

LEADERSHIP ACTION **RESULTS**

Enersource Hydro Mississauga
Horizon Utilities
Hydro Ottawa
PowerStream
Toronto Hydro-Electric System
Veridian Connections

Coalition of Large Distributors
CDM Retrospective Report 2005-2007

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LEADERSHIP

Is 527 million kilowatt-hours of electricity a little or a lot?

If you think of it as the equivalent of powering over 58,000 typical Canadian homes for one year, then it's a lot.

If it means that customers in the service area stretching from St. Catharines to Ottawa used 527 million kilowatt-hours less over three years, then it's also a lot.

And if those savings were achieved in an environment where three years ago, local distribution companies weren't 'doing' energy conservation, then not only is it a lot, it's an historic achievement.

In 2005, six of Ontario's largest electricity distribution companies – collectively known as the Coalition of Large Distributors – took a giant leap of faith. To support the Province of Ontario's call for a conservation culture, they pooled their resources, began to develop innovative conservation and demand management programs and then set out to implement their vision.

Three years later, the results of their partnership are total electricity savings of 527 million kilowatt-hours.

That's not just a lot of energy conservation. It's a lot of leadership.

TAKING THE INITIATIVE, LEADING THE WAY

The Coalition of Large Distributors (CLD) serves 40 per cent of Ontario's electricity market, representing approximately 1.7 million customers. Based in Southern Ontario and serving the provincial capital, the national capital, and several of the province's fastest growing cities and regions, CLD member utilities have been at the centre of — and front and centre in — the most widespread conservation and demand management (CDM) experiments in Ontario's history.

No matter where you live, engineering change in the electricity sector is a massive undertaking. It's like trying to alter the course of a freighter. It takes time. It requires forethought. And if the vessel is headed for troubled waters, all the more reason why results matter.

In 2004, it was clear that the Province's energy supply was stretched to the limit — and that it was time to chart a new course. The Coalition of Large Distributors rose to the challenge. It made complete sense that the CLD members would come together to jump-start the massive change in public attitude and behaviour that was required. After all, they had the critical mass in terms of customers. They were located in areas where energy demand was high. Many of them had already experienced significant change, either through amalgamations, acquisitions

or mergers, and had re-established themselves as corporate entities with municipal leadership and possessing widespread brand recognition.

But what nobody anticipated perhaps, back in 2005, was that when they took the helm, the Coalition of Large Distributors would navigate such a winning course.

And yet, that is exactly what happened between 2005 — when they trimmed their sails — and 2007 when the full impact of the coalition's \$72.7 million CDM investment was tallied.

The net result? An unprecedented 527 million kilowatt-hours of electricity were saved — enough to power 58,546 homes for one year.

But that's just the beginning of the story.

It's as much a story of creativity as it is of collaboration; as much about results as it is about building momentum; as much a reflection of leadership and discipline as it is of pride.

In three short years, the Coalition of Large Distributors played a pivotal role in shaping new attitudes regarding energy use in Ontario. And while their initial experiment was largely completed by December 2007, CLD members remain committed to bringing the very best ideas forward in support of the Province's vision for a cleaner, greener, more self-sufficient and more responsible electricity market.

NEW ATTITUDES START WITH AWARD-WINNING IDEAS

In 2005, the six founding members of the Coalition of Large Distributors invested roughly 25 per cent of their combined Ontario Energy Board-approved third tranche spending* in the development of a core group of prototype programs that would lay the foundation for Ontario's new conservation culture. The team moved quickly to implement their ideas and by year-end, their investment had generated 110.5 million kilowatt-hours in electricity savings. The following year, with strong momentum behind it, the team invested a further 57 per cent of third tranche funds and netted an impressive 302.5 million kilowatt-hours in electricity savings. By year-end 2007, with 18 per cent of their CDM investment allocation left to spend, the team racked up more (than in 2005) with less, and produced savings of over 83 million kilowatt-hours.

Not all of the CDM programs the team developed were created equal. Some were designed to reduce the amount of electricity used by residential customers; others were directed at helping commercial customers lighten their electricity load; and still others were meant to reduce peak demand during times when the electricity grid was stretched thin.

However, the feature shared by all these programs was an ability to deliver results. By November 2006, four of these pioneering initiatives (see below) had proven so successful that the Premier of Ontario and Ontario's Minister of Energy directed the Ontario Power Authority to coordinate the roll-out of these programs province-wide.

Following is a representative sampling of initiatives developed by the CLD; others are highlighted further on in this report, in the section devoted to each CLD member's activities in 2007.

peaksaver®

WHAT IT IS: Developed, piloted and licensed in Canada by Toronto Hydro-Electric System, peaksaver® is an award-winning residential and small commercial peak demand reduction program that reduces the strain on the electrical system during peak periods and improves the environment. This program was one of the first that Premier Dalton McGuinty mandated to be rolled out across Ontario.

HOW IT WORKS: A special peak reduction switch or programmable thermostat is installed on a home's central air conditioner. During critical times (typically on hot summer days), a signal is sent to the device to reduce the amount of electricity used by energy-intensive air conditioners without causing a noticeable temperature change to the homeowner.

RESULTS IN CLD MEMBERS' SERVICE AREAS:

Total CLD customers signed up to date: **35,258**

Total kilowatt savings: **26,700**

* Third tranche spending refers to money that the Province of Ontario mandated local distributors to invest in conservation and demand management programs, beginning in 2005. The money comes from the third of three rate adjustments ("tranches") on customers' bills that were made between 2001 and 2004; these rate adjustments were necessary in order to help local distributors establish themselves as commercial business enterprises, following the introduction of the Electricity Act in 1998. As a condition to being able to apply the third tranche adjustment local distributors were required to invest the equivalent of one year's third tranche rate adjustment in local conservation and demand programs. Total third tranche investment by CLD members was \$72.7 million; oversight for third tranche spending is provided by the Ontario Energy Board.

