SNC·LAVALIN

Building what matters

Critical Infrastructure Protection (CIP) & Cybersecurity for Power Utilities

Securing what matters

Critical Infrastructure Protection is a top priority for utilities, as the power sector faces increasing network interconnectivity, widespread smart grid technology, and ever-growing cyber and physical threats.

SNC-Lavalin's knowledge of the power sector comes from over a century of designing, constructing, operating and maintaining power plants and transmission and distribution systems around the world. Our in-house, multi-disciplinary team includes utility and operational technologies (OT) engineers, IT & cyber security specialists, and defence/ intelligence experts.

It is this unique combination of knowledge that enables us to develop effective and proactive long-term strategies to help you safeguard your critical assets.

By implementing a holistic security strategy, an organization can effectively detect, defend and recover against increasingly sophisticated threats. Our services are tailored to your unique needs, bringing tangible benefits and improvements to your bottom line, including:

> › Power outage reduction
> › Cost savings and efficiency
> › Regulatory compliance
> › Smart resilience of systems, plants and grids
> › Optimization of networks
> › Brand safeguarding
> › Enhanced CIP culture and risk awareness
> › Improved customer experience

Security and the CIP Systems Convergence Dynamics

The industry faces countless system vulnerabilities: the introduction of smart grid technology, Internet of Things (IoT) connections, outdated technology and large volumes of software/firmware (including SCADA, telemetry and teleprotection systems). This trend is driving the convergence of operational technologies (OT) and information technologies (IT), which in itself introduces new challenges for power utilities.

The convergence of systems calls for a more comprehensive approach to the development of security programs. That is why SNC-Lavalin employs an integrated approach, jointly developed by skilled personnel in electrical grid management, OT, IT and physical security, which provides assurance that all security gaps are optimally addressed.
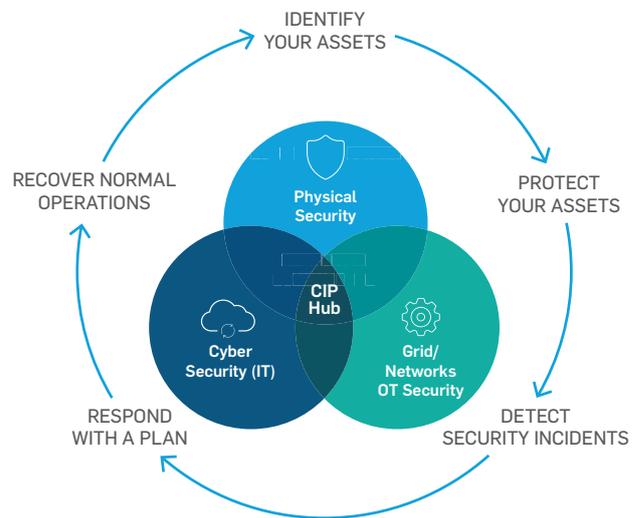
SNC-Lavalin's strategic offering combines expertise in physical security, cyber security, and OT/grid networks, assisting you to optimize grid security and operation

CIP & Cybersecurity for Power Utilities

Security by Design

SNC-Lavalin's consolidated matrix of offerings ranges from specialized engineering and consulting services to detailed master plans, from which we draw upon to deliver cost-effective solutions, adapted to every situation:

🏛 CORPORATE SECURITY / GOVERNANCE	🔒 IT / OT SECURITY	🛡 PHYSICAL SECURITY
COMPLIANCE PROGRAM DEVELOPMENT	**ARCHITECTURE & IMPLEMENTATION**	**DESIGN AND ARCHITECTURE SUPPORT**
› NERC CIP compliance & reporting	› Enterprise OT/IT security architecture	› Physical protection design optimization
› Security maturity assessments	› Network Security	› Physical security design
› Drafting of security policies and procedures	› LAN/WAN engineering (Gigabit Ethernet, SONET, MPLS)	**ARCHITECTURE AND IMPLEMENTATION**
› Security awareness program	› Wireless network engineering	› System design and implementation
› Media protection	› Legacy SCADA system integration	› Physical access control
COMPLIANCE MAINTENANCE	› IEC 61850 Energy Management Systems	› Perimeter protection
› Security governance optimization	› Design of network management centers	› Intrusion detection
› Insider threat protection	**IT/OT SECURITY MANAGEMENT**	› Advanced monitoring
› Phishing simulations	› Identity and access management	**MANAGEMENT MONITORING**
› Threat and incident response management	› Change management program	› Security Operation Center Design
	› Security event log management engineering	**TESTING**
	TESTING	› Facility penetration testing
	› Penetration testing	
	› IEC 61850 / DNP3 mapping tests	
	› IEC 62351 integration tests	

Security Maturity Assessment Tool (SMAT)

We understand the challenges utilities face on their journey to secure their assets and comply with regulatory standards. To facilitate that journey, SNC-Lavalin has developed a tool tailored for Power utilities to measure the level of maturity of their physical, IT/OT and human resources security programs. SNC-Lavalin's SMAT allows clients to quickly assess the security readiness of their systems in a highly cost effective manner.

The SMAT ranks our clients' readiness against more than 400 security criteria. These criteria are grouped under 20 control families, addressing all aspects of security including: Physical security / IT security / OT security / Personnel security. We can use the SMAT to quickly produce a comprehensive report which includes maturity ratings along with any identified gaps in the security categories.

Our methodology is based on years of experience in the power sector, as well as on recognized industry standards such as NERC CIP, NIST 800-53/82, ISO 27002, and IEEE 692. This complete approach allows you to remain at the forefront of the changing security threats and landscape.

Risk Mitigation and Compliance Management

SNC-Lavalin works hand-in-hand with our clients to address the comprehensive security issues facing their organizations. The result is a tailored roadmap allowing you to mitigate your security risks in a cost effective manner, while simplifying and automating compliance management to the greatest extent possible.

Speak to our experts to learn how we can help make your next project a success.

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