



Partners in Project Green – Building Retrofit & Eco-Efficiency Team

Agenda – Friday, November 20th, 2009 @ 9 a.m.

GTAA Admin Building (3111 Convair Drive, Mississauga)

1. Introductions
2. 2010 Eco-Efficiency Workshops
3. Energy Efficiency Library
4. Best-Practices Map
5. Rooftop Solar Project
6. On-Bill Financing
7. Canada Green Building Council – GoGreen Program
8. Reporting

TO: Members of the Partners in Project Green - Eco-Efficiency & Green Building Team

FROM: Chris Rickett, Senior Project Manager, Partners in Project Green

RE: **2010 WORKSHOPS**

KEY ISSUE

To review and identify 2010 eco-efficiency events for Partners in Project Green.

OVERVIEW

Over the course of 2009, Partners in Project hosted a number of events, including:

- NRCan Food Processor CIPEC Meeting – March 26th, 2009
- Sustainable Energy Plan Workshop – April 23rd, 2009
- Earth Day Tree Planting Event – April 25th, 2009
- Energy Management Workshop for Food Processors – May 13th, 2009
- Partners in Project Green Sustainable Business Tour – June 25th, 2009
- CME Lean Manufacturing Consortium – October 1st, 2009
- Energy Management Workshop for Logistics – October 6th, 2009
- Sustainable Business Networking Event – October 15th, 2009
- Partners in Project Green – Green Roof Tour – October 21st, 2009
- Fall Tree Planting Event – October 24th, 2009
- Partners in Project Green Energy 2009 Tour – November 24th, 2009

Overall these events with both well received and well attended. The feedback received from the energy management workshops, networking session and the sustainable business tours were good.

2010 EVENT OPPORTUNITIES

In 2010, Partners in Project Green plans to build on these successes and continue to offer interesting and engaging opportunities for businesses in the area to learn about sustainability. A final listing of potential events has not yet been determined, but the following is a list of potential events that are being considered:

- ISO 14001 Workshop – a workshop to help businesses develop their own environmental management system. This would be delivered in partnership with Green Enterprise Toronto.
- SME GHG Reduction Strategies Workshop – this workshop will be to assist companies in developing their GHG baselines and reduction strategies.
- AGM and Product Showcase – this will be an all day event with the afternoon being a green product showcase with vendors having the ability to pitch their product, followed by the first Partners in Project Green AGM with a speaker on sustainability during an evening reception.
- Sustainability Tour – building on the success of the spring and fall sustainability tour, there will be two Partners in Project Green Sustainable Business Tours.
- Wal-Mart Supplier Session – a workshop on Wal-Mart's Packaging Scorecard and Sustainability Questions to educate businesses on doing business with Wal-Mart.

- Feed-In-Tariff Workshop – a session to educate businesses on the opportunities from the Green Energy Act.
- The Great Exchange – a facilitated networking session that will provide participants with a forum to re-direct excess inventory or a reusable waste stream, obtain materials used daily at low or no cost, find a partner to reduce employee training costs, and networking with others.
- Tree Planting Event – a spring and fall tree employee tree planting event.

In addition to these events, a number of eco-efficiency workshops will be delivered; however, in addition to input on the above workshops, staff would like input on potential energy and water conservation workshops that could be delivered.

Report prepared by: Chris Rickett, extension 5316

For more information contact: Chris Rickett, extension 5316

Date: November 13th, 2009

TO: Members of the Partners in Project Green - Eco-Efficiency & Green Building Team

FROM: Chris Rickett, Senior Project Manager, Partners in Project Green

RE: VIRTUAL ENERGY EFFICIENCY EQUIPMENT LENDING LIBRARY

KEY ISSUE

Development of a virtual energy efficiency lending library to provide tools and education materials to companies in the Pearson Eco-Business Zone.

RECOMMENDATION

THAT a virtual energy efficiency lending library be developed for the Pearson Eco-Business Zone.

