



**HIKVISION®**

**Enabling safe, reliable  
and efficient energy**

Hikvision  
Substations Solution

 **Solutions by Scenario**



Substations – the midpoint of today’s power transmission systems – play a key role in keeping the electrical energy safe and reliable. However, conventional CCTV systems only focus on site security, and are unable to provide comprehensive solutions for equipment, operations and personnel. They also lack the capability to integrate with third-party systems, and require significant manpower for emergency handling. Such limitations seriously hinder power station security.

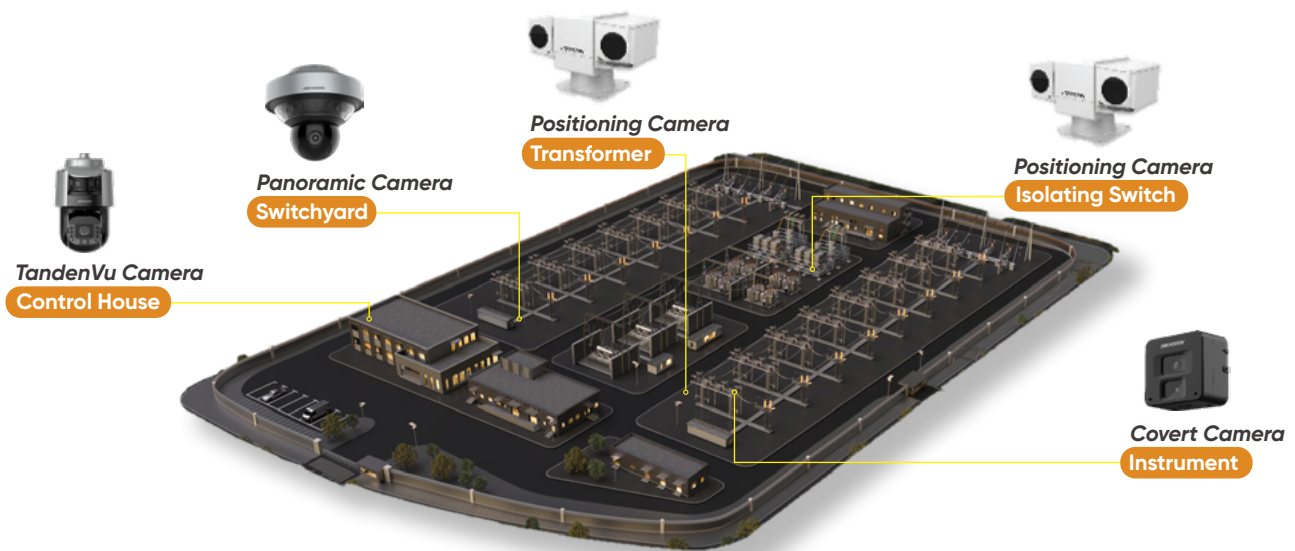
Faced with these challenges, energy enterprises expect technology and service leadership, intelligent analytics, reliable expertise, and comprehensive solutions. As your steady partner of choice, Hikvision provides reliable security protections while enabling efficient operations and timely maintenance for substations.

**Here is the solution that works. ▶**

# Keep Your Operations Running Smoothly

A set of positioning, PTZ, and covert network cameras installed at energy substations deliver panoramic and detailed imaging of critical assets, such as transformers, isolating switches, and control panels, providing real-time status updates.

With AR Live Interaction, video streaming integrates SCADA data with readable tags, boosting situational awareness with a more immersive experience and timely emergency dispatch.



## AI-powered asset status analytics

Cameras and edge devices are empowered with AI to identify status of electrical assets.

For example, the isolating switch status, LED or digital meter reading are clearly visible and the AI-powered analytics automates the meter and indicator light reading, thereby improving the efficiency of online monitoring and remote inspection.

## Accurate temperature measurement

Hikvision's thermography products are expertly designed to monitor temperatures from a safe distance at electrical installations.

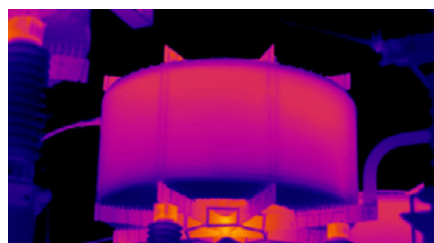
They offer:

- Real-time detection and notifications
- Non-contact measurement
- Clear imaging with heat distribution maps
- Configurable rules, an intuitive UI, and event reports



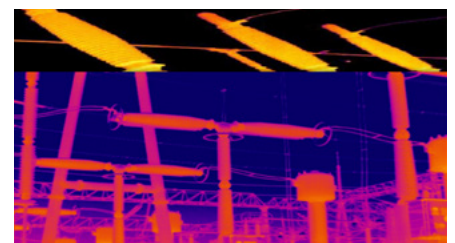
### Transformers

Elevated temperatures on the surface of each transformer are detected before failure occurs



### Inductors

Overheating detection helps prevent malfunctions on inductor core and cable joints



### Circuit Breaker

Temperature differences are detected on three-phase wire junctions

# Precision Meets Efficiency with Intelligent Inspections

A rapid increase in remote substations, along with safety concerns and a shortage of skilled personnel, calls for an autonomous, cost-effective inspection solution. Hikvision addresses this need by leveraging cutting-edge AI technologies, video imaging, and software for intelligent inspection work.

