

A Resource Redefined

IC&I Sector Confronts Its Landfilling Habits

By Meirav Even-Har

Partners in Project Green are a voluntary collective of interests endorsing the concept of an eco-business zone around Toronto's Pearson International Airport. This effort to build a business community focused on greening its bottom line is managed by the Toronto and Region Conservation Authority (TRCA), and delivers programming to support businesses in reducing energy and resource costs, improving operations and tapping into new opportunities.

The Eco-Business Breakfast series provides networking and educational opportunities like the recent Best Practices in Waste Management forum, which drew about 50 attendees to explore ways to reduce and reuse materials otherwise destined for the institutional, commercial and industrial (IC&I) waste stream. Presentations covered: the Recycling Council of Ontario's 3RCertified™ waste diversion certification program; WCM Public Affairs on waste technologies; Partners in Project Green's Resource Revitalization Program; and Algonquin Power's energy-from-waste product.

According to the U.S. Environmental Protection Agency (EPA) waste and wastewater contributes to 3% of global greenhouse gases (GHGs), but that figure does not include sector-related activities. A closer look at waste management reveals additional GHGs resulting from collection, separation, treatment, transfer and disposal.

A 2010 report from the UN Environmental Programme's Division of Technology, Industry and Economics identifies the waste sector as a significant area for realizing GHG emissions reduction: "...depending on which GHG accounting convention is used, the waste sector is capable of generating a net GHG benefit through waste avoidance, material recovery and energy recovery," it states.

PREVENTION TRUMPS RECOVERY

The report cites activities that generate energy from waste or store carbon in landfill to reduce GHGs, but also affirms prevention as the preferable option.

In that light, Wes Muir of WCM Public Affairs' presentation on emerging waste technologies provided a sobering look at

waste management, based on his previous years in the waste management industry. It's a \$60-billion industry with a rapidly changing business model as companies increasingly demand more materials be diverted from landfill.

Muir noted that 80% of Fortune 100 companies have a commitment to reaching zero waste or zero landfill disposal as part of

their sustainability goals. Yet, in fact, two-thirds of waste to landfill is attributed to the IC&I sector. The residential sector has made far greater strides in reducing and diverting waste.

3RCertified, a waste diversion certification program managed by the Recycling Council of Ontario (RCO), targets the province's IC&I sector. Four properties

REDUCTION AND DIVERSION LEADERS

3RCertified is a voluntary program for the institutional, commercial and industrial (IC&I) sector, recognizing organizations that take a leadership position in waste reduction and diversion. Funded by the Ontario Ministry of the Environment, the program aims to standardize and enhance waste management practices, increase waste reduction and maximize diversion by examining all aspects of waste creation from procurement to materials management policies and practices.

Cloverdale Mall, managed by Bentall Kennedy (Bronze level)

Cloverdale is the first and only retail complex to achieve 3RCertified thus far. It effectively promotes environmental stewardship and waste reduction to all tenants of the mall and its surrounding community. More than 79% of the waste generated at the Mall is diverted from disposal.

135 St. Clair Avenue West, managed by Ontario Ministry of the Environment (Bronze level)

Supported by the Ministry of Infrastructure and CBRE as its facility manager, this is the first tenant certification. Waste per building occupant has been reduced by 25% from 2010-2011 levels. An internal green team acts as the champion of waste reduction and environmental stewardship.

Canada Square, managed by Northam Realty Advisors (Silver level)

At regular intervals, property management staff monitors the program's effectiveness by sorting through all of the solid waste generated in a day's activities. This has yielded impressive results: a diversion rate that exceeds 80% and an even higher capture rate. Almost 85% of building's recyclable material is diverted from disposal.

In October 2011, Recycling Council of Ontario awarded Canada Square a Gold rating for Waste Minimization. Canada Square is also part of Take Back the Light program affiliated with the RCO.

Meadowvale Corporate Centre, managed by Bentall Kennedy (Gold level)

This office complex has a very comprehensive and diversified waste management program. The materials are separated to the highest degree necessary in order to maximize the value of the materials. Contamination of waste is monitored and eliminated through regular training and dedicated cleaning staff. Results include: a reduction in waste per building occupant by 14% since the previous year; a diversion rate of 75%; and more than 98% of all recyclable materials generated at the site are diverted from disposal.

For more information, see the Recycling Council of Ontario web site at www.rco.on.ca

have recently become the first to achieve certification under the program, which is meant to capture a holistic approach to solid waste management from procurement to final disposition of all materials. (See page 8.)

“The criteria are designed based on a Deming cycle of continuous improvement so that all elements of an ideal waste management program are implemented systematically, following a Plan-Do-Check-Act cycle,” explained Jessica Wilkinson, Technical Manager for 3RCertified program. “The scope of the site’s waste management program consists of all of the actions and outcomes that an organization can control and influence in order to prevent and minimize solid waste generation.”

DATA NEEDED, ON-LINE TOOLS IN PLAY

One dilemma is the lack of reliable data by which industry can benchmark its performance. There is no standardized method for gathering data and little of what exists currently has been externally verified.

Waste audits, which are mandated for the sector under Ontario Regulation 102/94, are conducted in a variety of ways. Recognizing the need for a reliable method to conduct waste audits, RCO established Ontario Waste Auditor Training and the soon-to-be-launched Accredited Waste Auditor program.

“Not only is there now a way to ensure that professional waste auditors have the same baseline level of understanding, but waste auditors finally have the ability to prove their competence in their field with an independent verification of skills and knowledge through the accreditation process,” said Wilkinson, who is also the program’s instructor.

In sync with the overarching theme of redefining waste as a resource, Peter Bulionis, Senior Project Manager with Algonquin Power, detailed the company’s energy recovery and delivery process, most notably its steam pipeline to Norampac. The company incinerates approximately 170,000 tons of municipal solid waste (MSW) annually, powering a steam turbine and 9-megawatt generating facility; 70,000 lb/hour of steam is sent to Norampac via an 800-metre pipeline.

Dennis Braun, Project Manager for Partners in Project Green, outlined a new initiative focused on materials recovery. The Resource Revitalization Program will facilitate material exchanges between participating companies. This diverts waste from landfill and provides a source of low or no-cost materials.

Inspired by the Quebec model, Centre for Industrial Ecology Technology Transfer

(CTTEI), materials are exchanged based on detailed categories of desired or unwanted materials via an on-line database. The on-line exchange allows users to find matches (automatically or by browsing the database), matches are validated with the help of program staff, and an exchange is explored through business-to-business negotiations.

Waste management will likely continue to be an area of concern, but also an opportunity. Commitment to prevention

forces businesses to look at procurement choices (material durability for example), while disposal opens up questions about the final destination of recyclables (local vs. international markets), or their final disposition (how is it recycled?). Responsibility factors into reduce, reuse and recycle. ❄

Meirav Even-Har is a Toronto-based sustainability consultant and writer. She is also program manager of the Recycling Council of Ontario’s 3R Certified program.

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