



ONTARIO POWER AUTHORITY



A Progress Report on Electricity Conservation

February 2007

Introduction

The Ontario Power Authority (OPA) was established under the *Electricity Restructuring Act, 2004*, and began operations in January 2005. A not-for-profit corporation without share capital, the OPA is governed by an independent Board of Directors appointed by the Minister of Energy. Its activities and programs are directed by a Chief Executive Officer. It reports to the Ontario Legislative Assembly through the Minister of Energy and is licensed and regulated by the Ontario Energy Board. The overriding guiding principle is to serve and further the interests of Ontario's electricity users.

The OPA's mandate is to ensure an adequate, long-term supply of electricity for Ontario—a critical factor in the province's continued growth and prosperity. In pursuit of this mandate, the OPA is committed to meeting the expectations of all its stakeholders by operating responsibly, prudently and professionally.

The four key areas of focus are:

- building a culture of conservation
- ensuring development of needed generation capacity
- power system planning
- supporting the continued evolution of the electricity sector.

The OPA's core value is to serve the best interests of Ontario's electricity consumers.

In 2006, the OPA's first full year of operation, solid progress was made executing and expanding on plans formulated in 2005, implementing new programs and initiatives and continuing to lay the foundation for the electricity future Ontarians want, need and deserve.

This interim progress report provides highlights of some of the initiatives that the OPA has undertaken for building a culture of conservation.

In addition to this report, progress highlights on generation development initiatives are provided in a separate report available at OPA and on our Web site at

www.powerauthority.on.ca

2006 Conservation and Demand Management

Achievement Highlights

- Launched 10 high-profile electricity conservation and demand management programs, including the successful Hot and Cool Savings Rebates, Every Kilowatt Counts that reached 4.8 million households, a program to improve energy efficiency in social housing units, and a demand response program for industrial customers that contributed almost 200 megawatts to meeting the system peak electricity demand on one of the hottest days of the summer.
- Established several important new partnerships to facilitate the development of an independent network of conservation delivery organizations through new and existing market channels. One such partnership was with the Building Owners and Managers Association of Toronto (BOMA) to provide assistance with energy-efficient building retrofits for their members and others that operate large, multi-tenant commercial buildings.
- Launched several public awareness initiatives in media across the province
- Promoted and supported the recently implemented energy-efficiency improvements in the Ontario Building Code.

Additional information on OPA programs is provided in the following pages of this report and on the OPA web site at www.powerauthority.on.ca.

Conservation Fund

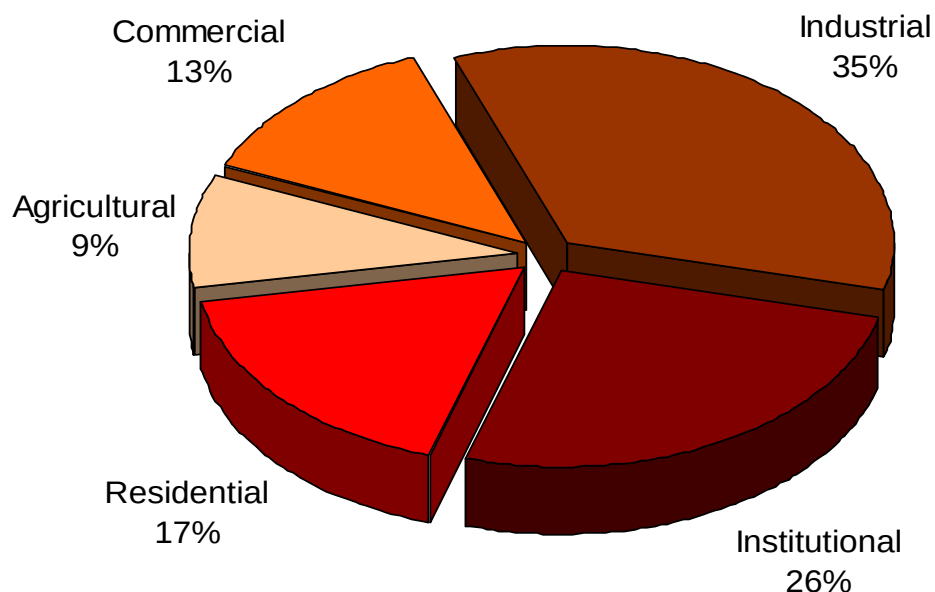
The Conservation Fund was established in 2005 to provide assistance to replicable, sector-specific conservation education and electricity reduction pilot projects that foster the development of a culture of conservation across the many sectors of Ontario's economy.