## Inspection work flow

Hikvision enables a state-of-the-art traceable, regulated, efficient, and fully-analyzed inspection process, thus guaranteeing safe and efficient operations.



## Remote inspections

Video imaging inspections enhance safety and efficiency in substations by allowing online planning, real-time response, and remote checks via high-definition cameras. Reports on Hikvision's HikCentral Platforms provide analysis on issue rates, coverage, rectification, and more, aiding in decision-making and issue resolution.



## Thermal & AI inspections

Thermal imaging and AI-enabled cameras automatically detect safety issues such as worker absence, equipment status, emergency exits, and more. This intelligent approach reduces time and labor costs while providing round-the-clock coverage.

# Security and Safety: Always the First Priorities

Hikvision offers smart cameras, radar units, and other advanced tools for substation security. Real-time detection and quick alerts from the video security system enable fast incident response and reduce risks and costs. These products also help protect the well-being of employees.

## PPE detection

Hikvision's remote PPE checks use video imaging to verify helmets and other protective gear are in use. This helps improve safety and increases compliance with industry regulations.



## Abnormal activity detection

Falling, running, unsafe gathering, and other abnormal activity can be detected. Managers can act promptly to reduce the risk of unnecessary accidents.

## Perimeter protection

Hikvision has your perimeter and critical areas covered with all-around protection 24/7, alerting your staff to any security breach.

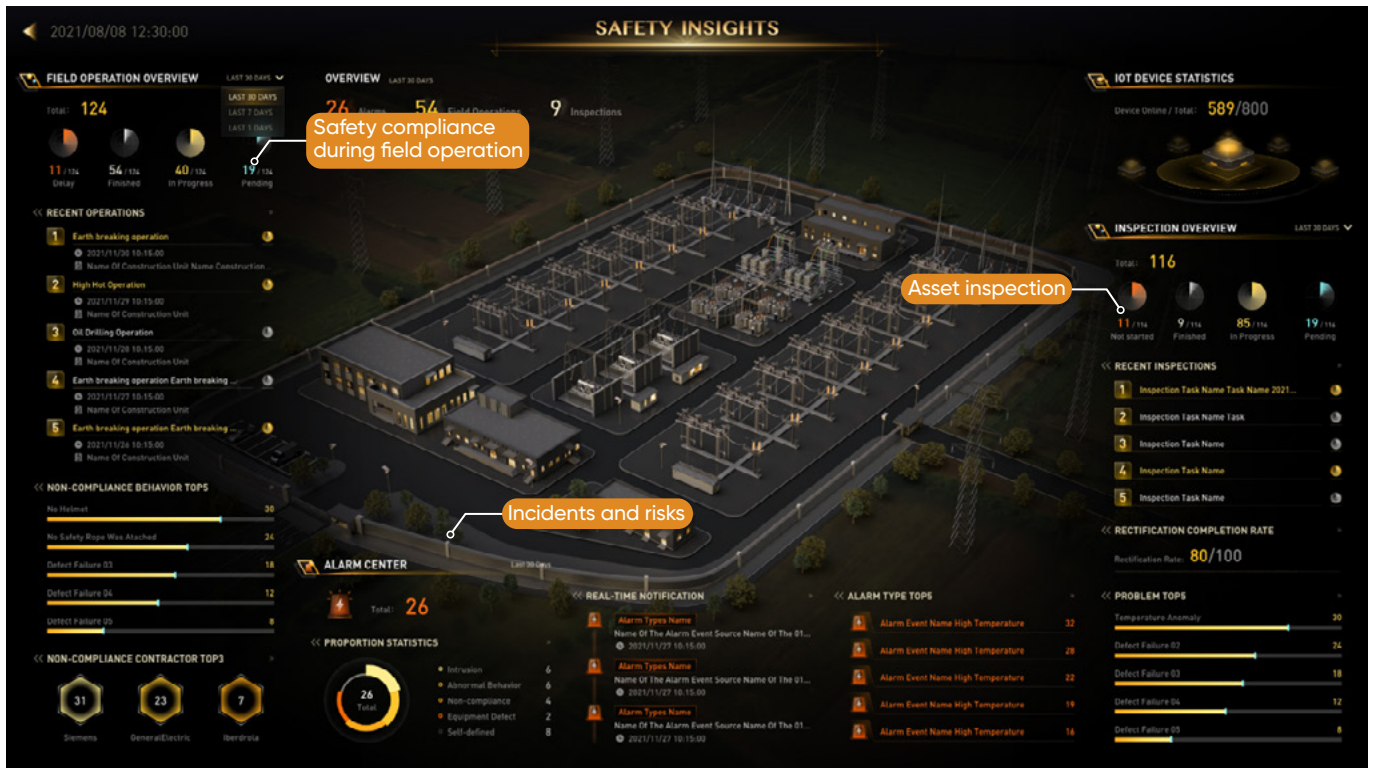


## Entrance & exit control

Smart entrance & exit control is created by Hikvision's barrier gates and facial recognition terminals. Access to specific areas remains limited to authorized personnel, minimizing loss and other hazards.

# Get Crystal Clear Insights Using Visualized Data

The all-inclusive dashboard presents real-time inspection status and detailed information about ongoing site operations. This valuable data-indexing facilitates better decision-making and enhances operational efficiency.



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