Fridge Bounty

WHAT IT IS: Developed and piloted by Hydro Ottawa, and now offered as a Standard Program throughout Ontario by the Ontario Power Authority under the name The Great Refrigerator Roundup, this program was designed to encourage residential customers to remove energy-guzzling refrigerators (in many cases a home's second refrigerator) from their homes. In its second year of operation, the program was expanded to include freezers as well as refrigerators.

HOW IT WORKS: As of June 2007, the Ontario Power Authority facilitates the removal of fridges and freezers across the province. Customers can book an appointment by calling 1-877-797-9473 or register online. Arrangements are made to have the appliance removed and disposed of in an environmentally responsible manner, with almost all materials recycled.

RESULTS IN CLD MEMBERS' SERVICE AREAS:

Total number of fridges and freezers removed to date,
for all CLD members: **15,579**

Total kilowatt-hour savings: **18.2 million**

Water Heater Tune-Up

WHAT IT IS: Developed and piloted by Enersource in 2005, the Water Heater Tune-Up program provided an opportunity for residential customers to reduce the energy used by the second largest electricity-guzzler in most homes — the electric water heater.

HOW IT WORKS: Enersource created a special kit containing a water heater blanket, pipe wrap, low flow shower head, faucet aerators and a tip sheet, and promoted the program widely throughout its service territory.

RESULTS IN CLD MEMBERS' SERVICE AREAS:

Total number of electric water heater tune-ups,
for all CLD members: **10,250**

Total kilowatt-hour savings: **19.6 million**

enerShift™

WHAT IT IS: Developed and piloted by PowerStream in partnership with Rodan Energy and Metering Solutions, enerShift™ is a demand response service for large commercial, industrial and institutional customers who want to reduce or shift their electricity load during peak demand periods.

HOW IT WORKS: PowerStream identifies customers that may be suitable for peak shaving or load shifting. Rodan personnel work in tandem with these customers to identify where non-critical load can be eliminated during peak periods. Once customers agree to implement these recommendations, PowerStream with the assistance of Rodan acts as an aggregator when the Independent Electricity System Operator gives the signal to reduce peak load.

RESULTS IN CLD MEMBERS' SERVICE AREAS:

Total of **3,500 kW** peak demand contracted in 2007.

powerWISE® Business Incentive Program

WHAT IT IS: Developed by the CLD and piloted by Hydro Ottawa, the powerWISE® Business Incentive Program (now Business Incentive Program for Toronto customers and managed outside Toronto by the Ontario Power Authority under the name Electricity Retrofit Incentive Program) was designed to provide a financial incentive to large customers who perform energy-efficient retrofits at their facilities.

HOW IT WORKS: Businesses submit an application outlining their plans to retrofit lighting, heating/cooling, or refrigeration equipment based on guidelines provided by their local distribution companies. The plans must be approved before any financial incentive is provided. Kilowatt savings must be measurable, and are rewarded with a kilowatt-based financial incentive.

RESULTS IN CLD MEMBERS' SERVICE AREAS:

Total number of approved applications to date,
for all CLD members: **242**

Total number of kilowatts saved: **10,814**

powerWISE® Starter Kits

WHAT IT IS: Developed and piloted by Veridian, the powerWISE® Starter Kit program was designed to introduce residential customers to basic energy conservation concepts, provide them with conservation tips and familiarize them with compact fluorescent lights (CFLs).

HOW IT WORKS: The powerWISE® Starter Kits were distributed at community events and local food banks.

RESULTS IN CDM MEMBERS' SERVICE AREAS:

Total number of CFLs distributed: **2,501,977**

Total kilowatt-hour savings: **260 million**

Summer Savings (Residential)

WHAT IT IS: Developed and piloted by Toronto Hydro-Electric System (under the name Summer Challenge), Summer Savings is an energy-savings program that rewards customers for reducing their electricity consumption during the hot summer months when the electricity grid can become strained.

