GTAA
PARTNERS IN
PROJECT GREEN
A PEARSON ECO-BUSINESS ZONE

SME Energy Management Consortium

Project Overview and Application Form

October 2019

GTAA PARTNERS IN PROJECT GREEN A PEARSON ECO-BUSINESS ZONE

EXCELLENCE IN MANUFACTURING CONSORTIUM

Toronto and Region Conservation Authority

PROJECT OVERVIEW

Purpose of the Project

The SME Energy Management Consortium will support ten (10) SME manufacturers in the Toronto region accelerating along the path of kick-starting Strategic Energy Management (SEM) practices within their organizations. The project is designed based on the following opportunities:

- **SMEs have limited time and resources** to dedicate to energy management, yet many have significant opportunity to reduce product input costs and improve business operations once they effectively embed energy management into day-to-day operations.
- **Class B customers** face a distinct set of challenges when it comes to mitigating energy bills.
- New **energy monitoring equipment and software** platforms are making it easier than ever to map and track energy use in a facility, identify where waste can be cost-effectively stemmed and ensure persistence of savings over time.
- Improving **energy literacy** across divisions of an organization will boost the effectiveness of tracked energy data and engage the organization broadly on identifying areas for improvement.
- Energy savings need to be understood in a **holistic** context, whereby financial savings costs are not the sole benefit. Co-benefits – such as reduced input costs (water, materials/ingredients, labour), EH&S improvements, reduced downtime – often make energy projects more feasible than they did at first glance.

The project is co-led by two long-standing not-for-profit organizations working to engage businesses on energy efficiency, Partners in Project Green (an initiative of Toronto and Region Conservation Authority) and Excellence in Manufacturing Consortium. This project was made possible through the financial support of the Independent Electricity System Operator (IESO).

Eligible Participants

- Manufacturers that employ **less than 500 people**, inclusive of a parent company and/or subsidiaries.
- Own-operate at least one **Class B** facility located within the Regional Municipalities of **Peel, Durham or York or in the City of Toronto.**
- Are willing to volunteer one **Energy Champion** at the Executive-level and one Energy Champion from Operations (Production, Facilities, EH&S, Engineering, etc).
- Are willing to **share successes** achieved from the program in some capacity with the wider business community.

Terms and Definitions
How is a "manufacturer" defined? The definition for manufacturer follows the NAICS Canada 2012 31-33-Manufacturing definition also used by Statistics Canada.
What is a Class B customer? Is a facility that is classified by the electricity utility as: 1) Under 1MW 2) An industrial facility less than MW, greater than 500kW and has ***not*** opted-in to participate in the Industrial Conservation Initiative program 3) Under 500kW and above 50kW
What is an Energy Champion? Individuals within an organization that volunteer or are selected to facilitate change on how energy management is perceived and executed. These champions (one executive, one operations) will work together to design a management system within the organization that allocate accountability and gather insight from employees broadly on where and how to save energy. They will propose, build the business case and oversee savings projects that get approved.
What is Strategic Energy Management? "Strategic Energy Management can be defined simply as taking a holistic approach to managing energy use in order to continuously improve energy performance, by achieving persistent energy and cost savings over the long term. It focuses on business practice change from senior management through shop floor staff, affecting organizational culture to reduce energy waste and improve energy intensity. SEM emphasizes equipping and enabling plant management and staff to impact energy consumption through behavioral and operational change. While SEM does not emphasize a technical or project centric approach, SEM principles and objectives may support capital project implementation." - *Consortium for Energy Efficiency℠ Strategic Energy Management Minimum Elements*

How the Project Will Work:

Starting in Q1 2020 until 2021, the participating businesses will receive a suite of resources and services, including tools, advisory support, peer-to-peer networking opportunities and financial assistance. These elements to support the project will be delivered in tandem as a means of guiding participants effectively to establish Strategic Energy Management best practices that can persist far into the future, embedded in regular business practices.

Support for your implementation of SEM practices will be provided in **two elements**:

