

# NOKIA



## Securing the grid

### Use case

Power utilities are increasingly at risk from sophisticated cyberattacks targeting critical infrastructure. Many utilities still rely on legacy communication systems that are vulnerable to modern threats, putting both operational data and grid reliability at risk. In addition to securing their digital networks, utilities must also safeguard physical assets, such as substations, from disruption. As the grid becomes more complex, a comprehensive approach to both physical and cyber security is essential.

## Challenges

Cyberattacks on critical infrastructure threaten grid reliability and safety. As malicious actors grow more sophisticated, utilities must defend against a wide range of potential threats that could disrupt operations or compromise sensitive data.

This is especially difficult given the reliance on legacy communication systems, which were not designed with modern cybersecurity risks in mind. These older systems often lack the encryption, access control, and monitoring capabilities needed to safeguard the grid against today's cyber threats.

Beyond cyberattacks, utilities must also protect the privacy and integrity of the vast amounts of data generated by their operations. Ensuring that customer data, operational metrics, and grid management information remain secure is crucial to maintaining trust and compliance with industry regulations.

At the same time, physical security remains a pressing concern. A breach of physical infrastructure could lead to widespread outages.

Maintaining the resilience of the grid requires addressing both physical and cyber threats. Utilities must find ways to protect physical assets like substations and distribution centers while ensuring their communication systems are secured against cyberattacks.

## Solution

Nokia offers comprehensive solutions including Nokia Core Enterprise Solution for Power Utilities and Nokia CyberSecurity Dome to help provide end-to-end protection for both physical and digital assets.

The Nokia Core Enterprise Solution delivers a secure, private 4G or 5G wireless network, ensuring that critical communications remain isolated from public networks. This secure network ensures continuous grid visibility and control of the grid, enabling utilities to manage operations with greater reliability and reduced risk of cyber intrusions.

Complementing this, Nokia CyberSecurity Dome provides an advanced, cloud-based security platform designed specifically for critical infrastructure. It offers integrated, AI-driven threat detection and response capabilities, continuously monitoring network traffic to identify potential vulnerabilities or attacks.

Additionally, the solution can integrate both cyber and physical security protocols, offering a unified approach to grid protection. With advanced encryption, real-time threat detection, and comprehensive monitoring, utilities can safeguard their critical infrastructure, ensure compliance, and minimize the risk of operational disruptions.

Nokia's Core Enterprise Solution for Power Utilities and Nokia CyberSecurity Dome create a protective shield around your utility operations.



## Benefits

With our approach, utilities gain a robust defense against both cyber and physical threats. This solution strengthens grid resilience by safeguarding communication networks and providing continuous operational oversight, which are essential for maintaining grid reliability. With the grid secured against modern cyber threats, utilities can operate with greater confidence, knowing that their communications and data are safeguarded.

The reduced risk of operational disruptions is another key benefit. By continuously monitoring for cyber intrusions and responding to potential threats in real-time, the solution helps prevent outages or malicious attacks that could compromise the grid. This not only minimizes downtime but also ensures that utilities can maintain service continuity, even when faced with sophisticated threats.

Additionally, the solution helps utilities comply with regulatory standards related to data privacy, cybersecurity, and physical infrastructure protection. By meeting these requirements, utilities can reduce liability and maintain public trust, ensuring that sensitive operational and customer data remain secure. This comprehensive approach to security allows utilities to stay ahead of evolving threats while protecting both their assets and their reputation.

## Results

With Nokia Core Enterprise Solution for Power Utilities and Nokia CyberSecurity Dome in place, utilities can operate with a higher level of security, confidence, and control. The grid becomes more resilient, with critical communication networks protected from cyber threats and physical vulnerabilities. Utilities gain continuous oversight and control of their infrastructure, ensuring that any potential threats or issues are addressed before they impact operations.

The result is a grid that operates reliably and efficiently, with minimal disruptions and enhanced stability. Utilities can focus on optimizing performance and adapting to future demands, knowing their communication systems and data are safeguarded against evolving threats. Compliance with regulatory requirements becomes a streamlined process, reducing liability and reinforcing public trust.

In this future, power utilities can achieve operational excellence, maintaining uninterrupted service while proactively mitigating risks. By integrating advanced security protocols and real-time monitoring, they not only protect their infrastructure but also ensure a secure, reliable energy supply for the communities they serve.

### About Nokia

At Nokia, we create technology that helps the world act together.

As a B2B technology innovation leader, we are pioneering networks that sense, think and act by leveraging our work across mobile, fixed and cloud networks. In addition, we create value with intellectual property and long-term research, led by the award-winning Nokia Bell Labs.

With truly open architectures that seamlessly integrate into any ecosystem, our high-performance networks create new opportunities for monetization and scale. Service providers, enterprises and partners worldwide trust Nokia to deliver secure, reliable and sustainable networks today – and work with us to create the digital services and applications of the future.

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