

Securing critical infrastructure: a forward-thinking approach to utility protection

How a major German utility provider uses intelligent, unified video and access control to safeguard their infrastructure.

Providing reliable energy to millions of people is a massive responsibility. For a major German utility provider managing over a hundred sites, "good enough" security was not an option. Facing new government mandates, rising physical threats, and the challenge of monitoring unmanned substations across vast regions, the organization needed a modern approach. They moved away from fragmented systems and chose a unified, intelligent security ecosystem. By integrating video management and access control into a single view, the utility provider created a clear, confident path to securing their vital infrastructure.

Customer

Major German Utility Provider

Industry

Utilities & Critical Infrastructure

Solutions

- Avigilon High-Definition Cameras
- Avigilon Thermal Cameras
- Avigilon Unity Video Management Software (VMS)
- Avigilon Unity Access Control
- AI Analytics

Challenges

With assets spread across vast geographic areas, unmanned substations faced increasing risks from unauthorized entry, copper theft, and purposeful sabotage. Manually monitoring these remote locations from a central hub often left security teams in a reactive position, struggling to prevent incidents in challenging low-light conditions.

Furthermore, legacy security systems in rural areas frequently triggered false alarms from moving branches or local wildlife. This constant noise led to significant alarm fatigue, overwhelming operators and making it difficult to identify and respond to genuine human threats quickly.

Solution & Results

Future-proofing critical infrastructure protection

By deploying an on-premise security solution through **Avigilon Unity**, the utility provider has significantly strengthened their security posture. The unified system provides reliable, efficient alerting and comprehensive site coverage, ensuring the ongoing safety of the grid. The organization now has a robust and scalable foundation that can easily adapt to evolving operational needs.

Overcoming alarm fatigue with intelligent analytics

The new system uses AI-driven analytics to filter the noise. Features like **Unusual Activity Detection** and **line-crossing alerts** can instantly tell the difference between a wandering animal and a person cutting a fence. From there, the AI-powered **Focus of Attention** interface prioritizes critical events requiring operator attention. Operators save valuable time and effort, allowing them to focus entirely on keeping the infrastructure safe.

Securing remote sites against unauthorized access, theft and sabotage

The integration of **high-definition and thermal cameras** brought 24/7 visibility to the darkest and most remote corners of the network. Thermal technology easily identifies human presence in complete darkness, allowing operators to spot unauthorized individuals immediately. In addition, the utility provider has been leveraging **line-crossing analytic alerts** available through the VMS to detect if a human crosses a defined perimeter.

Alongside this, advanced access control helps confirm only authorized personnel can enter sensitive areas, giving teams the power to remotely grant or restrict entry and monitor every door in real time. The access control system seamlessly integrates with the VMS, allowing teams to verify door access with video evidence.

The combination of intelligent video and robust access management empowers security teams to mobilize a swift response, protecting property and ensuring the continuous flow of energy to the community.





Conclusion

When you protect critical infrastructure, you protect the communities that depend on it. This major utility provider showed that upgrading to an intelligent, unified security system does more than just record video - it actively prevents disruptions. By eliminating blind spots and reducing false alarms, they have transformed their security operations into a proactive, highly efficient hub that also ensures they meet all necessary industry and regional requirements.

As they expand this technology across hundreds of cameras and dozens of sites, they are building a safer, more resilient power grid for the future.

To learn more, visit: www.motorolasolutions.com



Motorola Solutions, Inc. 500 West Monroe Street, Chicago, IL 60661 U.S.A.

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