txOne networks

Customer Story

Innovation and OT Cybersecurity: Edison Group Accelerates with TXOne Networks

With TXOne Networks, Edison strengthens the protection of its OT infrastructures against cyber incidents and enhances visibility across industrial assets—reinforcing security, resilience, and risk governance.

The Situation

Edison Group is one of the longstanding leaders in Italy's energy landscape. Founded at the end of the 19th century as a pioneer in electricity generation, the company has supported the country's industrial development for over a century, progressively expanding the scope of its operations. Today, Edison operates across the entire energy value chain—from the production and distribution of electricity and natural gas to the development of technologies and services for energy efficiency, as well as investments in renewable energy and ecological transition projects.

This growth has led Edison to manage a highly heterogeneous ecosystem of infrastructures, including hydroelectric and thermoelectric power plants, wind and photovoltaic facilities, cogeneration networks, and geographically distributed systems. Within this environment, modern technologies coexist with legacy OT systems that remain essential to ensuring the continuity of industrial processes.

In a context characterized by critical assets, distributed environments, and increasingly tight integration between IT and OT, operational security plays a strategic role. Protecting industrial networks, machinery, and plants

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Giampaolo Tacchini
Group CISO & Quality Manager, Edison

from operational risks and cyber threats is not only about mitigating incidents or downtime—it is fundamental to ensuring service reliability, environmental protection, and the safety of people.

In response, Edison has long embarked on a journey to strengthen its security posture, integrating advanced technologies for monitoring, control, and risk management. The objective is to ensure consistently high standards across all industrial operations while preserving business continuity, even in the presence of legacy systems and complex processes that require OT-native solutions and zero tolerance for disruption.

The Switch

"Security at Edison is an evolving journey," explains Giampaolo Tacchini, Group CISO & Quality Manager at Edison. "It is primarily driven by two factors: the increasing integration of industrial plants with ICT solutions, and the need to ensure increasingly precise and responsive control over energy production."

"About fifteen years ago, we launched our first major project aimed at optimizing electricity generation," Tacchini continues. "This marked the beginning of a structured collaboration among different corporate functions—from the Group CISO to ICT security and OT security—leading to joint initiatives such as network segmentation, access management, asset protection, and improvements in risk management processes."

Over the past four to five years, also supported by TXOne technologies, Edison has significantly strengthened its prevention capabilities. European cybersecurity regulations have accelerated focus on sectors that were previously considered less strategic, helping drive new investments and awareness in areas where security had once been perceived as more distant.

"The situation is different in electricity generation," Tacchini notes. "Here, security has always been a foundational element—a deeply rooted ethical and social responsibility within Edison's culture since the earliest days of its industrial operations."

The Transition

Prior to implementing TXOne solutions, Edison faced challenges typical of OT environments: very long asset lifecycles, legacy systems that could not be updated, and obsolete machines requiring specialized protection. Security updates—often complex and costly—could only be performed during scheduled maintenance windows. To manage security, Edison primarily relied on traditional ICT technologies such as firewalls, IPS, and other IT-oriented solutions, complemented by established operational procedures.

However, these tools revealed clear limitations in OT environments. Although they offered the necessary functionalities, their impact on OT machines was often too heavy.

"The vendor selection process," explains Tacchini, "was guided by market analysis, discussions with industrial system manufacturers, and internal evaluations of operational requirements—namely protection, visibility, and greater technological consistency." Tacchini emphasizes that system uniformity is a strategic factor.

"Having uniform technological systems enables faster intervention, improving efficiency and response speed."

After careful evaluation, Edison selected TXOne Networks, recognizing the ability of its solutions to effectively protect legacy systems, ensure operational continuity, and meet OT security requirements.

The Result

To protect critical machines running legacy systems, Edison deployed TXOne Stellar, an OT-native endpoint solution based on dynamic whitelisting and controlled maintenance modes. This ensures continuous operations even during updates and technical interventions.

Where machines cannot be modified or present technical constraints, Edison chose to secure the OT network using TXOne Edge IPS—devices designed to operate close to field devices and protect even the most sensitive environments without impacting production processes.

For air-gapped, distributed, or logistically complex sites, Edison also uses Portable Inspector, a portable solution that enables on-demand asset scanning and supports inventory and verification activities in complex environments, including plants managed by Edison Next.

All these technologies are integrated into a centralized console that enables 24/7 monitoring, as well as structured incident management and remediation processes.

Business Benefits

"This integrated architecture is now widely adopted both within Edison Next—engaged in energy efficiency projects, smart city initiatives, and experimentation such as hydrogen—and within Edison SpA at electricity generation plants, including thermoelectric and hydroelectric facilities," Tacchini explains.

In generation plants in particular, the benefits have been especially significant. Thanks to Edge IPS, Edison has been able to secure its systems while achieving excellent levels of visibility and control.

The adoption of TXOne solutions has also delivered substantial benefits on both a technological and organizational level. Collaboration between IT and OT teams has strengthened, supported by growing mutual trust and more structured knowledge sharing. This continuous dialogue has proven essential in balancing security requirements with the primary need to ensure uninterrupted plant operations.

Another key value lies in change management, enabled in particular by TXOne Stellar and centralized system management.

"Before these technologies were introduced, interventions by external maintenance personnel—often performed using removable media—represented a potential critical risk," Tacchini explains. "Today, every change to assets is optimally managed."

Machines are effectively "locked down," and no update is applied without prior checks. This process is further reinforced by the use of Portable Inspector—a simple yet decisive procedure for preventing compromise and achieving end-to-end visibility.

"Thanks to this coordinated set of solutions, Edison now manages its plants with greater security and consistency, benefiting from a stronger security posture, more efficient processes, and more transparent and reliable risk governance."

Conclusion

Looking ahead, Edison aims to further consolidate an advanced risk management strategy capable of integrating information, technologies, and processes into a homogeneous, easily analyzable model. The goal is to accurately understand the probability and impact of different threats—both internal and external—in order to more effectively guide the evolution of its security posture.

At the same time, the Group's ongoing technological transformation—particularly within Edison Next—introduces new challenges and opportunities. IoT networks, automation systems, distributed sensors, and intelligent infrastructures directly influence the operation of physical plants.

Protecting these new digital value chains, ensuring proper separation between IT and OT, and automating workloads will become increasingly essential to create efficiency, value, and resilience—and to support Edison's journey toward innovation and clean energy.
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About TXOne Networks

TXOne Networks offers cybersecurity solutions that ensure the reliability and safety of industrial control systems and operational technology environments. TXOne Networks works together with both leading manufacturers and critical infrastructure operators to develop practical, operations-friendly approaches to cyber defense. TXOne Networks offers both network-based and endpoint-based products to secure the OT network and mission-critical devices using a real-time, defense-in-depth approach. Learn more at www.txone.com.