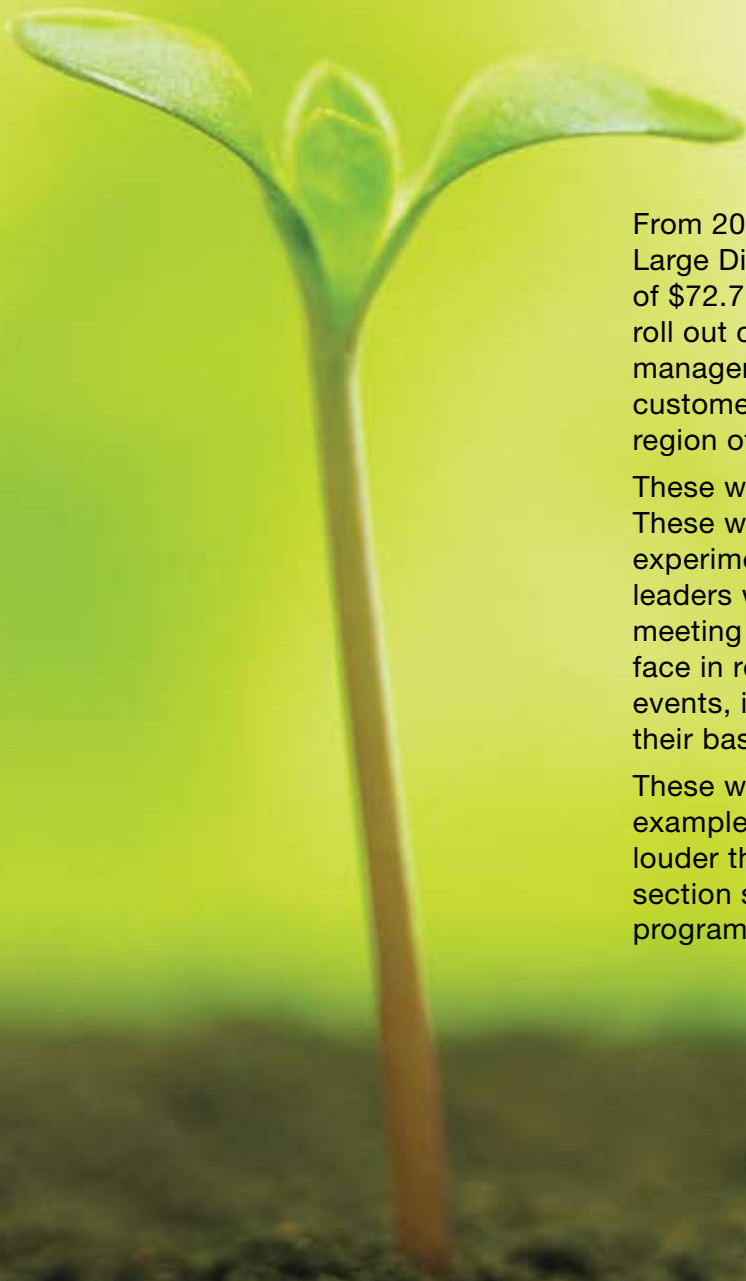
HOW IT WORKS: Residential customers eligible for the program are automatically registered with their local distribution company. The utility tracks customers' consumption from July 1 to August 31. Customers who reduce their energy use by 10 per cent receive a 10 per cent rebate on their fall electricity bill.

RESULTS IN CLD MEMBERS' SERVICE AREAS:

Participation in 2006: **153,637**

Kilowatt-hours saved 2007: **79.4 million**

ACTION



From 2005 to 2007, the Coalition of Large Distributors invested a total of \$72.7 million to design, pilot and roll out conservation and demand management programs to 1.7 million customers in the most populous region of the Province.

These were no arm-chair investors. These were pioneers ready to experiment with new approaches; leaders who didn't shy away from meeting their customers face-to-face in retail stores, at community events, in their workplaces, or in their basements.

These were people who led by example, people whose actions speak louder than words. The following section showcases some of the programs they implemented in 2007.



ENERSOURCE HYDRO MISSISSAUGA

There are many ways to educate people about energy conservation. For some, it all comes down to dollars and cents. For others, doing the right thing for the planet is the real driving force. But no matter what their personal motivation, Enersource once again proved it was plugged into customers' mindsets, successfully delivering a variety of programs designed to help anyone who was willing to change their electricity consumption habits.

"Our CDM vision is to show customers that there are plenty of energy-saving alternatives, and many different options," said Carmen DiRuscio, Chief Conservation Officer. "We know one size doesn't fit all; the most important thing is to deliver programs that are customer-friendly as well as being capable of reducing electricity usage in a convenient way."

Capitalizing on the widespread public acceptance of Earth Day, Enersource created the switch 4 earth campaign in order to nudge consumers into switching to energy-saving lighting. In partnership with Loblaw Companies and the City of Mississauga, Enersource distributed more than 70,000 compact fluorescent light (CFL) bulbs over Earth Day weekend at all Loblaws and Real Canadian Superstore locations in Mississauga, and at a family Earth Day event at Civic Square, City Hall. This was in addition to the over 99,000 CFLs Enersource distributed since it launched its CDM initiative in 2005, and brings total energy-savings from CFL

switch-overs to 17.6 million kilowatt-hours over three years.

Demonstration projects are another way of building awareness for energy-saving alternatives, and to that end Enersource partnered last year with the City of Mississauga to help finance a solar panel installation on the Hershey Centre. The 25-kilowatt installation on the roof of the complex is now the largest solar installation on any City of Mississauga building.

Changing behaviour sometimes boils down to financial incentives, particularly for large industrial, commercial and institutional customers. Enersource's Demand Response program was created to fill that need. By identifying customers who were willing to reduce their electrical loads during peak periods and providing them the financial incentives to do so, Enersource became an aggregator for the Independent Electricity System Operator's (IESO) Emergency Load Reduction program. In 2007, ten commercial and industrial customers signed up for voluntary demand response, including Orenda Aerospace, Greater Toronto Airport Authority (GTAA), Loblaw Companies, St. Lawrence Cement, Sysco Food Service, Norampac, Glaxo Smith Kline, G.E. Technology Finance and Oxford Properties. Total demand response capacity for these customers was 10.27 megawatts. On August 2, September 7 and September 25, Enersource put its plan into action and responded to the IESO's request for standby for emergency load reduction. ▶

BY THE NUMBERS

When the Coalition of Large Distributors began working as a team in late 2005, there was no such thing as No Catch to Conserve or the power-WISE® Business Incentive Program to help small and large commercial, industrial and institutional customers off-set the costs of performing energy-efficiency retrofits at their facilities. Three years later, more than 242 CLD customers have participated in these two programs, yielding combined energy savings of over 11,000 kilowatts.



As a final highlight, Enersource also provided an opportunity for residential customers to become participants in demand response by

initiating a *peaksaver*[®] pilot program in October. From October 2006, to April 2007, Enersource successfully installed 1,600 units.

Through community and in-store events such as the switch 4 earth campaign (photo at far left), Enersource delivered customer-friendly and measurable CDM programs throughout the 2005-2007 reporting period. Shown above is the 25-kilowatt solar panel installation that Enersource, in partnership with the City of Mississauga, helped to finance at the Hershey Centre.