BACKGROUND

The delivery of Partners in Project Green energy management workshops have been successful throughout 2009. However, in order to increase the ability for energy management staff to implement projects, the development of an online lending library for energy management tools could assist in driving energy savings.

OVERVIEW OF LIBRARY

The development of a virtual energy efficiency equipment lending library on the Partners in Project Green website would provide a resource for companies looking to utilize tools that can assist them in quantifying and implementing energy efficiency projects.

In discussions with a number of attendees at Partners in Project Green workshops, the following tools were identified as of interest:

- Power Analyzer to log KWH, KW, KVA, KVAR, PF, etc.
- Temperature/Humidity/pressure loggers
- Light meters and loggers to measure light levels
- Noise/vibration level meters and loggers
- Air Quality Monitors
- Infrared monitors and loggers

Partners in Project Green members would be able to sign-on to the project website, sign-out the required tools, and return them once they had developed their respective projects. In addition to making tools available, the energy efficiency library would also act as a repository for information and tools for energy projects, including spreadsheets and calculators made available by partners.

NEXT STEPS

To better understand the potential interest in the development of a virtual energy efficiency lending library, TRCA staff will undertake a survey of business partners that will determine the types of tools and information that should be made available. Given this input, staff will then work with the Eco-Efficiency Team to identify resources to build the virtual energy efficiency lending library.

Report prepared by: Chris Rickett, extension 5316
For more information contact: Chris Rickett, extension 5316
Date: November 13th, 2009

TO: Members of the Partners in Project Green - Eco-Efficiency & Green Building Team

FROM: Chris Rickett, Senior Project Manager, Partners in Project Green

RE: SUSTAINABLE BUSINESS BEST PRACTICES DATABASE MAP

KEY ISSUE

Provide update on the Partners in Project Green Sustainable Business Best Practices Database map.

BACKGROUND

At the April 8th, 2009 meeting of the Eco-Efficiency Team there was an interest in developing a repository of sustainability best practices so that members could learn about what their neighbours in the Pearson Eco-Business Zone were doing.

In order to satisfy this wish, TRCA staff worked with their web designer to develop an interactive map of the Pearson Eco-Business Zone that would highlight what companies in the area were doing when it came to sustainability.

DATABASE DEVELOPMENT

In order to provide a structure for the database, categories and sub-categories were developed to classify the sustainability initiatives that were being implemented by businesses in the area, the following is the structure of those classifications:

- Energy Efficiency
 - Lighting
 - Building Automation
 - Process Integration
 - Monitoring and Targeting
 - Energy Management Program
 - Retrofit General
- By-Product Synergies
 - Waste Reutilization
 - Waste-to-Energy
- Climate Change Mitigation
 - GHG Reduction Strategy
 - Offsetting
- Community Engagement
 - Peer-to-Peer Learning
 - Charitable Giving
 - Community Clean-Up/Tree Planting
- Green Building
 - LEED Certified Buildings
 - BOMA Best
 - Green Retrofits
 - EcoRoofs
 - Other
- Green Energy

- Bullfrog Powered
 - Solar PV
 - Geo-Thermal
 - District Energy
 - Bio-fuels
- Green Procurement
 - Green Products
 - Green Purchasing Blocks
 - Greening Your Supply Chain
- Low-Impact Site Development
 - Landscape Naturalization
 - Stormwater Management
 - Green Parking Lot
- Waste Reduction
 - Waste Reduction
 - Recycling
 - Toxic Reduction
- Water
 - Potable Water
 - Waste Water
 - Water Reutilization
 - Compressors
- Transportation
 - Employee Commuting
 - Fleet Efficiency
- Corporate Governance
 - Environmental Management System
 - Corporate Sustainability
 - Other
- Employee Engagement
 - Green Teams
 - Education

The database has been developed and will launch on the Partners in Project Green website in the coming weeks (www.partnersinprojectgreen.com). Case studies from partners, including Enbridge, Hydro One Brampton, Natural Resources Canada and the Region of Peel, along with case studies developed by Partners in Project Green, have been entered into the database. At current count, there are over 75 best practices within the database and another 50 plus case studies are in various stages of development.

