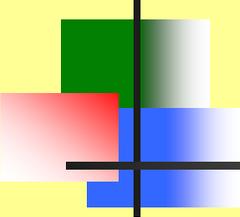


Haul Away Your Energy Hog Appliance Retirement Program

Presentation for General Committee - An Update on Program Results - March 2007

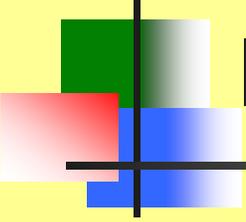
Prepared by: Viive Sawler
Manager, Markham Energy Conservation Office



Program Overview

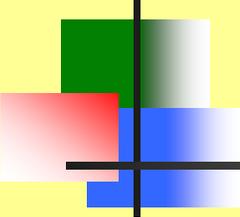
- MECO/MissionGreen partnership with PowerStream
 - Launched: Nov. 6th - Mar. 5th 2007
 - Purpose: to retire old, inefficient refrigerators, freezers and window air conditioners by collecting them from inside peoples' homes
 - Target: 1000 appliances and approximately 1,000,000 kWh of electricity savings
 - Customer benefits: free in-house collection; up to \$150/year in electricity savings; gift bag that included 1 free CFL, fridge magnet and information on energy conservation tips and purchasing energy efficiency products





Process & Logistics

- Appointments were booked through the Contact Centre - curb side collection option was still available in addition to the new in-home collection service
 - Clearly the in-home service was a key driver - 67% of appliances were picked up from inside the home - 33% from the curb
 - While the residents participating in the in-home collection received a gift bag, this was not advertised as an incentive, therefore was not a driver
 - Positive feedback received from residents:
 - *".....Very pleased with the service as the fridge is at least 50 years old (and still works!) but was unable to remove it myself. Thanks for offering the program!" - Town of Markham resident*



Disposal of Appliances

- All appliances (in-home collection and curbside) were taken to the Operations Yard at 555 Miller Avenue:
 - CFC refrigerant removed and destroyed
 - Compressor oil drained
 - Mercury switches removed
 - Appliances crushed on site and sold to a recycler (Town receives approximately \$75/tonne)
 - Recycler shreds material - sends to Hamilton for smelting
 - Unfortunately, there is no market for foam, rigid plastic or glass shelving that may fall out during the crushing process - this ends up in landfill ☹️

Program Results

- 1321 appliances collected
 - 845 fridges
 - 411 freezers
 - 65 window air conditioners
- Saved 1,478,295 kWh
- Reduced CO₂ emissions by 1006 tonnes

HAUL AWAY YOUR ENERGY HOG AND SAVE MONEY

RESULTS TO DATE

Fridges: 845

Freezers: 411

Window Air Conditioners: 65

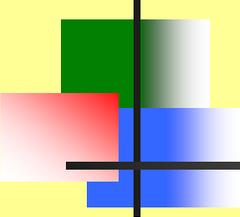
Total Saved: 1,478,295 kWh
= 1006 tonnes of CO₂
emissions reduced



This program is a Mission Green and Markham Energy Conservation Office (MECO) initiative

Call 905-415-7535 to book a collection appointment
www.markham.ca





Program Results – Cont'd

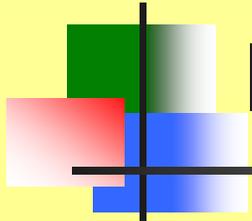
- Average kWh/year for old appliances: fridges - 1200¹, freezers - 900², A/C - 683³
- CO₂ emissions in tonnes - .704 kg/MWh⁴
- GHG savings equivalency calculator - 218 number of passenger vehicles removed from the road per year - <http://www.usctcgateway.net/tool/>

¹ Report by SeeLine Group Inc. - *Technology Assessment Study and TRC Analysis for the Ontario Power Authority, December 2005 for refrigerators and freezers*

² Ibid.

³ Report by Clean Air Foundation - *Keep Cool – Addendum to Final Report 2006 – Emissions Savings and Ozone Depleting Substance Recovery*

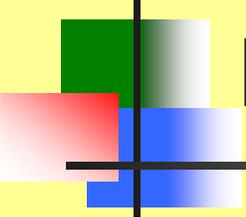
⁴ Bullfrog Power Emissions Calculator - www.bullfrogpower.com/about/faq.cfm#q9a



Program Costs

- Shared between MECO/MissionGreen & PowerStream

ITEM	COST	80/20 Cost Share b/w PS & Town
In-house collection	\$41,388.00	PS
CFL give-aways @ \$2.50/unit	\$1,952.50	PS
Advertising & promotion	\$4,332.18	Town
Additional CFC extraction	\$517.50	Town
Additional crushing/loading	\$5,097.95	Town
TOTAL COST	\$53,288.13	



Next Steps

- Ontario Power Authority planning to launch Province-wide appliance retirement initiative starting June 15, 2007
- OPA will lead program with no formal input or role for municipalities and role for LDCs appears to be limited to local promotion
- OPA will contract 3rd party service providers to collect appliances from inside homes and will transport them to two locations within the Province for thorough decommissioning
- MECO working with PowerStream to see if there is an opportunity to continue our program in the way that it is currently being delivered