Three key functions:

- Incubate and test ideas for OPA program development
- Identify marketing/delivery channels
- Build marketplace capacity to undertake CDM.

Funding	Projects
For 2007: \$3M	By end of 2006, 37 projects totalling \$2.5M were approved.

Funding:



Conservation Fund Projects

A sample of the Conservation Fund projects are shown below in four strategic capacity building and replication success categories:

First Nations

- Windfall EcoWorks delivered ~100 audits and TRC positive retrofits in partnership with Hydro One.
- Informing development of OPA First Nations programming. Piloted community a potential leader in new province-wide program.



New Home Construction

- Enerquality Corporation has enrolled 2,500 Energy Star homes representing Ontario's largest builders
- Building capacity amongst homebuilders to meet 2011 OBC requirements



Agriculture and Food Processing

- Wine Council of Ontario developed energy benchmarking and best practices for Ontario Wineries.
- Detailed analysis of production cycle identified significant CDM opportunities
- Benchmarking approach and process analysis easily transferable to other sectors



Forestry

- Ontario Forest Industries Ass'n building capacity amongst Ontario mills for CDM
- Identified significant operational savings through walk through audits and mill suggestions
- Webinars, CDM Help Desk and sharing of best practices will build industry capacity for CDM
- Program easily replicated in other industries; excellent tie ins with DR and OPA programming in development



Conservation and Demand Management Programs

Secondary Refrigerator Retirement Pilot

Goal:

In July 2006, the OPA launched a Secondary Refrigerator Retirement Program to retire and decommission older fridges from single-family dwellings. The pilot program was conducted in six markets and results as shown below were very positive. The program will be extended province-wide in June 2007.



Program Objectives:

- Determine consumer response to various incentives and marketing initiatives to remove second fridge in Barrie, Kingston, St. Catharines, Timmins, Windsor, Mississauga
- Identify program elements and costs required for a province-wide initiative
- Evaluate trial program results and conduct business case for a province-wide roll out.

Results Highlights:

- By the end of the program 49 percent of people in eligible markets knew about the program.
- An estimated 10,000 fridges were retired and decommissioned, representing a savings of 2.72 megawatts
- 40 percent of participants said that, were it not for the program, they would NOT have retired their old refrigerators.
- Consumers responded equally to all incentives that were tested (i.e., cash, gifts, free pick-up only). As a result, no cash incentive or gift will be offered in future.

Every Kilowatt Counts (EKC) Program

Goal:

Educate consumers on the wise use of electricity and provide instant coupon savings on energy-efficient products in major retail chains.



Program Objectives:

- Increase awareness by providing every Ontario household with information on easy-to-do conservation activities within their home.
- Achieve energy and demand savings by providing meaningful incentives to homeowners and tenants to undertake one or more easy-to-do energy savings actions.



Results Highlights:

- By the end of the program in 2006, 39 percent of people in Ontario recognized "Every Kilowatt Counts."
- 80 local distribution companies participated, as did more than 30 major retailers
- 1.6 million EKC coupons were redeemed by up to 24 percent of Ontario households
- In total, the 2006 program will result in lifetime electricity savings of more than 2 million megawatt hours over the eight-year lifetime of the products, which is enough electricity to power about 24,000 Ontario households (a city the size of North Bay) over the same time period.
- Those aware of EKC also exhibited more energy-conscious behaviour in general – turning off lights, using a programmable thermostat and turning up the temperature on their air conditioners.

