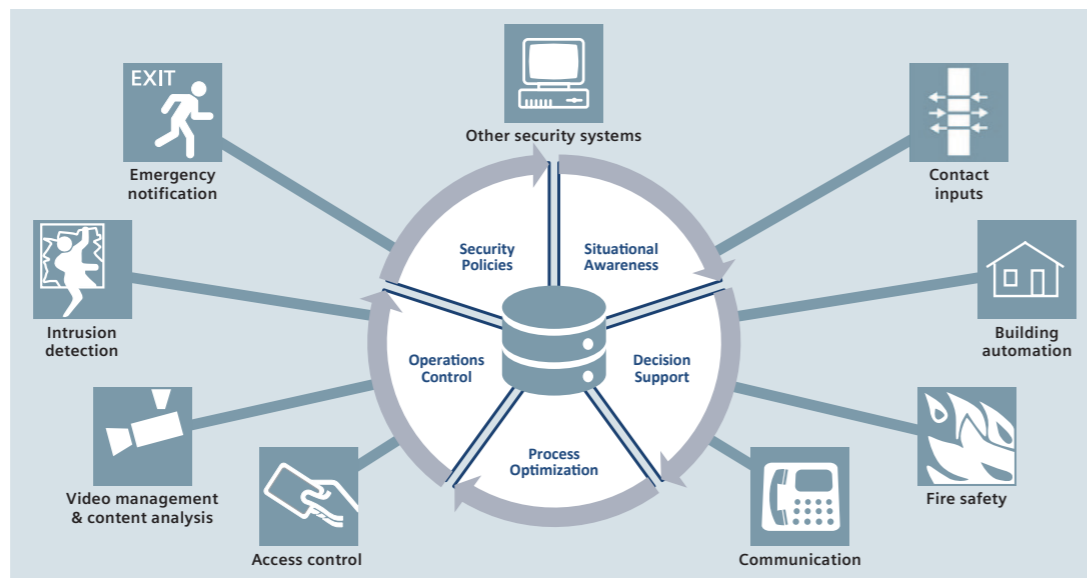
# Confronting metal theft

Solution blueprint for Power Utilities

## Answers for infrastructure.

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

**“We are the trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”**



Security platforms from Siemens support power utilities in minimizing damages by taking the right actions in a timely manner.

# Preventing damage to property and business

Sparked by rising scrap metal prices and struggling economies, theft of valuable metal has become a serious concern throughout the industrialized world and is now among the fastest growing crimes in many nations. The cost of metal theft to businesses and industries is staggering, as many of these crimes also substantially impact the surrounding property and cause enormous subsequent damages.

Power utilities are among the key affected industries of metal theft and the cost of operational disruptions vastly exceeds the value of stolen raw material. At the same time, metal theft poses a high safety risk to utility repair teams as well as offenders who may touch ungrounded wires and equipment.

Unattended, unguarded substations located in remote areas are a prime target for metal theft. As these substations typically supply larger regions with electrical power and are key elements within the transmission and distribution network, the breakdown of even a single site can dramatically impact the integrity and stability of the electric grid.

Interruption of power not only causes inconvenience and limitations for thousands of people and households, but also results in economic losses to affected businesses for a certain period of time. As incidents of metal theft incidents persist, the implementation of appropriate security measures becomes a key requirement for power utilities all over the world.

Power utility security solutions from Siemens encompass intrusion detection, access control and video surveillance to minimize the risk of metal theft. In case of an incident, security platforms from Siemens support utilities in minimizing subsequent damages and impacts on surrounding communities by taking the right actions in a timely manner.

## The Siemens Solution

Prevention is undoubtedly the most important aspect of effective security. By anticipating, identifying and classifying potential threats, it should be possible to reduce their impact. Then, should any incident take place, rapid detection combined with effective response through reliable communication and optimum coordination of resources should limit the impact and facilitate a rapid recovery and return to normal operation.

Command and control solutions from Siemens assist power utilities in increasing situational awareness of potential threats and deal with incidents in a timely and adequate manner. By combining multiple safety and security subsystems with command and control features, power utility solutions from Siemens allow for fast and effective decision-making in daily routine operations and time-critical processes, as well as crisis and emergency situations.

To achieve an optimal consolidation of security technologies such as intrusion detection, access control, video surveillance as well as fire alarm and communication systems into one common platform, Siemens offers customized consulting as well as design and engineering services.

By correlating and analyzing the data from different subsystems, control center solutions from Siemens assist operating staff in taking the appropriate actions by guiding them through pre-defined, customer-

specific incident workflows and detailed action and response plans.

In case of metal theft in a substation, an alarm notification is received by the access control, video surveillance or intrusion detection system and a team of qualified service specialists can quickly be dispatched to the site to assess damages and affected systems and to secure the site. Using a Geographic Information System (GIS), incident locations and the position of available resources are automatically displayed on maps or site plans to improve a coordinated response effort.

In parallel, adequate actions need to be taken in the control center: Based on information received by service technicians and information from the energy management system, a decision to take the substation off the grid to minimize further equipment damage needs to be balanced with the need to minimize power interruptions in the affected communities.

Based on the consistent guidance in a metal theft incident, power utility solutions from Siemens significantly reduce response time and minimize human errors in the decision-making process. In post-incident reviews the solution supports with detailed analysis and documentation functionalities to confirm that adequate actions were taken and organizational security policies were adhered to.

## Customer benefits

- Fast and well-organized incident response to limit impacts of metal theft and to minimize subsequent damages
- Workflow-based decision support to increase effectiveness while minimizing human errors
- Open interfaces for integration of subsystems to enable a quick and comprehensive analysis of the situation and to avoid inadequate actions
- Intuitive graphical and web-based interface and integrated Computer-Aided Dispatch of response units
- Scalable and flexible platform fully adaptable to customer-specific requirements
- Highest reliability with proven redundancy concepts avoiding downtime
- Seamless integration of different alarm systems and telephone and radio communication
- Comprehensive logging and reporting functionality to assist in post-incident reviews and regulatory compliance
- Comprehensive services ensure long-term investment protection and reduce total cost of ownership