

# Improved Service with Enterprise GIS

Nova Scotia Power is the main electricity provider of the Canadian province of Nova Scotia, serving 490,000 residential and business customers. To deliver better service, the utility built OneGIS, a web portal that leverages Esri's geographic information system (GIS) technology. The solution, which centralises all of the utility's spatial asset data and makes it accessible throughout the organisation, allows the company to better manage its distribution network and deliver more reliable service. In recognition of its first-rate technology application, Esri Canada yesterday presented Nova Scotia Power with an Award of Excellence in GIS.

"For utilities to operate intelligently, they need to synthesise the various information they manage and share it across their enterprise to enable coordinated planning and decision-making," says Alex Miller, president, Esri Canada. "Utilities should be able to track at all times if their assets are working at an optimal level and take quick action to resolve any network interruptions. OneGIS provides Nova Scotia Power with a complete picture of its network, allowing it to better understand its network and improve outage restoration. Being proactive is a key advantage that will help the organisation provide better service and speed up its transformation into a utility of tomorrow."

Previously, Nova Scotia Power had limited enterprise access to data, with some data existing in spreadsheets. Using ESRI's ArcGIS, Freeance mobile and smartphone technologies, the utility validated information on all its field assets and created an accurate digital model of its network. Now, it has gained the ability to visualise the location of all its assets. It also integrated distribution, transmission, vegetation and customer data, and will soon add outage information into the GIS portal. The integrated system allows the company to analyse numerous aspects of its operations and determine their impact on service reliability. The vision is to be able to analyse line clearing data with historical and current outage information to check the effectiveness of the vegetation management programme.

To extend the data to users across departments, the utility developed the OneGIS portal using ArcGIS for Server and the ArcGIS API for Flex. The portal allows staff to query the network and conduct geographic analysis. Now, engineers and operational managers can immediately pinpoint the location and impact of outages by visualising the power distribution topology along with critical asset information.

"Every customer-facing business function we perform involves location-based information," says Greg Reinhardt, manager of projects and systems support, Nova Scotia Power. "Centralising this information into one GIS helps us to operate more efficiently. It used to take several hours for our users to analyse tabular data and identify network risks. Now, using Web maps, this process only takes minutes. This helps us to effectively minimise and shorten outages, enhancing our ability to deliver exceptional customer service. At the same time, the system allows us to operate and plan future projects sustainably."

Researchers can now visualise potential routes for transmission lines, identify potential hazards and complete suitability studies for the utility's clean energy projects by accessing the portal. This includes the Lower Churchill generation project, which will harness hydroelectric energy from Labrador's Churchill River to supply renewable energy to the province. The system also enables researchers to overlay diverse datasets and apply buffers to accurately identify optimal sites for new wind farms.