ENERSOURCE HYDRO MISSISSAUGA 2005-2007 **HIGHLIGHTS**

8.4 million dollars
invested in
CDM programs

60.1 million
kilowatt-hours
saved

14,237 tonnes of
CO₂ emissions
diverted*

*Using an energy conversion of 0.237 tonnes of CO₂ emissions diverted per kilowatt-hour, based on OPG generation mix. Enersource Invested CDM Funds include \$1,418,969 Incremental Funding Approved in Rates, spent over 2006 and 2007.



HORIZON UTILITIES CORPORATION

Three CDM projects implemented in 2007 by Horizon Utilities are proof positive that to be sustainable, energy conservation needs to produce results.

Building on the highly successful powerWISE® Business Incentive Program that began in 2005, Mohawk College applied for the maximum incentive of \$50,000 for an energy efficient campus lighting project. Mohawk College was one of nine Horizon customers whose results were verified and whose incentives were approved by year-end 2007.

By converting more than 8,600 fluorescent lights to new high performance T-8 and T-5 lights, the College will reduce electricity demand by 645,000 kilowatt-hours per year and save itself more than \$82,000 in electricity costs as a result. The project also has improved lighting controls and illumination for common areas, classrooms and the College's gymnasium.

"These technologies have the benefit of providing a better quality of light," said Brian Smith, Manager of Conservation and Demand Management for Horizon Utilities. "They are also quieter, last longer and will require less maintenance, resulting in further operational savings for the College down the road."

Horizon Utilities also ramped up its own demand management capabilities with another high-profile project that will benefit customers during a power outage. The utility installed two 375-kilowatt standby generators at its head office in Hamilton and one 375-kilowatt standby generator at its location in

St Catharines. These will use natural gas as a clean fuel source to produce enough electricity to supply all power requirements for these buildings, even during their summer peak demand, which exceeds 600 kilowatts.

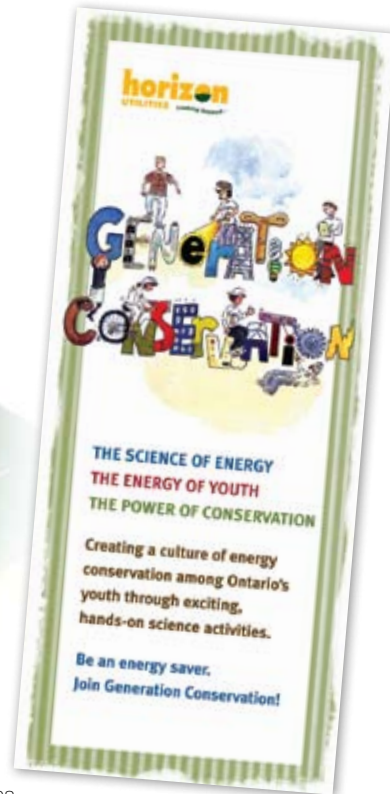
This turnkey project, with a total budget of \$1.5 million, enables Horizon Utilities to participate in either a provincial demand response program or emergency response program such as the Independent Electricity System Operator's Emergency Load Reduction Program.

Another project generating solid results was a LED retrofit of traffic lights for the City of Hamilton and St. Catharines, completed in late 2007. The project saw the installation of LED traffic signal technology at over 460 intersections in these communities, reducing peak demand by 427 kilowatts and producing savings of 3.8 million kilowatt-hours annually.

Teaching children about energy conservation is another way in which Horizon Utilities continued to work to create long-term results for the province's emerging conservation culture. In November, the utility unveiled an animated video called 'Power for Tomorrow,' to accompany the powerWISE® Home – a child-sized interactive energy conservation model house located at the YMCA's Children's Discovery Centre in St. Catharines. This unit serves to augment Generation Conservation, the curriculum-based, 10-lesson energy conservation course that Horizon Utilities is sponsoring for 7,500 Grade 5 students at 200 schools in St. Catharines and Hamilton.

BY THE NUMBERS

In 2007, customers served by Ontario's six largest electricity companies turned in more than 18,168 of their energy-guzzling home air conditioner units as part of the Clean Air Foundation's Keep Cool program. In return, they took 10.2 million kilowatt-hours off the province's electricity grid.



“By offering Generation Conservation through local district school boards and involving the public libraries in both communities to provide research connections for the students, we are stepping outside the traditional role of a local utility company and are living up to our tag line – ‘Looking beyond’,” said Mr. Smith.

“Through these efforts we are looking to create a new generation of citizens who understand the consequences of the wasteful use of energy and are committed to finding ways to conserve energy to improve the environment.”

Teaching children about the importance of energy conservation is the goal behind the interactive powerWISE® Home on display at the YMCA Children’s Discovery Centre of Niagara (above) and the Generation Conservation program that Horizon Utilities is sponsoring at 200 schools in St. Catharines and Hamilton (photos at far left and above). The utility also provided an energy retrofit incentive for Mohawk College (third photo from left) and awarded the first **peaksaver**® Star award to Hernder Estate Wines (2nd photo from left).

**HORIZON UTILITIES CORPORATION
2005-2007 HIGHLIGHTS**

7.1 million dollars
invested in
CDM programs

40.8 million
kilowatt-hours
saved

9,665 tonnes of
CO₂ emissions
diverted



HYDRO OTTAWA LIMITED

As if being front and centre on the world stage every day weren't enough, the nation's capital is also the Canadian city with the highest penetration of compact fluorescent light bulbs (70 per cent), the highest penetration of programmable thermostats (60 per cent) and the most likely to program the thermostats (91 per cent), according to Statistics Canada.

