

Dollars to \$ense Energy Management Workshops



Since 1997, over 30,000 representatives of industrial, commercial and institutional (ICI) organizations from across Canada have enrolled in the **Dollars to \$ense** energy management (EM) workshops. In 2016, **Natural Resources Canada (NRCan)** has expanded and completely remodeled and updated the D2\$ training material, before selecting **CIET as the sole licensee for delivering the Workshops** across the country. The new version of D2\$ is thus not what you attended 5 or 15 years ago; there's a lot more to it now! The material from the previous six standard workshops is now presented in **30 modules**, which can easily be **used as building blocks** for organizations that have limited resources or that wish to focus on specific topics.

- **Module 1 – Strategic Energy Management (2.5 hrs):** This module explains the benefits of energy management using a strategic approach.
- **Module 2 – Management Systems for Energy (3 hrs):** This module describes the benefits of an Energy Management System (EnMS), the key elements of ISO 50001, as well as the tools and resources that are available.
- **Module 3 – Benchmarking with Portfolio Manager (2.5 hrs):** This module explores the principles of energy performance benchmarking, introduces the key features of Portfolio Manager, and demonstrates the value of benchmarking in building a business case for energy management.
- **Module 4 – Behaviour Change (2.5 hrs):** This module explains the importance of behaviour change as a tool in energy management within an organization, and describes a systematic approach to achieving behaviour change.
- **Module 5 – Financial Analysis of Energy Savings (3 hrs):** This module identifies and explains key terms for financial analysis of energy savings, describes the inputs and outputs of a cash flow analysis, and describes the methods of a basic financial analysis.
- **Module 6 – Business Case for Energy Savings (2 hrs):** This module evaluates an organization's project selection decision making process, provides an approach to create a business case, and identifies key elements of an effective energy project "pitch" to a financial decision maker.
- **Module 7 – Alternative Financing Approaches (2 hrs):** This module provides various financing methods used to fund energy projects, such as Energy Performance Contracting and the role of Energy Service Companies.
- **Module 8 – Energy Fundamentals (2.5 hrs):** This module describes the basic principles of energy, how to manipulate units of measure and helps to understand power and energy terms.
- **Module 9 – Energy Rates (2 hrs):** This module describes the different charges that apply to energy consumption and demand, and explains the incremental cost of electricity and thermal energy.

Dollars to \$ense Workshops in Numbers

2 languages

6 standard workshops

15 years of delivery

29 accredited trainers across
Canada

Logistics

CEUs: 0.7/day

CSEP Points: 2/day

Locations: Can be offered anywhere.

Partners: In Ontario, this program is eligible to the IESO's Training Incentive covering up to 50% of the fees. Visit the [saveONenergy](http://saveONenergy.com) website for more details.



Dollars to \$ense Energy

Management Workshops

- **Module 10 – Seven Steps to Saving Energy (2.5 hrs):** This module describes a principles-based methodology to spot energy savings opportunities and to apply the 7 steps to determine the order of implementation of opportunities.
- **Module 11 – Tools for Energy Audits (2 hrs):** This module lists and describes the various tools that support an energy audit and how to use these tools to help identify opportunities for energy reduction.
- **Module 12 – Energy Saving Calculations (3 hrs):** This module explains the importance of various tools used when calculating energy savings and how to apply them.
- **Module 13 – Motors, Fans, Pumps Savings & VSDs (3 hrs):** This module describes a method to assess savings opportunities in motor driven systems, identifies common opportunities and the savings calculation required for speed control.
- **Module 14 – Heating System Savings (2.5 hrs):** This module describes the basics of combustion and different types of boilers, how to maximize the efficiency of a condensing boiler, and identifies improvement opportunities and best practices for optimum performance
- **Module 15 – Cooling Systems Savings (2.5 hrs):** This module describes the key components of mechanical cooling and refrigeration systems, how the systems operate, and how to identify energy saving opportunities for cooling systems.
- **Module 16 – Lighting System Savings (3 hrs):** This module explains lighting systems terminology, describes the various components of an effective lighting system and how they interact, and identifies conservation and efficiency.
- **Module 17 – Building Envelope Savings (2.5 hrs):** This module describes the mechanisms for heat loss through building envelope, identifies tools and methods to assess opportunities for improvements, and describes building envelope energy savings opportunities.
- **Module 18 – Compressed Air (2.5 hrs):** This module describes the high cost of compressed air compared to other systems, and identifies saving opportunities in compressed air systems.
- **Module 19 – Heat Recovery (2.5 hrs):** This module describes the various types of heat recovery and how heat recovery can be a saving opportunity.
- **Module 20 – Renewable Energy (2.5 hrs):** This module identifies where renewable energy is appropriate, the major sources of renewable energy (RE), and the tools used to estimate savings potential for RE systems.
- **Module 21 – RCx Basics (2 hrs):** This module describes what makes RCx a unique activity, explains the operational and business benefits of RCx, and describes common RCx opportunities.

