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THE GLOBE AND MAIL
Report on Business Special Report
Report on E-business

05/25/2001
The Globe and Mail
Metro
E10

Local utilities find profit power through the Net

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Special to THE GLOBE AND MAIL

As deregulation of Ontario's electricity industry forces small municipal utilities to either grow or be eaten, Whitby Hydro Energy Services Corp. has found a new way to use the Internet not only to expand its business but to develop new sources of revenue.

After Bill 35 restructured Ontario's electricity system and forced the province's non-profit municipal utilities to become businesses last year, many small utilities were swallowed by larger neighbours.

Not Whitby Hydro. It opted to go on the offensive by buying neighbouring Scugog Hydro and seeking an affordable way to monitor the three substations that came as part of the purchase.

The solution was found in hardware developed by Markham, Ont.-based [GE Power Management](#) -- a division of General Electric Canada Inc. of Toronto -- that enables Whitby Hydro to use the Internet to monitor the substations without having to install expensive remote systems or pay staff to watch control panels.

"It has worked really well. It allows us to monitor those substations from our control room," says Kevin Whitehead, director of engineering and construction at Whitby Hydro. "And it only took about 1 1/2 days to install, per site, which is incredible."

By turning to technology to develop new revenue sources, Whitby Hydro is part of a growing trend, according to the Municipal Electric Association (MEA), the industry association representing Ontario's municipal utilities. "There are all kinds of local utilities that are getting into retail businesses," spokeswoman Sharee Bond says. "It is a good opportunity."

Several utilities are taking advantage of their existing distribution networks to expand their operations, she says. "Some put in fibre-optic cable a few years ago and are going to get into some Internet services, which makes sense when they have the infrastructure."

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For example, in the Northern Ontario town of Cochrane (with a population of 4,500), the Public Utilities Commission has operated the region's telephone system, Northern Ontario Wires Inc., for many years. For the past five years, the company has offered high-speed Internet access to local customers, which includes Cochrane, Iroquois Falls and Kapuskasing.

The utility added another profit-making venture about 18 months ago when it established a call centre that employs up to 120 people to do telemarketing for companies located largely in the United States, says Cochrane PUC general manager Ross Peever.

In Whitby Hydro's case, the enerVista.com hardware it uses collects data at a remote site using an electronic "box" that is hooked to a local Internet service provider. The information is sent to the system's servers, which format the data so they can be viewed using a standard Internet browser. If an alarm occurs, the server will notify the user by e-mail, phone or pager, says Jeff Mazereeuw, product manager for enerVista.com.

The remote system picks up "anything that can be converted to a digital signal," which includes electrical items such as current, voltage and overload protection on circuits, and it notes when a circuit is tripped, Mr. Mazereeuw says. It also can monitor motion detectors and security systems, including contact detectors on doors.

As well, the system can monitor analog items such as temperature, voltage, vibration, pressure, flow and other continuous-process areas, he says. "The infrastructure of the Internet has made this concept affordable. You don't need a communications infrastructure; you just get your site hooked up to your local Internet service provider and you can transport the data from wherever to wherever."

The enerVista.com hardware secures the information by using virtual private network (VPN) encryption, an industry standard, to "create a virtual tunnel through the Internet," he says.

At the same time, the system enables "multiple people at multiple locations to have access to it," he says, which means small companies can economically operate geographically diverse sites.

This feature has attracted the attention of other types of businesses, including alternate-energy providers and distributed-energy companies, several of which are pilot-testing enerVista.com.

The system means that, instead of waiting for a Whitby Hydro customer to report a power loss, the monitoring device will prompt a pager call to notify a repair crew as soon as a problem happens.

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And the utility has been able to expand its operations without hiring new staff. "We've trained two of our existing substation technicians and they're handling it. That includes manufacturing the new panels and maintaining the system, and developing it further. We're adding Web cams and things like that," Mr. Whitehead says.

Mr. Mazereeuw says monitoring a single substation "the old way" would be "\$125,000 to \$250,000 in capital costs to install the system on the site, plus some maintenance and upkeep on the system," as well as the salary of the person monitoring the controls.

"Ours is in the \$10,000-to-\$15,000 range for capital costs, plus \$200 per month [for monitoring]. The price difference is huge."

Whitby Hydro has big expansion plans for the enerVista.com product. The utility has negotiated the rights to use the hardware to develop a business providing customized monitoring packages to other utilities interested in operating in remote locations. "We're becoming a value-added reseller for GE," Mr. Whitehead says.

Whitby Hydro will develop a customized Internet-based system of uninterrupted power supplies, modems and other devices supported by the enerVista.com hardware to meet a client utility's needs. "We have global-distribution rights," Mr. Whitehead says. "We're becoming a design/build consulting-engineering company."

And, although Whitby Hydro can't guarantee lower rates for customers because of the new venture, it does hope that the revenue gained will help it compete in the deregulated market, he says.

"The concept is the rates should go down because we're bringing in additional revenue from outside our franchise area."

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