Hydro Ottawa was instrumental in driving this change in consumer behaviour. Not only did the utility partner early on with Project Porchlight, delivering 245,000 compact fluorescent light bulbs to area homes by the end of 2006, it also created one of the province's early CDM success stories — the Fridge Bounty program (now managed by the Ontario Power Authority under the name The Great Refrigerator Roundup).

Hydro Ottawa also piloted the very successful powerWISE® Business Incentive Program (PBIP), which provides financial incentives to customers who retrofit their lighting systems, install new energy efficient motors and cooling equipment, or develop customized energy conservation solutions with measurable results.

"Some of Hydro Ottawa's commercial and institutional customers are involved in activities that are highly energy-intensive," said Bruce Bibby, Manager, Energy Conservation, "and with the powerWISE Business Incentive Program our goal was to enable sizable energy reductions from these operations, while at the same time helping customers to manage their electricity costs more efficiently. This program really is a win-win for customers and for the environment."

In 2007, Hydro Ottawa introduced a program to recognize the efforts of business custom-

ers with a brand new promotional campaign to highlight key accounts that had reduced their energy consumption. The Companies for Conservation campaign launched in October; each month a different business is featured in the *Ottawa Business Journal* as a means of encouraging other customers to take advantage of the program.

To year-end 2007, Hydro Ottawa's PBIP had approved 22 applications, representing total savings of 2.8 million kilowatt-hours annually — enough to power 310 homes for a year. Among the customers who rose to the challenge was the Nepean Sportsplex — a City of Ottawa facility that houses sports fields, skating and curling rinks, an athletic centre, and an aquatic centre. As a result of the retrofit, completed in 2007, the Sportsplex will save 1.7 million kilowatt-hours annually. Other customers with verified kilowatt-hour savings include the Royal Canadian Mint, the Westin Ottawa Hotel and Hudson's Bay Company.

BY THE NUMBERS

The Coalition of Large Distributors blazed a trail with the wide-spread introduction in Ontario of the **peaksaver®** peak demand reduction program in 2005. By year-end 2007, more than 35,000 CLD customers had enrolled in this award-winning program, making 26,700 kilowatts of electricity available for peak shaving during high demand periods.

As noted previously, the Fridge Bounty program was a signature program for Hydro Ottawa. In 2005, at its inception, the program surpassed initial projections with 581 refrigerators removed and 627,480 kilowatt-hours saved. Based on this success, the utility expanded the program in 2006 to include freezers; and by year-end, a total of 4,492 refrigerators and freezers had been retired. In April 2007, Hydro Ottawa wound the program down to coincide with the launch of the Ontario Power Authority's Great Refrigerator Roundup Program. All told, 5,928 fridges and freezers were removed and 5,913,000 kilowatt-hours were saved during the reporting period for third tranche. ▶



Raising awareness of the importance of energy conservation was another integral aspect of Hydro Ottawa's CDM strategy, and during the 2005-2007 reporting period the utility's Conservation Van played a lead role. Given its success in earlier years, the program was expanded in 2007 to include presentations to Grade 5 students. In May, the van visited 22 schools, and Hydro Ottawa representatives spoke with over 1,300 Grade 5 students about environmental stewardship and energy conservation. During the summer months, they also

brought their message to campers in the Mad Science program and to more than 26 community and business events.

As a result of the high visibility achieved for these and other Hydro Ottawa CDM programs, it came as no surprise that Ottawa led the pack in terms of being the city where customers were most familiar with the concept of 'a conservation culture'. According to an Environics poll conducted in April 2007, 42 per cent of Ottawa residents said they had heard the term, compared with a provincial average of 27 per cent.

During the 2005-2007 reporting period, Hydro Ottawa approved 22 applications for the powerWISE® Business Incentive Program. Customers such as the Nepean Sportsplex (photos above) will save 1.7 million kilowatt-hours annually.

HYDRO OTTAWA LIMITED
2005-2007 **HIGHLIGHTS**

8.0 million dollars
invested in
CDM programs

75.2 million
kilowatt-hours
saved

17,821 tonnes of
CO₂ emissions
diverted



POWERSTREAM

Regional and municipal partnerships are the key to understanding PowerStream's vision for conservation and demand management.

For example, PowerStream was the only utility in the province to invest in the establishment of a municipal conservation office, in this case, the Markham Energy Conservation Office (MECO), whose goal is to help citizens learn about conservation and demand management by way of example.

To date, the investment has yielded impressive results. A lighting retrofit at the Milliken Mills Community Centre's parking garage that began in late September 2007 will save 25,000 kilowatt-hours and associated electricity costs annually. In addition, close to 60,000 kilowatt-hours in annual electricity savings will come as the result of retrofits to various meeting rooms, elevators and hallways at the Centre.

PowerStream's expertise was also instrumental in the development of a demand response program designed to reduce the Town of Markham's energy consumption during periods of peak demand. In partnership with Rodan Energy and Metering Solutions, PowerStream identified energy savings at the Thornhill Community Centre. MECO now has strategies in place to either turn off or significantly reduce its lighting load during peak times at this location. Strategies have also been established to manage heating, air conditioning and ventilation during peak times and to curtail energy consumption by pumps and refrigeration plants – all of which add up to a reduction in peak demand of over 1,000 kilowatts.

Also of note during the 2005-2007 reporting period was the piloting of the No Catch to Conserve program – a program developed by PowerStream and implemented in conjunction with MECO, Green\$aver, Enbridge Gas Distribution and the Ontario Power Authority.