Lead Trainers



Robert Greenwald



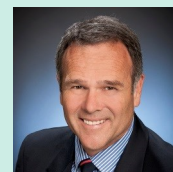
Brian O'Donnell



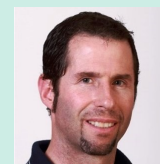
Stephen Dixon



Sebastiano DePani



Dale Robertson



Ian Ball



Garth White

... as well as 23 other accredited
trainers from BC to NS!

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workshop.

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Dollars to \$ense Energy

Management Workshops

- **Module 22 – RCx Process (2.5 hrs):** This module describes the RCx process, criteria for selecting suitable buildings, describes how to initiate and manage an effective RCx project, and the key activities required for persistence savings.
- **Module 23 – HVAC Control System Basics and Opportunities (3 hrs):** This module describes the basic components and actions of a building control system, how to reduce waste and maximize efficiency through building system control strategies, and identifies ways to obtain effective equipment maintenance using input from your building control system.
- **Module 24 – Fundamentals of Energy Monitoring (2.5 hrs):** This module describes the benefits and key functions of monitoring, describes performance analysis techniques and monitoring as part of an Energy Management Information System (EMIS).
- **Module 25 – Analytical Tools for Energy Monitoring (3 hrs):** This module explores the relationship between energy and driving influences using various analytical tools, describes the steps in the development of a simple energy performance model, and identifies easily accessible analytical tools for performance analysis.
- **Module 26 – Monitoring and Verification of Savings (2.5 hrs):** This module describes how to apply the principles of monitoring to the measurement and verification (M&V) of project savings, and describes M&V methods.
- **Module 27 – Sub-Metering (2 hrs):** This module identifies the potential benefits of sub-metering to verify, control and reduce costs, and describes various meter types, cost and application considerations.
- **Module 28 – EMIS Fundamentals (2 hrs):** This module describes the basic principles of an Energy Management Information System (EMIS), its main elements and requirements for a successful EMIS implementation.
- **Module 29 – EMIS Audit (2 hrs):** This module explains the steps to conduct an Energy Management Information Systems (EMIS) audit, explains the organizational gap analysis, the allocation of Energy Account Centres, the source of savings from an EMIS and the basis for costing the EMIS.
- **Module 30 – EMIS Implementation and Case Studies (2 hrs):** This module provides an overview of the implementation stage of an Energy Management Information System (EMIS), and provides case studies that demonstrate results through EMIS systems.

Who should attend?

- Accountant/controllers
- Building managers
- Contractors/consultants in energy management
- Control technicians and building automation supervisors
- Directors/chiefs of engineering
- Electrical/mechanical tradespeople
- Energy champions/energy managers
- Energy service providers
- Facility managers
- Financial operations managers
- Maintenance managers/supervisors
- Operations and maintenance staff
- Plant/process engineers/managers
- Property/facility management firms
- Senior managers and executives



30 Modules that Can Be Adapted to Meet your Training Needs:

The complete *Dollars to \$ense* training material covered in the six standard workshops is divided into 30 individual training modules for easy reorganization or adaptation to your organization's training needs. This allows us to provide you with exactly the training your team, members or clients need!



Please contact

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