Greening Business Waste-Management Systems from the Bottom-Up

Project Summary

This industrial-institutional sector project will create and test a new model, for **an "organic", bottom-up approach to greening waste management activities in all types of businesses and institutions**.

It will focus on the initial identification of key players at different levels within organizations and their subsequent recruitment into a flexible process of change. This process will address the challenges of:

1. understanding the importance of change;
2. identifying barriers and strategies (including motivation) for effecting change; and.
3. developing cost-effective and convenient tools for both implementation and for on-going evaluation and adaptation.

The project will **begin with an assessment stage**, then move to **the solicitation of organizations for participation** (2018).

Key elements of this model will include:

1. the early recruitment and empowerment of custodial staff, encouraging them to take ownership of the processes developed for their organization;
2. the use of interviews and internal focus groups (and/or "green teams" where they already exist) to identify barriers to participation by employees;
3. obtaining buy-in from management for the bottom-up processes involved (with clear information on financial restraints);
4. assessment of the value of specific behaviour-change tools, such as prompts, mechanisms for changing default behaviours, feedback processes, and inter-company competitions; and,
5. the development by company-specific working groups of an implementation and assessment strategy for each participating organization.

The final stage of the project will include:

1. implementation of the strategies developed;
2. on-going monitoring and assessment;
3. incremental adaptation of the strategies where required; and,
4. identification by participants of other possible areas of greening within each company that could be developed in the future.

A final report will document the process and the results, with the goal of creating process guidelines that can be adopted widely.

Project Description

The project will **pilot and demonstrate a process** by which businesses and institutions can:

1. **reduce, reuse or recycle the waste they generate**, saving energy and associated GHG emissions;
2. **divert organic waste from landfill**, eliminating potential methane emissions and creating the opportunity for soil-carbon sequestration via the application of compost to soil.

The process will begin with the development of educational materials (posters, fact sheets). These will simply and effectively draw the connections between waste and climate change.

The next task, in partnership with DUKE Heights BIA, will be to solicit interest from member companies. Our objective is to reach agreements with 25 to 30 companies, drawn from a range of types and sizes of businesses.

We will then lead a process through which each company can develop a "carbon challenge plan", within which they can adopt a long-term "zero-waste" goal.

The process will be similar at each firm:

- first, we will hold a **kick-off meeting with senior management**, where we set the goals and clearly identify any and all constraints, including financial.
- The **second step will be to meet with custodial staff**, to get their input, allay any concerns, and seek their full buy-in.
- The **next task will be identifying volunteers from among the employees**. We will use existing "green teams" where that makes sense, and/or help organize our volunteers into "carbon challenge (CC) teams". We will offer short, clear, and interactive education and training sessions with these groups. Staff members of our BIA partner will often participate in these activities, which will act as training

sessions -- another goal of the project is to leave the BIA with enough knowledge of the subject matter and process that the organization can carry this forward in the future as a service to their members. Since we expect that businesses know that they will be asked to do more in the near future with regard to waste management, and particularly organic residuals, we do not foresee difficulties in finding participants for our project.

- Next **we will work with CC teams and custodial staff to develop a better waste management system within the facility**. This process could take some time and several meetings, including at least one where the CC team and custodial staff work together. These meetings will also provide an opportunity to get input on behavior change (BC) tools that would work best in each context. We expect that some tools, such as prompts (reminders & info at point of use), feedback and recognition mechanisms (a BIA website where accomplishments will be displayed), and changing the default (e.g., easy to recycle, harder to throw away), will be used in all of the businesses. Others, such as changing social norms and signing pledges, may work in some business cultures more so than in others, and we hope that our process will shed light on these differences.
- The **new systems and BC tools will form a package that we will present to management at the end of 2017-18 fiscal year, complete with costs**.
- The **next fiscal year (2018-19) will be devoted to implementation, monitoring, and assessment** – of both the system itself and effectiveness of the BC tools. Systems of data collection will address the PCC metrics: level of uptake, participation rates, and direct and indirect GHG reductions. The Council has access to good research on the carbon footprints of various materials and the GHG reductions associated with different practices. We will use these to convert raw data into concrete examples that will motivate participants. All employees, including management, will be encouraged to follow the progress of their company and others on the DUKE website. In addition, this website will provide users with the ability to assess their own actions in their homes, by providing easy-to-use calculators for finding their own GHG reductions.
- Finally, we will **be providing on-going assistance to the companies through the first year of the new system.**
- We will also conduct **final waste audits**, to compare the data with the initial audits, and write up the results in **a final comprehensive report**.

Project Objectives

As per the PCC Guidelines, our project will have four objectives.

