



## OAKVILLE HYDRO:

# Gaining Efficiencies through Voltage Conversion

An important aspect of Conservation and Demand Management (CDM) planning relates to the selection of programs that enable distributors to gain greater system efficiencies. A number of initiatives are underway across the province to address system optimization and loss reduction issues.

An excellent example of this can be found in two voltage conversion projects undertaken by Oakville Hydro and which are designed to increase system efficiencies. The program is an important component of the utility's 2005 CDM Plan.

The first conversion project has been

completed and involved a 1,500 kVa transformer at a local shopping mall that was converted from 4 kV to a 27.6 kV direct-feed from the grid. The expected improvement in grid efficiency should result in a 10 kW reduction in peak demand and an estimated 50,000 kWh/year in energy reduction.

The second voltage conversion project is larger in scale and has targeted one of Oakville's older residential areas. It will convert the area from 4kV to 27.6 kV. The conversion project is currently underway and encompasses approximately 400 residential customers and 70 distribution transformers. The expected savings in

energy through improved transformer efficiency and lower line losses (as a result of higher distribution voltages) are 40 kW off-peak demand and an annual energy reduction of 170,000 kWh per year.

The combined results of these two initiatives have the potential of a permanent peak reduction of 50 kW, and an estimated energy reduction of 220,000 kWh per year.

*Oakville Hydro Electricity Distribution Inc. uses a network of power lines approximately 1,285 km long, and has reliably delivered power to homes and businesses in Oakville for close to a century.*



## Does Your Conservation & Demand Management Program Need a Boost?

The MEARIE Group, together with our Consultant Network, delivers a comprehensive solution to today's Conservation & Demand Management issues. We can help you:

- ▶ Design programs to meet your objectives
- ▶ Project manage your initiatives
- ▶ Plan and establish strategies
- ▶ Establish formal processes and procedures
- ▶ Coordinate with other LDCs

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