It is intended that this database will grow continuously as Partners in Project Green becomes increasingly more aware of the sustainability initiatives being implemented by businesses in the area and as partners, such as Enbridge and the local distribution companies, look to highlight the companies that have utilized their programs. In addition to TRCA staff entering information into the database, the re-launched Partners in Project Green website will also allow companies themselves enter their best-practices into the database. This means that if, for instance, GTAA implements an energy management project, they can log into the site and update their profile to highlight this latest project.

The following is an overview of what the interface for the best practices database looks like:

Figure 1 – Front-End Sustainable Best Practices Database

Environmental Best Practice Database

Admin - go to [Company Manager](#) to add new program

The Partners in Project Green Pearson Eco-Business Zone features a wide-array of progressive companies that have realized that where there is an environmental issue, there is an economic opportunity.

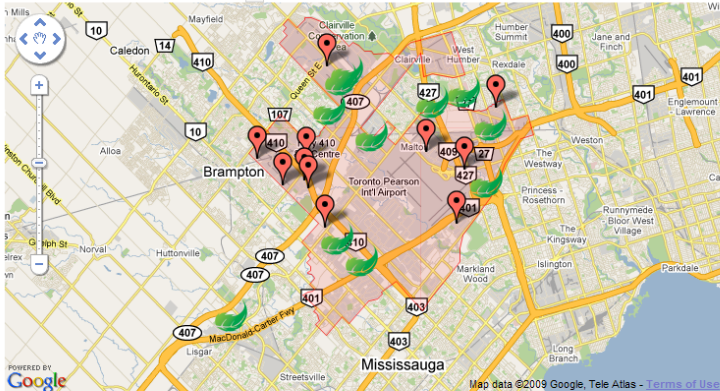
Partners in Project Green has an ongoing mandate to collect and share environmental best practices being deployed within the Pearson Eco-Business Zone.

Please search the live database to learn more about what companies are doing to improve their financial and environmental performance. To see the case studies, select using the drop-down boxes below.

By priority area: Energy Efficiency and/or company type:






Select one

Partners in Project Green ambassador
 Partners in Project Green partners



[Members Login](#)

Hi crickett,
Log out

© GTAA Partners in Project Green. All rights reserved.

Figure 2 – Example Case Study

Home
Background
Eco-Business Defined
Solutions
Resources
News & Events
Contact

Environmental Best Practice Database - Case Study

Lange Transportation

Location	3965 Nashua Dr, Mississauga, ON, L4V 1P3
Industry	Transportation, Distribution and Warehousing > Truck Transportation
Best Practice	Green Energy > Geo-Thermal
Description	<p>When it comes to greening the bottom-line, Eric Lange, President of Lange, knows where to look, from embracing energy efficiency, installing renewable energy and engaging his employees in sustainability, Lange has become a leader in eco-business.</p> <p>When Lange moved into a 30-year old, 70,000 sq. ft. building in Mississauga, the natural gas bill was \$5,600 a month. To lower these costs, Lange installed a geothermal system, that utilizes the constant temperature of the Earth to heat and cool their building.</p> <p>The process consisted of burying pipes that allowed heat to be transferred between the Earth and the building – heat is brought up to the surface in the winter and pumped back underground during the summer, allowing for both heating and cooling of the building.</p> <p>At Lange, the process was complicated by the size of the site – instead of being able to do all of the piping horizontally (which is cheaper), Lange had to drill 28 holes 360 feet into the ground, raising the price of the installation to \$560,000.</p> <p>However, for the next 20 years, Lange will no longer receive a natural gas bill and has reduced its carbon emissions by 158,000 tonnes.</p> <p>Download the full case study here.</p>
Return on investment	Payback Period (years) 6 years.
Company Quote	<p>"We've taken a number of very serious steps to reduce, reuse and recycle at Lange Transportation including installing the first retrofitted geothermal heating and air conditioning system on a 70,000 square foot building and office complex. Basically what that means is that we took a 30-year old building and proved that you can achieve immediate savings by totally reducing the need for fossil fuels to heat and air condition."</p> <p style="text-align: right; font-style: italic;">Eric Lange, President</p>

[Members Login](#)



Username

Password

Remember Me

Login

[Forgot your password?](#)
[Forgot your username?](#)
[Create an account](#)

Members of the Eco-Efficiency Team and Green Building Team are encouraged to share their best practices with TRCA so they can be entered into the database.