1. The first is to help Ontarians understand how their actions contribute to climate change. We have built mechanisms for building this understanding into our project from the very beginning, where we will create and disseminate easy-to-understand fact sheets to partners and potential participants, to the middle, where we will offer short, concise, and powerful presentations to our employee volunteers, and from then on throughout the project, via the DUKE website, where data will be turned into visuals and concrete examples.
2. Our second objective is to identify and remove barriers to behaviour change. This will be the entire focus of the bottom-up process we envision. We will learn the barriers from those who experience them and let them help us design ways to remove them.
3. Third, we will motivate participants (in the current project and via future adopters of the process) to make low-carbon choices, specifically through the use of BC tools such as recognition, competition (inter-company only), positive feedback, and the feeling of being empowered, not only as participants in the project, but as designers of the future.
4. Finally, the 4th objective is to evaluate the behaviour-based approaches we will use to achieve greenhouse gas emissions reductions. We will do this by comparing results between companies that use certain tools and those that do not, by conducting interviews of key participants at the end of the project, through the use of surveys, and by analyzing the hard data collected on uptake, participation, waste reduction and diversion rates, and GHG reductions.

Project Rationale:

Our project is viable for several reasons.

1. First, Ontario is on the verge of releasing a new organics action plan, and businesses are very aware that this will impact them in

the near future. They will be motivated to find cost-effective solutions.

2 Second, our focus on waste management is deliberately narrow, so that we can develop the best possible well-defined process for widespread adoption by businesses, almost all of whom generate substantial wastes.

3 Third, despite the narrow focus of the proposal, the process and methods we will be testing and demonstrating have potential for use in the wider area of general sustainability, and we will be tracking ideas generated during this project for possible future implementation in partnership with business entities such as DUKE Heights BIA.

4 Finally, our project is viable because of the combined expertise and experience of the partners -- a pairing perfect for this type of project.

Project Beneficiaries:

The initial beneficiaries will be the 25 to 30 companies that participate in the project. The next level of benefit will go to those among DUKE Heights membership who choose to follow the lead of these participants in the future, under the guidance of the BIA. DUKE is one of the biggest Business Improvement Areas in North America, with 2,500 members and over 30,000 employees. The third level of benefit will go to other business groups and their members, as others adopt similar programs. Finally, the largest group to benefit will be the people of Ontario, who will see over the long-term benefits to the environment and to the economy.

Project Outcomes:

1- At least **25 companies with new waste management systems** that can substantially reduce GHGs;
2- A **website documenting waste/GHG reduction achievements** among businesses, to serve as a model for the province's business associations to adopt;
3- A **demonstrated and documented bottom-up process for achieving significant sustainability goals within business operations**;
4- a **useful evaluation of the effectiveness of several behaviour-change tools**;
5- a **large number of educated and empowered employees/citizens**;
6- **Significant, on-going, documented GHG reductions for Ontario**;

7- **A model plan for business associations wishing to assist their members move forward on sustainability**.

Evaluation Plan/Criteria:

Our project will use a number of evaluation methods:

1 **participation rates** (as measured by survey);
2 **reduction and diversion rates** (as measured by direct observation and actual data; company inventory data and waste audits for reduction; waste management company records and waste audits for diversion);
3 **attitude and behaviour changes** (self-reported in surveys and corroborated by aggregated data);
4 **GHG reduction rates** (calculated from hard reduction and diversion data by means conversion co-efficients drawn from credible research); and,
5 **increase in employee interest levels and knowledge over time** (garnered from on-line usage and comments on website as well as periodic surveys).

Innovation in Project:

Elements of innovation include:

- the bottom-up approach to system design and the use of behaviour change tools. The concept of eliciting changes in behaviour by means of psychological techniques has a dark side -- the idea of controlling people from above with "brainwashing" methods has seen wide depiction in dystopian literature (as well as, unfortunately, in real history). This dark side virtually vanishes when at least some of the people whose behaviour is the target of the methods are complicit in the design of the program. Moreover, being involved in the program development is empowering in itself. It provides motivation to participate.
- Another innovative concept in this project is to specifically target and work close with the custodial staff. At the Council, we have seen good projects, often supported at high levels in organizations, run into trouble because of a lack of support at the level where the rubber hits the road -- the basic operators of the system. There are a number of possible reasons for this phenomenon, but we feel it can be precluded

by reaching out at the very beginning to the people who will make the system flow smoothly, or not.

- Another area of innovation is the idea of having a website devoted to reporting, in a user-friendly, climate-change-relevant manner, the real data arising from the project. Along the same lines, extending the opportunity to assess success to individual employees, with respect to their efforts at home, takes the project potentially in an even more powerful direction.

"This project is funded by proceeds from the Government of Ontario's carbon market, as part of Ontario's Climate Change Action Plan. The action plan and carbon market work together to support innovative initiatives that provide residents and businesses with more choices to reduce greenhouse gas pollution and save money."

For more information, please contact **The Compost Council of Canada** @ **416 535 0240 (1-877-571-GROW(4769))** and **DUKE HEIGHTS Business Improvement Association: info@dukeheights.ca**.