Project Element #1 - Access to the SME Consortium Group		
Type of Support	***What You Get***	***What is Required***
Tools, Guidelines and Templates	At the start of the program, each participant will receive a package to support SEM implementation, including: • *Draft commitment letter for SEM goals and a reporting-implementation-reassessment framework* • *Energy mapping template* • *Strategies for setting Key Performance Indicators (KPIs), baselines, targets and Measurement and Verification (M&V)* • *Metering gap analysis, corresponding to KPI tracking and reporting goals* • *Tips for energy dashboard and report development* • *Energy management assessment tool* • *Energy project register* • *Employee engagement strategies*	Commitment from the top levels of the organization to: 1) Set, frame and communicate energy policy and goals 2) Ensure the SEM initiatives are properly resourced 3) Some form of communications related to successes lessons-learned from the project directed at the wider business community (e.g. development of a case study, recognition in a publication, contribution or results to aggregated/anonymized report, etc) In-kind resources, estimated to be around 5% of an FTE annually, distributed across all employees involved in the project Annual contribution to the project of $1,500 (X2 years), a total of $3,000 Development of a final M&V report identifying savings achieved and lessons-learned from the project.
One-on-one support from project leads (PPG and EMC)	As needed, representatives from the project co-leads (PPG and EMC) will be on-hand to answer questions and facilitate progress toward implementing SEM goals.	
Access to a series of events to network with peers in similar roles at similar-sized organizations, to share knowledge and best practices on tackling similar challenges implementing SEM	Six (6) sessions annually (for 2 years), inclusive of: Two (2) sessions For Executive Energy Champions, topics covered could include: • *Establishing Efficiency KPIs* • *Marketing Energy Performance* • *Energy Efficiency and Plant Digitization* • *IoT, AI and Analytics-Driven Energy Performance* Four (4) sessions For Operations Energy Champions: • *Energy Monitoring System Procurement* • *Energy Management Communication and Engagement* • *Finding the Co-Benefits, Presenting the Holistic ROI* • *Operational Efficiencies of Various Subsystems (low hanging fruit, low/no-cost savings)*	
Access to a series of industry events focused on relevant topics	Three (3) free tickets annually to industry events on relevant topics (for 2 years), topics covered could include: • *Energy Monitoring Equipment and Energy Data Management Services* • *Energy Data Engagement Strategies* • *Renewables* • *Demand response and energy storage* • *Advanced energy data analytics* • *Alternative energy project financing*	
Assistance from engineering students (optional)	As needed, representatives from the project co-leads (PPG and EMC) will help coordinating with local academic institutions for support from engineering and technology students and faculty.	

Project Element #2 - Financial Assistance for Establishing Energy Management Best Practices		
Type of Support	***What You Get***	***What is Required***
Financial Support for Energy Data Monitoring Equipment and Energy Data Management Advisory Services	Up to $15,000 reimbursement for expenses for energy monitoring equipment and contracted services related to energy data management (see eligible/ineligible expenses section below for more detail).	In-kind resources for employee time dedicated to the procurement of an energy monitoring system or other eligible contracted services. Execution of Agreement with TRCA for disbursement of funds.

Eligible Expenses for Financial Assistance

- Project-specific materials, equipment and products and professional, engineering, technical, management and advisory services, including:
    - Capital expenditures for energy data monitoring equipment and installation (permanent systems intended to be left in place)
    - Professional services for energy data management practices to optimize energy data in business operations
- Equipment and products, including energy management information systems, and associated software
- Costs associated with the monitoring, verification and evaluation of the project's impact, including data collection, processing, analysis and management.

Ineligible Expenses for Financial Assistance

- Equipment, installation or professional services unrelated to energy data management
- Costs for which funding was received from another government source.
- Activities completed or costs incurred before the funding is approved or after the project is completed.
- Subscription, rental, leasing or ongoing licensing fees.
- Hospitality, travel costs, incidental or food expenses for the project team or personal devices (e.g. personal mobile or landline phones, laptops or internet service provider fees, etc.)
- Any overhead costs generated by the applicant or third parties, such as operating costs related to general maintenance and repair.
- Budget deficits
- Costs associated with the purchase of real estate.
- Any costs not directly related to the achievement of the projects objectives as defined in the Contribution Agreement between the TRCA and the applicant.

How to Get Involved:

The project only has capacity for ten (10) participant businesses. Therefore, participants will be selected by a committee of representatives from third-party organizations and agencies.

If you are an eligible business that would like to apply to participate, complete the below Application Form and submit via email with the title "*Application for SME Consortium – [organization name*]" to **admin@partnersinprojectgreen.com**. We will consider applications on a first-come first-served basis until capacity has been reached.

Contact Information:

For further inquiries, please contact either of the project leads at any time for the duration of the application period.

Nathaniel Magder, Program Manager
Partners in Project Green, Toronto and Region Conservation Authority (TRCA)
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This project was made possible through the financial support of the Independent Electricity System Operator (IESO).

APPLICATION FORM

General Information

1. Legal Name of Organization

2. Head Office Address

3. Market segment

4. Overview of operations (types of products manufactured, number of lines, number of shifts, days/week, percentage of employees in production and percentage in office, facility size, etc)

Mandatory Criteria

Answers in this section are required to be completed for the application to be considered.

5. Is your organization a manufacturing company with at least one facility located in the Municipalities of Peel, York or Durham or the City of Toronto?