Report prepared by: Chris Rickett, extension 5316

For more information contact: Chris Rickett, extension 5316

Date: November 13th, 2009

TO: Members of the Partners in Project Green - Eco-Efficiency & Green Building Team

FROM: Chris Rickett, Senior Project Manager, Partners in Project Green

RE: PARTNERS IN PROJECT GREEN ROOFTOP SOLAR MARKET PUSH PROGRAM

KEY ISSUE

Provide an on the Partners in Project Green Rooftop Solar Market Push Program to the respective teams and gather their input on the project.

BACKGROUND

In order to achieve Partner's in Project Green's goal of sourcing 10% of energy required in the Pearson Eco-Business Zone from renewables by 2015, new modes of energy generation need to be explored. To that end, TRCA identified rooftop solar projects as a possible avenue for partner companies. It has been noted that there are barriers to rooftop solar implementation and in order to achieve project goals, it is advisable that data be gathered pertaining to these barriers, as well as their solutions, before proceeding.

To assist in identifying and addressing these issues, TRCA issued a request for proposals (RFP) for a report to identify and provide recommended solutions to drive greater adoption of rooftop solar on buildings in the Pearson Eco-business Zone. The RFP outlined the following work:

- Rooftop Solar Research - conduct research on local, national and international case studies of rooftop solar installations, review and report on rooftop leases, review and report on the related legislation and policy frameworks in the municipalities, Province of Ontario and Government of Canada.
- Interviews – through one-on-one interviews, identify relevant individuals from the following stakeholders - tenants, owners, practitioners, utilities, sector associations, and governments (municipal and provincial) to identify the core issues and barriers that limit the implementation of roof top solar projects, including technological understanding, building suitability, land-use policies, regulatory, capital and leasing requirements, financing, insurance and access issues, as well as any others identified through the interviews.
- Draft Report – develop a draft report that highlights the results of the focus group interviews that includes, but is not limited to, the issues and barriers that impede the installations of rooftop solar projects, and provide recommendations to address those barriers, including, but not limited to, required marketing and communications materials, agreement and leasing templates, policy/regulatory changes, technological specifications, and other requirements identified through the consultation process.
- Stakeholder Workshop – utilizing the rooftop solar research and case studies, along with the draft report of recommendations, develop and host a stakeholder workshop with no more than fifty (50) key stakeholders from the five stakeholder areas identified. The purposed of the stakeholder workshop is to highlight the possibilities of roof top solar gleaned from the background research and to ground truth the recommendations with stakeholders. TRCA will provide the facility and send invitations, but the consultant selected will be responsible for preparing, facilitating and reporting on the workshop.

- Final Report – Based on the input received at the stakeholder workshop, finalize the report and its recommendations for implementation by TRCA and its partners.

CURRENT STATUS

The proponent selected to complete the work was Zizzo Climate Law. They are currently undertaking the work and are completing the research and interview phase of the project. A draft report is expected in early December, with the workshop to take place in January 2010 with everything being finalized by early February 2010.

Zizzo Climate Law will be present at the November 20th, 2009 meeting to provide an overview of their findings thus far and will be looking for input from the Eco-Efficiency and Green Building Teams.

Report prepared by: Chris Rickett, extension 5316

For more information contact: Chris Rickett, extension 5316

Date: November 13th, 2009

TO: Members of the Partners in Project Green - Eco-Efficiency & Green Building Team

FROM: Chris Rickett, Senior Project Manager, Partners in Project Green

RE: ENERGY EFFICIENCY FINANCING

KEY ISSUE

Investigation of the development of a revolving loan and/or on-bill financing mechanism for energy efficiency projects in the Pearson Eco-Business Zone.

