

Markham Energy Conservation Office



MECO Report – Year in Review

Presentation to General Committee – May 28, 2007

Viive Sawler, Manager, MECO



Overview

- MECO established in 2005 with funding support from PowerStream's Conservation and Demand Management Deferral Account
- 6 original programs
 - Cool Shops
 - MECO@Work Employee Awareness
 - Better Buildings Partnership
 - Energy & Environmental Management System (EEMS)
 - Advancing High Performance Buildings
 - Combined Utility Metering Pilot
- New programs added on an on-going basis
 - Seasonal LED (SLED) Exchange
 - Haul Away Your Energy Hog Appliance Retirement Program
 - Energy Conservation Workshops for the Community

Highlights from MECO Report

- Electricity savings to-date mainly from Cool Shops and Appliance Retirement Program
- Various energy savings opportunities currently underway for Town owned assets and street lights as part of the Better Buildings Partnership Program
- MECO@Work events on-going
 - Lunch & Learn's
 - MECO Energy Conservation Open House
 - MECO BBQ
 - Celebrate the Environment – Think Green
 - Watt Reader circulation
 - Energy Conservation Challenge
 - MECO Newsletter

MECO Scorecard

MECO Programs	Quantitative Measures	Units
<i>Cool Shops</i>	# of stores participating # of CFLs installed # of kWh saved # of tonnes of CO ₂ reduced	580 1285 202,500 143
<i>Energy Hog Appliance Retirement</i>	# of appliances collected # of kWh saved # of tonnes of CO ₂ reduced	1321 1,400,000 1006
<i>Better Buildings Partnership (Town Assets)</i>	# of projects completed/underway • Gartner Lee Decision Support Tool • Street Light Evaluation Study • Milliken Mills Community Centre Audit • Installation of Interval Meters at Select Facilities • Load Shedding at Civic Centre – August 2006 • Toaster Replacement in Cafeteria • Parking Garage Lighting Retrofit • LED Parking Lot Pilot • Sustainability Study at Centennial Community Centre	9+ Completed Underway Implementation in 2007 Completed 1,749 kWh 4,000 kWh 25,000 kWh Underway Implementation in 2007
<i>MECO@Work Employee Awareness</i>	# of Watt Readers signed out by staff # of Watt Readers signed out @ Markham libraries # of Lunch & Learn's # of Special Events	50 481 5 3

Project Highlights

Better Buildings Partnership

● Street Lights

■ RTG Street Light Evaluation

- Identify whether select residential & industrial areas are over lit and if feasible to convert to lower wattage bulbs

■ Alternative Technologies Evaluation

- Explore new energy efficient technologies including LEDs, dimmable ballasts, etc.
 - 3 fixture LED pilot in parking lot currently under assessment

■ Street light energy account to be moved to the spot market

- Estimated savings = \$300,000 per year

● Milliken Mills Community Centre

■ Energy Audit in August 2006

- Atmospheric boiler upgrade with condensing boiler and modified heating loop
- Exhaust air heat recovery system for swimming pool
- Drain water heat recovery unit for swimming pool
- Solar water heating system for swimming pool
- Building automation system (BAS)
- Energy efficient lighting retrofit

Project Highlights

Better Buildings Partnership

● Centennial Community Centre

■ Sustainability Study

- Atmospheric boiler upgrade with condensing boiler and modified heating loop
- Exhaust air heat recovery system for swimming pool
- Drain water heat recovery unit for swimming pool
- Solar water heating system for swimming pool

● Parking Garage Retrofit

■ Funded by MESF

- 96 fixtures with four lamp T-8 fluorescents were retrofitted with 2 lamp T-8s and parabolic reflector technology
- Reduced energy consumption by 25,000 kWh or 50%

MECO Plans for 2007

MECO Programs	2007 Plans
<i>Cool Shops</i>	Program to be continued but likely re-branded. Focus will be on energy efficiency opportunities beyond lighting – i.e., HVAC, refrigeration, etc. Some funding incentive \$ available from OPA for implementation.
<i>MECO@Work Employee Awareness</i>	Education and awareness programs for staff to be ramped up and continued. Recently held 4 Energy & Environment Lunch & Learns.
<i>Better Buildings Partnership/EEMS</i>	Focus on implementation of energy savings opportunities at Milliken Mills and Centennial Community Centres as well as evaluating new opportunities on an on-going basis for all Town assets, including street lighting. Also evaluating an opportunity to implement a demand response program at selected facilities where feasible and appropriate.
<i>Energy Conservation Workshops @ MPL</i>	Energy Conservation Workshops held at libraries: May 15 th – Thornhill; May 24 th – Angus Glen; May 30 th – Milliken Mills; June 6 th – Unionville.
<i>FCM-ICLEI Partners for Climate Protection (PCP) Program</i>	Working with Environmental Leadership Staff to move forward on Milestone One, to create a GHG emissions inventory and forecast.
<i>Green Energy Festival</i>	Potential to plan an event that could tie in with Earth Day 2008.