This unique program – which was conceived as a way of helping small business customers (with a billed demand of less than 50 kilowatts) save money on upgrades to their facilities – starts with a free energy assessment and ends with a \$1,000 maximum credit towards approved energy retrofits. Introduced as a pilot project for the town of Aurora in early 2007, the program spread like wildfire throughout PowerStream's service territory, with energy assessments being completed at a total of 60 businesses by year-end 2007. With the help of this program, small business customers, to date, have managed to save over 250,000 kilowatt-hours of electricity.

For the years 2005-2007, PowerStream also invested significantly in a unique partnership with Toronto and Region

Conservation (TRCA) – a partnership aimed at increasing public awareness for energy conservation and educating the community at large about the tools available to do so.

With collaboration from York Region District School Board and York Catholic District School Board, as well as Ontario EcoSchools, the Clean Air Partnership and York Region Health Services, PowerStream's three-year investment was used to develop a pilot project which helped to transport more than 1,100 Grade 5 school children from 19 schools in 41 different classes to the Kortright Centre at The Living Campus, providing them an opportunity to

BY THE NUMBERS

Since 2005, the CLD team has distributed more than 2.5 million compact fluorescent light bulbs through in-store programs such as Bright Ideas, coupon redemptions and community events. The results are telling – approximately 260 million kilowatt-hours saved in just three years.



learn about energy conservation directly from TRCA's expert staff.

PowerStream's third-tranche CDM investment was also instrumental in the promotion of the Archetype Sustainable House Design Competition, whose goal was to encourage architects and builders to submit plans for the best sustainable house. Once built, the sustainable house will become a 'green' demonstration project for other developers and for the community. By demystifying the notion

that sustainable houses are too expensive or too niche, the hope is that buyers will catch on to the benefits of green housing and will demand that developers start building homes with energy conservation in mind.

Selected by an independent panel in June 2007, the winning sustainable house is called 'Building Blocks'. Plans are now in place for the house to be built on Kortright's Energy Trail by the Greater Toronto Homebuilders Association. Construction will begin in June 2008.

In 2007, PowerStream delivered on a wide range of CDM programs for its 237,000 customers including (from left to right): The Great Refrigerator Roundup, community events, Catch the Sun in partnership with The Home Depot and the Archetype Sustainable House Design Competition, whose winner was announced in June.

POWERSTREAM 2005-2007 HIGHLIGHTS

6.6 million dollars
invested in
CDM programs

62.2 million
kilowatt-hours
saved

14,732 tonnes of
CO₂ emissions
diverted



TORONTO HYDRO-ELECTRIC SYSTEM

Businesses might account for just 20 per cent of Toronto Hydro-Electric System's ('Toronto Hydro') customer base, but they represent approximately 80 per cent of the City's electricity use. And so it made sense that, on the heels of the hugely successful Summer Challenge program for residential customers (introduced in 2006, with over 140,000 residential customers receiving credits each year in both 2006 and 2007), Toronto Hydro would follow up with the first-in-Canada Summer Challenge for Business in 2007.

Launched during a tongue-in-cheek fashion show called 'Fashion Thrills Without The Chills' that was held in the city's financial district, Summer Challenge for Business rewards business customers with a 10 per cent credit on their fall electricity bills if they reduce consumption by 10 per cent between July and August, compared to the year prior.

To ensure strong promotion for the program, Toronto Hydro developed the 'Do The Right Thing' direct mail and advertising campaign that included elevator door wraps, newspaper inserts, radio commercials and online promotion. The result was a whopping 70 per cent awareness for the new program, with 52 per cent of business customers actively participating. At year-end, an impressive 87.8 million kilowatt-hours had been saved thanks to 12,902 customers who rose to the challenge. Together, they earned rebates totaling \$3.7 million.

To provide further encouragement to the business community, Toronto Hydro also developed the 'Green Profiles' campaign in which busi-

nesses that had successfully reduced their energy consumption – whether by using a *peaksaver*® device, retrofitting their facilities or conserving energy in some other creative way – were featured in radio and print advertising, on the Toronto Hydro website and in special 'Conservation Customer of the Week' press releases.

In partnership with Toronto Association of Business Improvement Areas, Toronto Hydro also spearheaded a Festive Lighting Exchange that invited local area residents to exchange two traditional incandescent light strings for one free string of LED lights. In 2005, four Business Improvement Areas (BIAs) participated in the program, resulting in 750 kilowatt-savings; by 2006, savings generated through the Exchange had increased to 1.034 megawatts; and by year-end 2007, with 18 BIAs and five additional communities participating in the program, a savings of 1.8 megawatts was achieved. Toronto Hydro provided additional visibility for the program by partnering with the City of Toronto on its annual Cavalcade of Lights, which featured lighting displays across the city.

For the third year in a row, Toronto Hydro also invested in the Clean Air Foundation's Keep Cool program. Toronto Hydro customers who brought their old room air conditioner to a local Home Depot store received a \$25 Home Depot gift card. In 2007, a total of 6,338 inefficient units were returned and recycled over four weekends, representing over four megawatts in electricity savings. Since it first participated in the program, Toronto Hydro has collected and recycled more than 18,000 old room air conditioners, equal to a demand reduction of almost 15 megawatts.

BY THE NUMBERS

Between 2005 and 2007, the Coalition of Large Distributors installed over 820,000 smart meters, making their combined service territory the largest installation site for smart meters in the world.



Do you have any concerns or tips to share about energy conservation? That was the question of the day at 32 Toronto Hydro sponsored community events last summer. In the spirit of pushing the envelope, Toronto Hydro developed the hugely popular 'Talk Box' – a fun and interactive way of promoting grass-roots conservation awareness. The eight foot tall compact fluorescent light (CFL) with built-in camera and microphone gave Torontonians attending the events the opportunity to voice their opinions on conserva-

tion. Videoclips of their feedback were posted on the Toronto Hydro website; and all participants received a free compact fluorescent bulb.

