

Manitoba Hydro

Unified security helps major utility company work at full power



Industry

Critical Infrastructure

Location

Winnipeg, Manitoba, Canada

Products

Security Center, Omnicast, Synergis, KiwiVision, Plan Manager, Mission Control, Advantage

Manitoba Hydro achieves NERC compliance across 80+ critical sites using Genetec access control and video management

Manitoba Hydro is the major energy utility company for the province of Manitoba, Canada. From its head office in downtown Winnipeg, the company serves 580,262 electric customers and 281,990 natural gas customers, and fulfills power sales to SaskPower, Wisconsin Public Service, Minnesota Power, Xcel Energy, Great River Energy, and the Basin Power Cooperative. About 96% of the electricity produced by Manitoba Hydro is renewable power produced at its 15 hydroelectric generating stations. In total, the company has over 160 sites around the province, including generation, transmission, and converter stations, critical control centers, customer service facilities, office buildings, natural gas stations, and storage depots.

Facing NERC physical protection requirements with limiting technologies

In the United States and Canada, the North American Electric Reliability Corporation (NERC) ensures the reliability of bulk power systems. NERC does this by developing, monitoring, and enforcing a variety of industry-specific standards, including cyber security and physical security standards within the electric utility industry.

One of NERC's main physical security requirements is that utility organizations must record all access control activity, maintain logs for authorized access, and monitor critical facilities for unauthorized access 24/7. In the event of an access breach, energy companies must investigate and categorize the

alarm incident and implement the appropriate response plan within 15 minutes of the alarm.

Verification of the alarm details and the response must be documented and are subject to audit and review by the NERC Regional Entity, which in Manitoba Hydro's case is the Midwest Reliability Organization.

While Manitoba Hydro monitored facilities using independent access control and a video management system (VMS), the solutions lacked the capabilities that the utility company needed to achieve NERC compliance.

For instance, if a breach was in progress, operators had to connect to the specific site's Physical Access Control System

(PACS) and locate the alarm. They would then switch to a separate VMS to search through recorded video and see what was happening. Bandwidth issues caused video to lag and sometimes the VMS wasn't responsive at all. Too often, the whole process exceeded 15 minutes, which the team knew would not meet NERC requirements. A new solution would be required.

Searching for a trusted PACS and VMS vendor

Achieving NERC compliance for the physical protection of its facilities and equipment became the driving force behind Manitoba Hydro's decision to find a more robust and centralized physical security system. They wanted a scalable, enterprise-level solution that could help their team make more informed decisions in less time. To streamline operations and reduce system administration costs, they also wanted to be able to monitor all of their systems from a central command station and work with one vendor who could provide both PACS and VMS.

One last question remained— which company would be the best partner for Manitoba Hydro?

“We wanted a company we could rely on and that would work with us for the long run,” said the Physical Security Supervisor at Manitoba Hydro. “Our due diligence pointed us towards Genetec. The company also had an impressive client list. Knowing that so many other reputable organizations had been through the same process gave us the added confidence to move forward with the Security Center platform.”

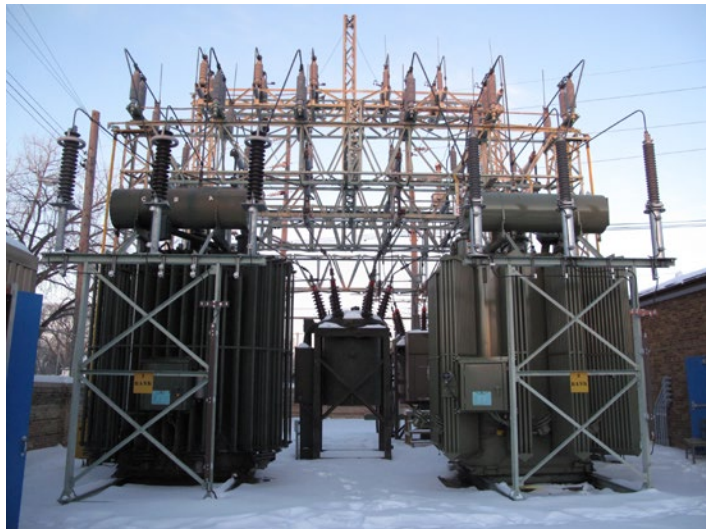
Achieving NERC compliance with Security Center

