

# ONTARIO'S HYDRO ONE IS "RESPONSE" READY FOR DISASTER

By Dave Baumken, Paul Tremblay and Daffyd Roderick

Managing Mother Nature is an impossible task. Storms rarely arrive at a good time and seldom behave in the way they're predicted to. Hurricane Isabel was forecast as a lion yet arrived like a lamb, doing far less damage than a major ice storm that hit Ontario a month later in November. Every season of the year holds the potential for disaster for North America's utilities. Winter offers snow and freezing rain, summer ushers in hot temperatures that tests the limits of equipment and every season can bring winds that gust well over 100 kilometres per hour. It's impossible to control the weather, but Hydro One works through these conditions with careful planning, management, preparation and response.

Some years are worse than others. In 2002, Hydro One's system was battered by 31 major storms, compared to 13 in 2001. This concentration of nasty weather systems resulted in \$60 million being spent to repair storm damage to the utility's distribution lines in 2002, four times as much as in the previous year.

Staff in the field more than tripled the hours they worked on storm damage as compared to the year before, logging more than 254,000 hours repairing the havoc wreaked by high winds, flooding, landslides and falling trees. One of the worst storms ripped through Northwestern Ontario on June 10, 2002. The unnamed storm caused more damage to Hydro One's system than tired out Hurricane Isabel. The anonymous sum-



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On the surface, the management of North America's largest utilities in emergency situations can seem like a daunting task. Hydro One's customers are spread across a service area of 640,000 sq. km from Canada's southernmost point, Pelee Island on Lake Erie, to Fort Severn, Ontario's northernmost community on Hudson's Bay. The utility has more than 123,000 circuit-kilometres of conductor travelling through some of the most remote and difficult to access areas in the province and almost 30,000 km of high-voltage transmission lines. However, Hydro One has effective protocols in place to properly handle its enormous transmission and distribution infrastructure in event of disasters and emergencies.

One of these effective protocols is that Hydro One officials constantly monitor the weather forecast. They use forecasts from the Weather Channel and Environment Canada to move emergency and response crews waiting on standby to areas where work is needed.

In last November's winter storm, Hydro One crews replaced more than 60 snapped poles in the Lindsay area, essentially rebuilding and re-stringing the entire distribution system. This work can only start after the damage has been cleaned up and assessed, and replacement conductor, transformers and poles are delivered. This work can be slowed by continuing bad weather that makes for a situation of one step forward, two steps back, with recently restored lines being damaged by wind a second time.

Hydro One uses an all hazards approach to managing emergencies using an emergency classification scheme sup-



ported by a command and control structured organization. It lets the utility match an appropriate level (high/middle/low) of response to the emergency situation. This system was created for responding to classical transmission and distribution emergencies, but in recent years, the approach has been expanded to include emergencies such as computer viruses, terrorist attacks, and last spring, SARS.

As situations escalate, it becomes increasingly important to communicate both inside and outside the company. Hydro One increases its efforts to relay information to its shareholders, the government of Ontario, municipal governments and agencies and the media so they can communicate to the general public.

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Major storm systems, such as the wind and snowstorm of November 13, 2003, which affected more than 170,000 customers across Ontario, bring this type of response into effect.

Preparing for these emergencies requires constant practice through the use of emergency simulation exercises for both transmission and distribution staff. An emergency response drill or exercise can range from the mobilization of a single emergency response team to the activation of the entire Hydro One emergency response organization.

Simulations and exercises form the core of Hydro One's emergency preparedness program. Crises that have a higher potential to actually occur (major storms) are simulated and tested more frequently than low-risk, low-impact incidents. In recent years, integrated restoration exercises have involved organizations outside of Hydro One such as Ontario Power Generation, the Independent Electricity Market Operator, local distribution companies such as Toronto Hydro, Emergency Management Ontario and large industrial customers. One simulation was the loss of all load on the transmission system. This exact situation played itself out on August 14 this year.

"The August 14th blackout tested

the resiliency of our system and the skill and dedication of our staff, and both came through with flying colours," says Tom Parkinson, president and CEO of Hydro One. "Our people played an instrumental role in the timely restoration of the power grid and they should be commended for a job well done."

"Our people are our strength. During the blackout, the teamwork was incredible and I know that a big part of that is due to the drills we do. They have

made us better," says Paul Tremblay, director of network operating. "Now our people ask themselves and each other 'What if?' They know the value of a back-up plan for the back-up plan." The key to handling emergencies is to think like a Boy Scout and be prepared.

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Ten years ago, Alberta's restructuring began with great expectations—new supply, new innovation, new choice and a downward pressure on prices. While many of these expectations have been met, others will be on the agenda for next March.

#### KEYNOTE SPEAKERS

The Honourable Murray Smith, Minister of Energy, Government of Alberta

Peter Mansbridge, Anchor,  
The National, CBC Television

Paul Michael Wihbey, President,  
Global Water and Energy Strategy Team

Robert Nicolay, President and CEO,  
ENMAX Corporation

Steve Snyder, President and CEO,  
TransAlta Corporation

#### SESSIONS

Transmission Policy and Planning

The Blackout of '03

Politics and the Power Industry

New Directions in Market Design

There will be a 25 booth Trade Show held in conjunction with the Conference and Dinner at the Fairmont Banff Springs Hotel on Monday March 15, 2004.

The full program will available at [www.ippssa.com](http://www.ippssa.com) at the end of December, 2003.

If you have any questions regarding the Conference or Trade Show please contact the Conference Office at email [capitol@shaw.ca](mailto:capitol@shaw.ca) or telephone (403) 210-0596.

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