Lastly, but no less importantly, Toronto Hydro refined and re-introduced the Business Incentive Program in August 2007. A total of 107 applications were approved and over 5 megawatts in electricity savings were achieved. The 2006 version of the program (which ran from November 2006 to August 2007) yielded a total of 6 megawatts in savings.



TORONTO HYDRO-ELECTRIC SYSTEM 2005-2007 **HIGHLIGHTS**

40.0 million dollars
invested in
CDM programs

270.7 million
kilowatt-hours
saved

64,149 tonnes of
CO₂ emissions
diverted

Fashion Thrills Without The Chills, Talk Box, Festive Lighting Exchange and Summer Challenge for Business were among the innovative and entertaining CDM programs in which Toronto Hydro invested in order to deliver savings totalling 273 million kilowatt-hours during the 2005-2007 reporting period. At top left, Toronto Hydro Corporation President David O'Brien turns up the thermostat at Fashion Thrills Without The Chills.



VERIDIAN CONNECTIONS

Experimentation has played a key role in the CLD members' strategy of driving change. In 2007, Veridian continued the tradition by introducing two new pilot programs to customers in its service area.

The first was the Time-of-Use Pricing Pilot project introduced in February and ending in September. All of Veridian's Regulated Price Plan customers with a peak demand of greater than 200 kilowatts were given an opportunity to move to time-of-use (TOU) pricing, so that they could become accustomed to this price structure and be financially rewarded for reducing consumption during on-peak hours. A total of 38 customers took part in the program.

In addition to offering these customers a chance to 'test drive' time-of-use rates, the pilot also gave Veridian an opportunity to test its time-of-use settlement processes, in anticipation of the province-wide introduction of time-of-use rates. It was also intended to help participating customers prepare for a transition to hourly electricity pricing when they become ineligible for the Regulated Price Plan in Spring 2009.

"Our Time-of-Use Pricing Pilot project provided staff with invaluable experience in the application of this new electricity price structure," said Rob Scarffe, Veridian's Executive Vice President of Customer Services." This was our first opportunity to test our new settlement processes in a production environment. Our systems and staff met all expectations. We're

confident that we'll be ready for broad scale introduction of TOU rates, and that the transition to this rate structure will be seamless for customers."

Participating customers also found the pilot project to be of value. In response to a post project survey, customers reported that the pilot made them more aware of when they use electricity. They also commented that the TOU pricing gave them greater control over their electricity costs.

Veridian also provided an opportunity for residential customers to help ease the strain on the provincial grid during periods of peak demand by introducing the **peaksaver**® program that

has proven so successful in other jurisdictions. Over 400 Veridian customers had their central air conditioners equipped with **peaksaver**® load control devices prior to the 2007 air conditioning season. Additional customers were enrolled over the course of the summer, as the Ontario Power Authority's province-wide program was implemented. By the end of the year, almost 900 customers were enrolled in the program.

For commercial and industrial customers, Veridian introduced a separate demand response program. By the end of the year, approximately 456 kilowatts of customer air conditioning and lighting load had been contracted for remote dispatch during periods of supply constraint. In addition, more than 100 kilowatts of dispatchable load displacement generation capacity was in place by the end of 2007. ▶

BY THE NUMBERS

The number of refrigerators and freezers removed in CLD customers' service territories in 2007 was triple the number relinquished in 2005 – the first year in which the Coalition of Large Distributors invested in the program on behalf of its 1.7 million customers. Since the Fridge Bounty program was first introduced, 15,579 refrigerators and freezers have been removed in CLD members' service territories.



VERIDIAN

The power to make your community better.



Building on the strong foundation it laid with distribution system loss reduction investments in Belleville during 2006, Veridian continued to invest third tranche funds in voltage load profile management systems, this time targeting the community of Bowmanville. The \$650,000 project is designed to decrease the amount of electricity naturally lost

during delivery to customers, by dynamically adjusting distribution voltages to optimal levels. This ultimately makes distribution more efficient and reduces costs to all Veridian customers.

The Bowmanville project will target two substations, and implementation will be completed in 2008.

Jackie Hunter and Ross Barnett of Veridian promote conservation at a community event (far left); the Paterson Family from Ajax (2nd from left) and Brian Garrard from Belleville (3rd from left), during the launch of Summer Savings; Veridian President and CEO, Michael Angemeer with Tracy Paterson (above) at the July 2007 program launch.

VERIDIAN CONNECTIONS 2005-2007 **HIGHLIGHTS**

2.8 million dollars
invested in
CDM programs

18.0 million
kilowatt-hours
saved

4,274 tonnes of
CO₂ emissions
diverted

CLD MEMBERS INFORMATION

ENERSOURCE HYDRO MISSISSAUGA distributes electricity to over 180,000 customers in the City of Mississauga. Its parent company, Enersource Corporation, is 90% owned by the City of Mississauga and 10% owned by BPC Energy Corporation ("Borealis"), a subsidiary of the Ontario Municipal Employees Retirement System.

HORIZON UTILITIES CORPORATION is committed to providing best value to its 232,000 customers in Hamilton and St. Catharines through the delivery of a safe, and reliable supply of electricity in a cost-effective manner. The company is 100 per cent owned by Horizon Holdings Inc., which is 78.9 per cent owned by Hamilton Utilities Corporation and 21.1 per cent owned by St. Catharines Hydro Inc. Hamilton Utilities Corporation and St. Catharines Hydro Inc. are respectively owned 100 per cent by the cities of Hamilton and St. Catharines.

HYDRO OTTAWA LIMITED, a wholly owned subsidiary of Hydro Ottawa Holding Inc., is the second largest municipal electricity company in the province. Hydro Ottawa is responsible for the safe, reliable delivery of electricity to more than 285,000 residential and business customers in the City of Ottawa and the village of Casselman.

