



ERICSSON

SUCCESS STORY

HYDRO ONE TELECOM,
CANADA

EVERYTHING
IN ONE PLACE

Hydro One Telecom enhances its power grid reliability through advanced communications network management



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Tero Kontio
IT Director,
Hydro One Telecom



BOOK OF RECORD

HYDRO ONE TELECOM

Hydro One owns and operates the largest electricity transmission and distribution systems in Ontario, Canada. It currently serves around 1.3 million customers.

Hydro One Telecom, established in 1999 as a wholly owned subsidiary of Hydro One, is a facilities-based carrier delivering broadband telecom solutions to carriers, ISPs, commercial customers and the public sector. It uses the same 5,700 km fiber-optic network and Network Operations Center (NOC) to provide for the telecommunications needs of its parent, including its electricity networks, and has recently taken on the role of monitoring the newly deployed smart meter network.

Website: www.hydroonetelecom.com

Safety and reliability have always been top priorities for electric utility companies. With new devices being added to the mix, from wind turbines to smart meters and more, there are now thousands of new potential points of failure. Managing the grid's increasingly complex telecommunications network is critical to ensuring reliable power delivery. Hydro One Telecom has risen to the challenge, using Ericsson's Operational Support Systems (OSS) as the foundation for its network and service management efforts.

Hydro One Telecom was faced with an expanding telecom network that had outgrown its management tools. Its disparate network inventory systems were built around ad hoc data. As a result,

the information they contained was inaccurate and unreliable.

Hydro One Telecom recognized the need for a comprehensive inventory management system for its telecommunications assets – one that would maintain up-to-date, accurate information on all key network elements, attributes and configurations. This system would become the cornerstone for allowing it to quickly and efficiently identify network issues and impacted grid elements.

Ericsson was selected to deploy its Granite Inventory, Network Engineer and COMMON LANGUAGE® solutions. Tero Kontio, IT Director at Hydro One Telecom, explains what the rollout meant for the company: "The platform was a significant enabler for us to move ahead with various automation initiatives, and gave us our inventory 'book of record.' It quickly became the center of our telecommunications network universe."

Since then, Granite Inventory has become an essential part of Hydro One Telecom's expanding operations. It stores information about the entire multi-vendor, multi-technology communications infrastructure, topology, IP addresses, firmware and configurations. Supporting its need to document the location

of all physical cable and network equipment, Ericsson Network Engineer provides the company's personnel with a graphically rich view of its network, while COMMON LANGUAGE® provides a uniform set of location identifiers.

Having fast access to reliable network information has helped Hydro One Telecom in a number of areas, one being its Service Impact Analysis (SIA).

"Our SIA tool can pull out the information it needs to determine what services are down and identify the remaining level of network redundancy to the power system," explains Dan DeJesus, IT Program Manager, Hydro One Telecom. "With this information at hand, the power specialists can decide whether to shut down the power line entirely, reduce the power load, or take no immediate action." Since its deployment, service impact analysis time has been reduced from hours to less than a minute.

The Ericsson solution plays a key role in managing equipment installation and configuration, circuit and service provisioning, and planned and unplanned outages. It has become integral to Hydro One Telecom's management of the communications network infrastructure, supporting critical



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Greg Taylor
Director of Client Services,
Ericsson



OVERVIEW

CUSTOMER:

Hydro One Telecom, Canada

CHALLENGE

- > Improve communications network management through better tracking of assets to ensure the reliability of the network in support of the grid.
- > Provide quality commercial services and assure SLAs.
- > Implement process automation to quickly identify the impact of telecom network failures on the power grid and support fast restoration.

SOLUTION

- > Ericsson's Granite Inventory and Network Engineer communications network management systems.
- > COMMON LANGUAGE® Information Services.
- > Deployment support, including system installation and configuration, modeling of the communications network and power grid elements, data migration and user training.

RESULTS

- > Power line service impact assessment time reduced from hours to less than a minute.
- > More efficient use of network capacity due to improved visualization of the network.
- > Year-on-year business volume growth in commercial services.

grid elements from power lines to smart meters. It is also essential for successfully conforming to Service Level Agreements (SLAs) with its commercial broadband customers.

"Ericsson has already seen a number of other leading utility providers around North America follow in Hydro One's footsteps and realize their potential, building upon the success of this project," says Greg Taylor, Director of Client Services, Ericsson. "We're very excited to be part of a number of future projects at Hydro One, enabling them to bring alternative sources of energy onto their network, as well as modeling our

solutions to enable them to achieve 4G wireless backhaul."

"We've clearly come a long way in the last ten years," says Tero Kontio. "But as we continue to roll out new smart grid applications, I can see that we will have to keep getting better in terms of telecom network management and assurance. Ericsson will be an important part of that, no question."

FINDING THE TOUCH POINTS

Electric utility providers around the world are turning to smart grid applications and their underlying communications networks in an effort to improve the efficiency, reliability and sustainability of their power networks.

Smart grid applications have the ability to improve fault detection and allow service restoration with minimal human intervention. The communications network channels essential information to Network Operation Centers, where analysis is automated and critical actions are taken with immediacy.

The key is having the ability to uncover touch points between the communications network and the grid. Successful communications network management automatically identifies the link between a network failure and a grid element, providing a more reliable electricity supply and reduced vulnerability to natural disasters and other damage.