Home Heating and Cooling Program

Goal:

Generate awareness and educate consumers about energy savings through the use of energy-efficient heating and cooling systems.

Program Objectives:

To encourage Ontario residents to purchase energy-efficient heating and cooling systems when replacing their existing systems by offering attractive rebate offers.

Save Energy AND Money
by Installing an Energy Efficient Furnace

In most Canadian homes, the furnace is one of the largest single consumers of electricity. If the furnace in your home is older than 15 or 20 years, you may be using more electricity and spending more money than necessary. The good news is that most of what's been done to improve energy efficiency in homes is to replace old furnaces with new ones that are significantly more efficient than the ones used in most existing homes. Research has shown that ECMs can reduce electrical consumption in the home by 20 percent (20 kWh) during the heating season and by 14 percent during the cooling season (in homes with central air conditioning).

Our Offer to You

The new Home Heating Program is being offered to Ontario residents with existing furnace. Rebate is available for the installation of a qualified furnace or air handler with a fully variable speed ECM, with a 100% or 100% ECM, and for central air conditioning system with a fully variable speed ECM, with a 100% or 100% ECM.

\$50 REBATE ON ECM EQUIPPED FURNACE/AIR HANDLER INSTALLATION

- Rebate must occur between September 1, 2006 and March 31, 2007.
- Qualifying furnace must be an ECM.
- Claim for furnace rebate must be received by May 1, 2007.

\$75 OFF THE REBATE TOWARDS A NEW INSTALLED PROGRAMMABLE THERMOSTAT

- The rebate will apply to customers who do not currently have a programmable thermostat.
- Rebate must be performed between September 1, 2006 and March 31, 2007.
- Claim for thermostat rebate must be received by May 1, 2007.

\$500 REBATE ON REPLACEMENT OF AN EXISTING CENTRAL AIR CONDITIONING SYSTEM WITH AN ENERGY STAR QUALIFIED SYSTEM

- Installation must occur between September 1, 2006 and March 31, 2007.
- Claim for central AC rebate must be received by May 1, 2007.

How To Claim Your Rebate

To receive a rebate, complete the Claim form on the reverse side.

- ☐ Detach this card and insert in the pre-addressed envelope provided.
- ☐ Enclose the yellow copy of the program checklist in the envelope provided.
- ☐ Enclose a copy of the contractor invoice in the envelope provided.

Conservation Ontario HRAI

1.866.859.9898

Results Highlights:



Rebate	Number rebate submissions
\$50 on central AC tune-up off Energystar CFL 2-pack	9,834
\$75 on programmable thermostat installation	10,895
\$500 on replacement of existing central AC with Energystar system	14,299

Rebate	Number rebate submissions to date (Jan 23)
\$100 ECM installation	3,059
\$75 on programmable thermostat installation	2,160
\$500 on replacement of existing central AC with Energystar system	769

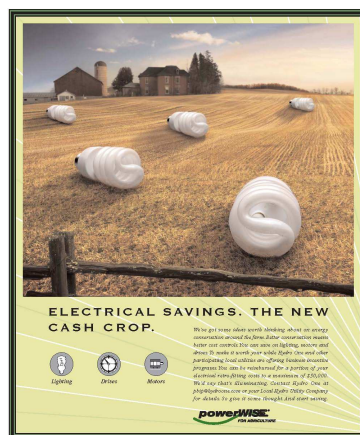
Agricultural Marketing Program

Goal:

To educate farmers on the availability of electricity savings and electricity revenue opportunities by encouraging participation in specific programs.

Program Objectives:

- To encourage business farmers to participate in the business incentive program.
- To inform farmers that:
 - Electricity matters are integral to good land management
 - Electricity savings are available no matter how they farm
 - Electricity has revenue opportunities that can complement their farm income
- To begin a stakeholding process with industry associations and influencers within the agricultural sector
- To develop a newsletter that will consist of “thought leader” information to stimulate editorial articles in the sector, and develop a subscriber base of association leaders, media and business farmers
- To participate in the premier Agricultural Conference “Growing the Margins” to engage directly with business farmers.