BACKGROUND

Through discussions with some Partners in Project Green companies and partners, the issue of financing has been discovered as an issue to the implementation of energy efficiency projects. This has either been the result of internal competition for capital or projects that do not meet internal hurdle rates. In order to better understand the issue, TRCA has had limited discussions with some of its partners to further scope the need and identify potential financing solutions to help companies implement their energy efficiency projects.

EXISTING PROGRAMMING

It is recognized that all of the utilities through their conservation programming offer financial incentives for energy efficiency projects; however, what the development of a financing program recognizes is that not all businesses can identify the financing to cover the remainder of the purchase price for their chosen energy efficiency projects. This slows down implementation or cancels it outright. The development of a financing mechanism to assist in these situations is one way to speed up the implementation of energy conservation measures.

Enersource Hydro Mississauga, has an existing financing program. The program allows businesses to apply for an on-the-bill payment plan that provides a company with the financing for their energy efficiency projects and then allows repayment through the hydro bill, essentially allowing the capital project to be operationalized. The program involves Enersource reviewing the proposed energy efficiency projects and then connecting the client with Citicapital, who then reviews and approves the financing. Repayment then takes place through the month hydro bill on term of either 36, 48 or 60 months.

In addition to this program, there is the Canada Small Business Financing Program. The program is open to businesses with gross revenues of \$5 million or less and will provide up to \$500,000 for numerous projects, including energy efficiency and building improvements. This financing is accessed through a company's existing financial institution and a portion of the loan is guaranteed by the federal government in order to bring down the interest rate paid by the company. This program is helpful for small businesses, but would not help the majority of manufacturers in the Pearson Eco-Business Zone.

Another option available to companies is energy performance contracting. Partners in Project Green has been working with the Clinton Climate Initiative and has access to their best practices for energy performance contractors and list of their approved providers. Under energy performance contracting, a business partners with an energy performance contractor to undertake energy efficiency retrofits, the contractor finances the projects and, the savings are used to pay back the financing. Partners in Project Green has been promoting the use of

energy performance contracting, but at this point the market has been resistant due to past experiences.

PEARSON ECO-BUSINESS ZONE MARKET

To better understand the number of businesses that may be interested in an energy efficiency financing program, TRCA staff characterized the market within the Pearson Eco-Business Zone. While there are over 12,500 businesses operating within the Pearson Eco-Business Zone, there are 3,869 within the manufacturing and logistics/warehouse sectors in the Pearson Eco-Business Zone. Table 1 provides an overview of the number of companies and their respective size by employees. The table provides a good analysis of the typology of businesses in the area, indicating that over 92 per cent of operations have 100 or less employees.

Table 1 – Sector Employment Ranges

Employment ranges	Manufacturing	Transportation & Logistics
0-10	1943	704
11-50	426	144
51-100	265	94
101-500	199	77
>500	11	6
Total # of records	2844	1025

Judging a business solely by the number of employees though is misleading, so to better understand the amount of economic activity within these sectors, Table 2 highlights the revenues of these companies.

Table 2 – Revenue Levels

Revenue Level	# Businesses
# Businesses With < \$5M Revenue	0
# Businesses With > \$5M Revenue	881
# Businesses With > \$10M Revenue	257
# Businesses With > \$20M Revenue	27
# Businesses With > \$30M Revenue	23
# Businesses With > \$40M Revenue	0
Total	1,188

Revenues for all of the companies within these sectors were not available and only 200 of them had revenue data associated with their operations. In order to develop this breakdown, estimates were developed utilizing either employee size comparisons to those with data, or facility size as comparisons to those with data. This allowed for 1,188 records to be developed with revenue data estimations. The R2 value for the employment data was .48 and for the building size was .27, which highlights that these are very rough estimates at best.

Despite these rough estimations we can draw a number of preliminary conclusions from the data, including:

- There are a large number of small businesses operating with the Pearson Eco-Business Zone; and,

- A potentially large portion of the businesses have in excess of \$5M in revenue.

