

## **BRIEFING FORM**

**SUBMITTED TO:** Environment and Sustainability Standing Committee

**DIRECTOR'S APPROVAL:**



**DATE OF MEETING:** November 3, 2011

**SUBJECT:** **Project in Industry/Dalhousie Department of Industrial Engineering**

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### **ORIGIN**

This reports originates from the Project Development of Solar City.

### **BACKGROUND**

For over forty years, companies in Nova Scotia have helped shape the careers of Industrial Engineering students through their participation in the Project in Industry program. They have also gained important advantages for themselves. Many projects have had significant impact on the host company either through immediate cost savings in system operations or in the design of efficient new systems that lead to improved corporate performance.

Local industry partners provide projects that challenge and develop the skills of these young engineers. Projects can involve many aspects of the manufacturing or service industries, to improve productivity, quality, throughput, health and safety, and economics. Designs can include, among others, factory and office layouts, workstations, work methods, manufacturing systems, transportation systems, plant location, production and inventory control systems, maintenance systems, scheduling systems and information systems.

The student engineers work in teams of two and are assigned a client project early in September. Although a faculty member is assigned to each team as an advisor, the students are responsible for all aspects of the project, including problem definition, project direction and project management. Senior students have no scheduled classes on Wednesdays, allowing them

time to visit their client for an entire business day each week; however, they are also expected to spend many more hours each week working on their projects. Projects must be completed in March, as the final project report is due in early April.

These projects are extremely low cost for the participating organizations (they are expected to pay direct costs such as photocopying, phone, fax, and travel where necessary). Access is provided to the full range of university equipment and facilities, at no cost. There are no professional fees for either the students or the professors who will be actively involved in the project.

In addition to a design project being carried out to the highest standards of Industrial Engineering practices, participating organizations have the satisfaction of contributing to the educational experience of some of Canada's brightest young engineers.

## **DISCUSSION**

Halifax Regional Municipality submitted the following project related to the development of the Solar City, for consideration in the program:

### **The Student Project:**

A requirement of this project is a metering solution. The solution must provide information required to meet the following needs (at minimum):

1. Simple performance for Homeowner to know whether installation is working and benchmark with neighbours;
2. Measurement for HRM to ensure installations are meeting performance expectations and be able to assess success of project; and
3. Measurement for different funding stakeholders (i.e. NRCan, Efficiency NS, etc.) to prove the value of their project investment.

### **The Challenge:**

Designing a cost effective metering solution that achieves the information needs stated.

Two students, Mo Kbeili and Mark Staples, have accepted this project. Staff is encouraging these students to attend and participate in as much Solar City project development work as possible to help with their hands-on experience.

The intent of this report is to advise committee of this partnership and resource.

## **ALTERNATIVES AND ASSOCIATED RISKS**

None identified

**IMPACT/BENEFITS:**

Low cost engineering advice.

**COMMUNICATION ISSUES/OPPORTUNITIES:**

None identified

**ATTACHMENTS:**

None

**KEY STAFF CONTACT:** Richard MacLellan / Julian Boyle, Office of Energy and Environment