Results Highlights:

- Initial feedback from farming associations is very positive.
- Two issues of newsletter have been published.
- Total circulation has reached 300, up 25 percent from initial distribution.
- An additional 1,000 hard copies have been distributed at industry events.

Low Income / Social Housing Program

Social Housing Programs

Goal:

To help low-income Ontarians and social housing providers reduce their energy consumption and demand, consequently saving energy and money



Program Highlights:

- The Ontario Power Authority is investing up to \$9.25 million in energy-efficient lighting and appliances and education programs for social housing in the province.
- Social Housing Services Corporation (SHSC) through its Green Light Initiative is the program implementer
- OPA financial incentives in the form of loan guarantees and interest buy-down (or equivalent grants) to housing providers towards the implementation of their energy management projects
- Development and delivery of an education and outreach program is an integral component of the overall program
- Target: 5,000 housing units
- Duration: March 2006 - December 31, 2007 (for OPA loan guarantee commitments)
- Phase 2 three-year program (2008 to 2010) is expected to be developed later this year.
- The OPA also provides funding to assist SHSC building its capability to manage an energy management program for the sector.

Results Highlights:

- To date, 5,975 housing units are participating.
- Energy savings to date of 1.2 MW

Energy Efficiency Assistance Program for Houses (Pilot)

Goal:

To assist up to 1,400 low-income private households (homeowners and tenants) to reduce their energy consumption and participate in Ontario's energy-efficiency and conservation initiative

Program Highlights:

- Program implementers: Green Communities Canada for 15 communities across Ontario; EnviroCentre for Eastern Ontario (mainly the Ottawa region).
- Launch dates:
 - o EnviroCentre, November 2006.
 - o Green Communities Canada, January 2007.
- Program budget: \$2.9 million
- Program elements: Energy audit and installation of basic and extended energy-efficiency measures at no cost to the program participant
- Program implementers chosen through a competitive bid process conducted in summer 2006.



Results Highlights:

- Expected: EnviroCentre - May 2007, Green Communities Canada – November 2007

The Ontario Power Authority Market Research

The OPA conducted market research to analyze existing consumer attitudes, behaviours and barriers to energy conservation.

The research will establish base-line data that will be used to track changes in consumer attitudes and behaviours over time.

The OPA will build on existing research to ensure that programs delivered to Ontarians are appropriately targeted and use optimal messaging to best influence the audience.

The research results will be shared with stakeholders and program partners in March 2007 to help build market capability.



Key Top Line Results:

1. Half the people in Ontario say that the cost of electricity makes a noticeable impact on their household budget.
2. Current consumer behaviour can be improved: almost 9 in 10 say consumers can make “an important contribution” to reducing overall energy use in the province.
3. However, 3 in 4 also say consumers in general are wasteful users of electricity.
4. Education and awareness programs are seen as effective by more people (4 in 10) than taxes & incentives (1 in 4) or regulations & standards (1 in 4) at getting people to change their behaviour.
5. 94 percent of people said they did something in the past 12 months to reduce consumption of electrical energy in their homes.
6. One in four say they personally are doing all they can, half say they could do a bit more and one in four say they could do a lot more.

Demand Response

Goal:

- To develop the demand response market in Ontario
- Initially, to engage existing demand response capabilities in the Ontario market
Future initiatives will build on this phase with other styles of demand management programs

Results Highlights:

- The Ontario Power Authority's Voluntary Demand Response Program began accepting applications effective June 23, 2006.
- There was an average of approximately 88 MW curtailment during 2006 peak hours with the highest, 181 MW curtailment reached on August 4, 2006.

Development Continues:

- Extensive design activity has been undertaken for two new products, specifically a Contractual Load Shifting product (DR II) and a Contractual Peak Shedding product (DR III).
- A successful introductory webcast on the two new designs was held January 31, 2007 with participation from more than 100 interested parties.