Genetec™ Security Center combines the Security Center Omnicast™ video surveillance, the Security Center Synergis™ access control and other security systems into one intuitive platform. Today, Manitoba Hydro uses the unified security solution to manage over 1,000 doors and 1,100 cameras across all its critical facilities to enhance security and minimize NERC compliance violations.

While NERC requires electric utility companies to monitor their facilities for unauthorized access 24/7, the regulatory body doesn't specify how an organization should determine what's happening or how to respond within the 15-minute timeframe. The Security Center platform gave them the tools they needed to address this challenge.

“Having both the Synergis and Omnicast systems combined in one platform is a tremendous benefit to our operations,” explained the Physical Security Supervisor. “We receive real-time alarms alongside live video of the event, allowing our team to quickly investigate and classify alarms and to initiate the appropriate planned response to meet NERC compliance requirements.”

Leveraging the openness of the Security Center platform, the security team has set up virtual tripwires using KiwiVision™ Intrusion Detector to identify potential intruders nearing their sites' perimeter. All video and data are sent back to a central monitoring station over a dedicated fiber network, where security operators actively monitor incoming alarms.



To speed up response, the team works from Plan Manager, the map interface of Security Center. This helps them easily locate doors and cameras, check device statuses, and quickly handle alarms across all their sites. Now, if a door is left open or motion is detected near a perimeter fence, the team can see what's happening and resolve the situation within minutes.

Streamlining the management of 5000+ cardholders

Upgrading to a centralized PACS system has simplified the task of managing the 5,000+ cardholders at Manitoba Hydro.

“As part of NERC requirements, only employees or contractors with the appropriate qualifications are allowed to gain access through the physical security perimeters,” said the Physical Security Supervisor. “Criteria include privileges, cyber security training, and cleared personnel risk assessments. Upon termination of a contract or employment, or change in their security status, access rights must be removed within seven days, 24 hours, or sooner, depending on the circumstances.”

Now, instead of logging into independent PACS systems to make changes, the team can quickly assign privileges, remove access rights, and update door rules across all their sites from one intuitive interface. Using the Synergis system, they also regularly generate event logs and cardholder reports during NERC audits to prove that the energy company is adhering to regulations.

The Synergis system has also helped Manitoba Hydro with access control and tracking at its critical facilities. As an added measure of security, a quarterly report is automatically emailed to facility managers who validate the credentials and privileges of each cardholder.

Working at peak efficiency with Genetec support

The reliability of the Security Center unified platform has been a major advantage for the Manitoba Hydro team. Even with thousands of devices and cameras, the unwavering system

performance gives operators constant access to the information and video they need. Without interruptions or failures, the team works at peak efficiency to secure their sites and stay NERC compliant.

The utility's security system administrators and infrastructure and operations support team have taken the full certification training with Genetec, giving them the knowledge and confidence to handle system updates and maintenance fully in-house.

Taking operational efficiency to the next level

Manitoba Hydro is currently looking at the Genetec Mission Control™ decision management system to minimize nuisance alarms and further boost response efficiency.

With Mission Control, the utility company's operators will be alerted to the most urgent situations. The system will then guide them through the necessary steps to reach a resolution, including quickly notifying law enforcement during an emergency.

"We've gone from zero intelligence to almost real-time event monitoring using the Security Center platform. We now have peace of mind knowing that we have robust physical protection systems that help us keep our facilities secure and our organization NERC compliant," concluded the Physical Security Supervisor at Manitoba Hydro.



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