   ◯ Yes
   ◯ No

   Enter eligible facility address(es):

6. Does your organization employ less than 500 employees (globally, inclusive of parent company and affiliate subsidiaries)

   ◯ Yes
   ◯ No

   Enter approximate number of employees:

7. Are you a Class B electricity rate-paying customer and have not opted-in to participant in the Industrial Conservation Initiative program? (see above for definition of Class B customer)

   ◯ Yes
   ◯ No

8. Will your organization be willing to share some element of the project's lessons-learned with the wider business community? (for example: news release, an article in a trade magazine, presentations, social media/website, hosting an open house)

   ◯ Yes
   ◯ No

9. Is budget available for $1,500/year for each of the two years of to participate in the Consortium?

   ◯ Yes
   ◯ No

Merit Criteria

Answers in this section will contribute to a scored weighting criteria that increases your chances of being selected. Answers in this section are not mandatory, however unanswered sections will receive zero points in the scoring criteria. Please answer to the best of your knowledge. For the longer text fields, 1-3 paragraphs is the suggested response length.

10. Do you track your electricity, gas and water usage on a monthly basis?

    ◯ Yes
    ◯ No

11. What is your approximate organizational spend on utilities (electricity, natural gas, water) annually?

    ◯ Under $100k
    ◯ Between $100k-*$200k*
    ◯ *Between $200k-$300k*
    ◯ *Between $300k-$400k*
    ◯ *Between $400k-$500k*
    ◯ *Above $500k*

12. What is your approximate facility-wide consumption annually for the following utilities:

    Electricity use (kWh/year): _____
    Electricity cost ($/year): _____
    Natural gas use (m3/year): _____
    Natural gas cost (m3/year): _____
    Water use (m3/year): _____
    Water cost ($/year): _____
    Wastewater (m3/year): _____
    Wastewater cost ($/year): _____
    Sewer surcharge cost ($/year): _____

13. What are the largest users of energy and water waste in your facility?

14. Have you ever undertaken energy management initiatives?

    ◯ Yes
    ◯ No

    If yes, please describe
    Examples: lighting upgrades, air compressor efficiency audits, installing VFDs, optimizing shut-off procedures, etc

15. Have you ever taken advantage of rebates or incentives for energy management?

- ○ Yes
- ○ No

If yes, please list
Examples: IESO Save On Energy, Enbridge DSM, NRCAN EMIS, etc

16. Do you have an energy monitoring system installed?

- ○ Yes
- ○ No

17. Do you have an energy team?
Energy Team: employees who meet regularly to identify sources and solutions to energy waste

- ○ Yes
- ○ No

If yes, what departments are represented?

18. Describe any energy management strategies or projects currently underway or planned for the near future?

19. Is there currently funding available in your budget for energy management?
Examples: energy monitoring, retrofits, employee time, etc

- ○ Yes
- ○ No

20. What is your organization's typical payback expectations?
    Can be in terms of time, results or other metrics

21. Please identify any production KPI metrics?
    Examples: unit cost, production cost, maintenance cost, downtime, scrap quantity, energy consumed per unit produced, etc

22. Please identify any industry benchmarks you use to compare performance against industry averages
    Examples: cost of goods sold, return on sales, inventory turnover, repairs and maintenance, etc

23. Please identify any management systems or accreditation programs you adhere to
    Examples: ISO, Energy Star, Lean Six Sigma, etc

24. What type of plant digitization projects have you recently undertaken or are planned within the timeline of the project (2020-2021)?
Examples: ERM, shop floor monitoring, QA/QI sensors, predictive maintenance, etc

25. Do you anticipate any relevant business impacts through energy management and how have you quantified these?
Examples: reduced business risk, job creation or retention, increased sales and revenue, increased profitability

26. Are you a member of a BIA or similar network where you could communicate the project lessons-learned and your company's successes?

- ☐ A local Board of Trade or Chamber of Commerce
- ☐ A local Business Improvement Area (BIA)
- ☐ Partners in Project Green
- ☐ Excellence in Manufacturing Consortium
- ☐ Canadian Manufacturing and Exporters
- ☐ Association of Energy Engineers

Additional organizations you are a member of:

27. Are you in need of or would consider support from a post-secondary student?

- ◯ Yes
- ◯ No

Signatures

Two signatures are required for submission of this application, one from the representative expected to take the role of Operations Energy Champion and one from the Executive Energy Champion.

Executive Energy Champion

_____
Signature

_____
Name and Title (printed)

_____
Date

I have authority to bind the organization:

Operations Energy Champion

_____
Signature

_____
Name and Title (printed)

_____
Date