

Enersource Simplifies Operations Center with Smart Grid Technology from Intergraph®



PROJECT WILL ALLOW UTILITY TO CONTROL ELECTRIC GRID WITH SINGLE USER INTERFACE

THE CHALLENGE:

Enersource is the second-largest electricity supplier in Ontario, Canada, among 86 municipally owned utilities. It serves more than 180,000 customers with an electrical system that spans more than 5,000 kilometers. Enersource delivers service reliability to its customers, and the total duration of service interruption per customer is consistently below the Canadian utility average. To continue to meet customer expectations for reliable service, Enersource needed a more efficient method to control the electric grid, which includes 65 municipal substations and 24,000 distribution transformers. The utility used various software and computer consoles to manage all operations. Operators used different applications for geographic information systems (GIS), supervisory control and data acquisition (SCADA), internal work processing, and many other systems for day-to-day electric grid management. This required operators to switch among multiple systems in the control room, which increased the complexity and time required to monitor and analyze data. Enersource also wanted to leverage its GIS data so all users could have easy digital access to information. This would speed the elimination of paper wall boards, maps, and other paper processes and streamline the flow of information across the utility.

THE PROJECT OBJECTIVES:

- Provide a consolidated user environment for system operators
- Eliminate paper processes and wall maps
- Leverage existing GIS data

THE SOLUTION:

Enersource decided to implement a fully integrated smart grid system to improve operational efficiency. It wanted to model the system Intergraph® developed in conjunction with Oncor Electric Delivery in Texas. Intergraph's Smart Grid Operations Command-and-Control Center provides a complete, integrated environment for electric distribution grid operators. Enersource is working with Intergraph and Siemens to integrate and automate the various assets and

PROFILE:

Name – Enersource Hydro Mississauga

Web site – www.enersource.com

Serving more than 185,000 customers in the City of Mississauga, Enersource Hydro Mississauga Inc. is the core regulated affiliate of Enersource Corporation. The City of Mississauga owns 90 percent of Enersource and BPC Energy Corporation (Borealis), a subsidiary of the Ontario Municipal Employees Retirement System, owns 10 percent. Enersource Hydro Mississauga focuses on quality of service with the distribution of electricity, delivery of electricity conservation programs, and smart metering solutions to meet government objectives.

KEY BENEFITS:

- Analyzes trouble calls in real time and determines the device most likely causing the outage
- Provides view information about crews and their current status, as well as pending and active jobs
- Supports better network management

PRODUCTS USED:

- InService product suite
- G/Technology product suite

functions of its power grid with an integrated operating model (IOM). The IOM combines Intergraph's applications for utilities with Siemens' Distribution System Power Flow (DSPF) application to create an integrated command-and-control environment.

Enersource divided the project into two phases because of its complexity. During the first phase, Enersource implemented Intergraph's InService Outage Management System (OMS). This allows the utility to use existing GIS information regarding 917,000 assets, including transformers, utility poles, meters, conductors, and others with Intergraph's OMS software, and enhance functionality for trouble analysis, call-taking, dispatch and work management, receiving SCADA alarms, and network management. Enersource successfully launched the first phase in September 2008. The project's second phase involves the integration of load flow analysis with power distribution software from Siemens, two-way SCADA interfaces, and additional InService functionality that will allow operators to manage the network with Intergraph's Smart Grid Operations Command-and-Control Center. The Intergraph solution gives operators a single user interface to monitor, analyze, and control network data. The unified command-and-control environment provides easily-visualized, actionable intelligence manifested in the form of alarms, events, work orders, and other understandable activities, allowing for quick detection and remediation of outages and other potential issues.

The IOM will help Enersource work more efficiently under both normal and storm conditions, as well as ensure it has the most up-to-date and accurate information. In addition, the IOM will result in more reliable power for Enersource customers.

THE FUTURE:

Enersource wants to continue to leverage its smart grid technology and provide more users with geospatial data. It plans to implement Intergraph technology that will allow additional users throughout the enterprise to access the InService system. Enersource also wants to use InService for mobile workforce management, and expand the system with additional geospatial technology.

Enersource purchased its first Intergraph system in 1989 and uses it throughout the organization today. The utility credits Intergraph software for helping it deliver safe and reliable power across its service area and will continue to rely on it in the future. "The IOM implementation is providing a good foundation basis to help Enersource meet the growing energy demands of tomorrow without sacrificing the excellent service and safety it has delivered for the past 90 years," says Raymond Rauber, vice president of engineering and operations for Enersource. "Utilizing Intergraph solutions allows us to keep building on a quality product that provides Enersource with the confidence to deliver reliable electricity for customers now and well into the future."

ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data into understandable visual representations and actionable intelligence. Intergraph's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph

PP&M provides enterprise engineering software for the design, construction, and operation of plants, ships, and offshore facilities. Intergraph SG&I provides geospatially powered solutions to the defense and intelligence, public safety and security, government, transportation, photogrammetry, utilities, and communications industries.

For more information, visit www.intergraph.com