Given these findings, within the manufacturing and logistics/warehouse sectors, the Canada Small Business Financing Program would not be an option for most operations. This means that unless a company can finance the energy efficiency project itself, could qualify for Enersource Hydro Mississauga's on-the-bill financing program, or was interested in energy performance contracting, an energy conservation project could go unimplemented due to limited financing options.

OPTIONS FOR PARTNERS IN PROJECT GREEN

A number of options are available for Partners in Project Green, including promoting the existing financing mechanisms available, working with its utility partners to expand on-the-bill financing, or developing its own revolving loan fund to assist companies in financing their projects. The first two options are felt by TRCA staff to be the most ideal use of existing resources.

NEXT STEPS

In order to better understand the potential and interest in financing programs, TRCA staff plan to undertake the following steps:

1. Undertake further discussions with Enersource Hydro Mississauga to learn more about how their program operates, its level of success and other issues of consideration.
2. Undertake further discussion with other utility partners to gauge their interest in developing similar on-the-bill financing mechanisms.
3. Further segment the market within the Pearson Eco-Business Zone to identify sectors, types of owners and square footage.
4. Consult with utility partners to identify types and size of energy efficiency projects being implemented.
5. Consult with energy performance contractors on the types of retrofit projects they've done in the commercial and industrial building sector to determine how these were financed and the types of projects.
6. Consult the business community in the Pearson Eco-Business Zone to identify a number of issues, including:
 - Knowledge of existing energy efficiency financing options;
 - Interest in potential energy efficiency financing options;
 - Identification of past or existing projects that have not been implemented due to financing issues;
 - Identify from landlords and tenants current financing rates and structures (i.e. term loans, mortgage refinancing, lines of credit, equipment leases, etc.); and,
 - Energy efficiency projects of most interest (lighting, HVAC or holistic projects).

Following the completion of these next steps, a report on how to proceed will be brought back to the Eco-Efficiency Team and Green Building Retrofit Team for further input and consultation.

Report prepared by: Chris Rickett, extension 5316

For more information contact: Chris Rickett, extension 5316

Date: November 16th, 2009

TO: Members of the Partners in Project Green - Eco-Efficiency & Green Building Team

FROM: Chris Rickett, Senior Project Manager, Partners in Project Green

RE: PEARSON ECO-BUSINESS ZONE 2009 REPORT

KEY ISSUE

Identify timelines, process and marketing of partner 2009 eco-efficiency achievements in the Pearson Eco-Business Zone.

BACKGROUND

At the April 8th, 2009 meeting of the Eco-Efficiency Team, partners agreed that it would be advantageous to all of the partners to aggregate the results of their various programs together into a report that could highlight the number of eco-efficiency projects and resulting savings realized by companies in the Pearson Eco-Business Zone.

Within the Eco-Efficiency Team's Terms of Reference, the following reporting outline is provided:

- Eco-Efficiency Team members, depending on their programming and services, will aggregate the following information annually for the businesses within the Pearson Eco-Business Zone:
 - Number of businesses engaged
 - Quantity of electricity savings
 - Quantity of natural gas savings
 - Quantity of potable water savings
 - Quantity of environment/waste savings
 - Quantity of greenhouse gas reductions
 - Estimated dollar value of investments
- Data will be provided to Partners in Project Green in aggregate form with no personal information.

TRCA staff will begin working on the Partners in Project Green Annual Report in January of 2010 for an April 2010 release. The intent would be to gather the aggregated data highlighted above and include this in the report. The results of these eco-efficiency measures would then be released at a public event in April 2010 that would recognize the contributions of the various partners in assisting companies in the Pearson Eco-Business Zone.

NEXT STEPS

In order to start quantifying and collecting this data, TRCA staff will be contacting all Eco-Efficiency Team partners to establish how this data can be collected. A deadline for submission of the data is proposed to be the end of February 2010 for inclusion in the Partners in Project Green Annual Report.

Report prepared by: Chris Rickett, extension 5316

For more information contact: Chris Rickett, extension 5316

Date: November 13th, 2009