POWERSTREAM INC. is the third largest local electricity distribution company in Ontario, providing service to more than 237,000 residential and business customers in the municipalities of Aurora, Markham, Richmond Hill and Vaughan. It is an incorporated entity, jointly owned by the City of Vaughan and the Town of Markham.

A wholly owned subsidiary of Toronto Hydro Corporation, **TORONTO HYDRO-ELECTRIC SYSTEM** Limited delivers electricity through a complex network of poles, wires and underground structures to 678,000 customers and distributes approximately 19 per cent of the electricity in the province of Ontario. Toronto Hydro Corporation is owned 100 per cent by the City of Toronto.

VERIDIAN CONNECTIONS INC. safely and reliably delivers electricity to more than 109,000 customers in the Cities of Pickering and Belleville, the Towns of Ajax, Port Hope and Gravenhurst, and the communities of Uxbridge, Bowmanville, Newcastle, Orono, Port Perry, Beaverton, Sunderland and Cannington. Veridian Connections Inc. is a wholly owned subsidiary of Veridian Corporation, jointly owned by the City of Pickering, the Town of Ajax, the Municipality of Clarington and the City of Belleville.



RESULTS

Leaders do more than talk the talk.
They get out there, they make things happen and they take responsibility.

The members of the Coalition of Large Distributors invested time, money and expertise to achieve every single megawatt reduced and every kilowatt-hour saved during the 2005-2007 reporting period.

They didn't do it alone — 1.7 million customers pulled their weight too. But one thing's for sure, change couldn't have happened if the CLD member utilities hadn't taken a leadership role.

RESULTS AT A GLANCE

To reach 527 million kilowatt-hours in energy savings requires a wide range of programs and incentives. Here is a snapshot of the results achieved by CLD member utilities in the 2005-2007 reporting period.

- 1** powerWISE® brand
 - 73 peaksaver®** de load control customers confirmed
 - 242** powerWISE® Business Incentive Program customers approved
 - 757** Community conservation events held
 - 3,274** LED exit signs installed
 - 4,322** Smart thermostats installed
 - 4,390** Energy audits conducted
 - 5,374** Halogen torchières returned
 - 10,250** Electric water heater tune-ups performed
 - 13,088** Watt readers loaned
 - 15,579** Refrigerators and freezers removed
 - 18,168** Air conditioners recycled
 - 35,258 peaksaver®** load control customers confirmed
 - 80,070** Energy efficient appliances installed
 - 133,388** Seasonal incandescent light strings retired
 - 153,637** Summer Savings customer rebates awarded
 - 370,240** Visits to powerWISE® website recorded
 - 992,230** Retail coupons redeemed
 - 1,716,754** Customers served by Coalition of Large Distributors
 - 2,501,977** Compact fluorescent light bulbs provided
 - 7,435,166** Conservation messaging bill inserts distributed
-
- \$72.7 M** Invested in CDM programs by Coalition of Large Distributors
 - 114** Megawatts of peak demand reduced
 - 526,912,217** Kilowatt-hours saved
 - 124,878** Tonnes CO₂ emissions diverted
-

58,546 Homes powered for one year by resulting electricity savings

NOTE: The above chart reflects kilowatt-hours saved by third tranche programs only.

INDUSTRY AWARDS

The Coalition of Large Distributors is proud to have received widespread industry recognition for its CDM efforts during the 2005-2007 reporting period. Following is a list of the awards received to year-end 2007.

Canadian Energy Efficiency Alliance

(Province of Ontario, for 2006 CLD programs)

Canadian Marketing Association – Summer Challenge

(Toronto Hydro, 2006)

Canadian Public Relations Society, ACE Awards, New Product/Service Launch – Summer Challenge

(Toronto Hydro, 2007)

Chartwell Best Practices Award, Marketing

(Toronto Hydro, 2008)

Electricity Distributors Association, Innovations Award PR

(Toronto Hydro, 2006)

Electricity Distributors Association, Local Distribution Company (LDC) Performance Excellence Award

(Hydro Ottawa, 2007)

Green Star Awards – Business Leadership

(Veridian, 2007)

Green Toronto Award – Summer Challenge

(Toronto Hydro, 2007)

International Association of Business Communicators, Ovation Award, Advertising – Busted Campaign

(Toronto Hydro, 2007)

International Association of Business Communicators, Silver Leaf – Summer Challenge

(Toronto Hydro, 2007)

Ontario Clean Air Alliance's Peak Buster Award

(Horizon Utilities, Hydro Ottawa, Veridian, 2007)

Ontario Energy Association – Company of the Year

(Coalition of Large Distributors, 2006)

Ontario Power Authority - Certificate of Recognition for “Don’t Be a Fridge Magnet” refrigerator retirement program

(Horizon Utilities, 2007)

Platt’s Global Energy Award, Energy Efficiency Initiative – *peaksaver*[®]

(Toronto Hydro, 2007)

Utility Automation and Engineering T&D™ Magazine – AMR Project of the Year

(Coalition of Large Distributors, 2007, for smart meter implementation)

Voluntary Blackout Day Challenge - Winner

(City of Hamilton/Horizon Utilities, 2007)

The logo consists of three overlapping semi-circles. The top one is dark blue, the middle one is a lighter blue, and the bottom one is a light purple/pink. They are arranged in a way that they appear to be part of a larger, stylized shape.

COALITION OF LARGE DISTRIBUTORS

Enersource Hydro Mississauga
Horizon Utilities
Hydro Ottawa
PowerStream
Toronto Hydro-Electric System
Veridian Connections