MAY 27, 2025

Expanded Energy Management Program (EEM)

How to participate?

- Register your organization: saveonenergy.ca/EEM
- Contact us at SEM@ieso.ca

Once you have contacted us, a knowledgeable energy coach will schedule a free assessment call with you to discuss how the program can meet your specific needs.

Background on Expanded Energy Management Program

- The IESO's Save on Energy (SoE), with financial support from Natural Resources Canada (NRCan) as part of its Green Industrial Facilities and Manufacturing Program (GIFMP), has expanded its Strategic Energy Management (SEM) program offering

- GIFMP aims to maximize energy performance, greenhouse gas emissions reductions and competitiveness for industry in Canada, by leveraging collaborative opportunities and supporting initiatives that focus on energy efficiency and energy management solutions

Expanded Energy Management Program Overview

- The Expanded Energy Management Program (EEM) provides support for **industrial** facilities in Ontario to improve their energy performance with energy savings opportunities in four areas:
- Energy practitioners training
- Energy manager support
- Expanded Strategic Energy Management cohorts & curriculum
- Energy management systems

Energy Manager Support

The initiative supports hiring and retaining of certified energy managers. Energy managers identify energy saving opportunities, build an energy-savings culture, and implement energy management systems.

- Funding limit: up to **$100,000** per facility per year
- Until **June 30th, 2025** those organizations who join the program will be eligible to apply the Energy Manager funding to an existing employee, without the requirement of an incremental hire.
- This offering has been provided to support industrial organizations mitigate the impact of US tariffs on their energy management activities.

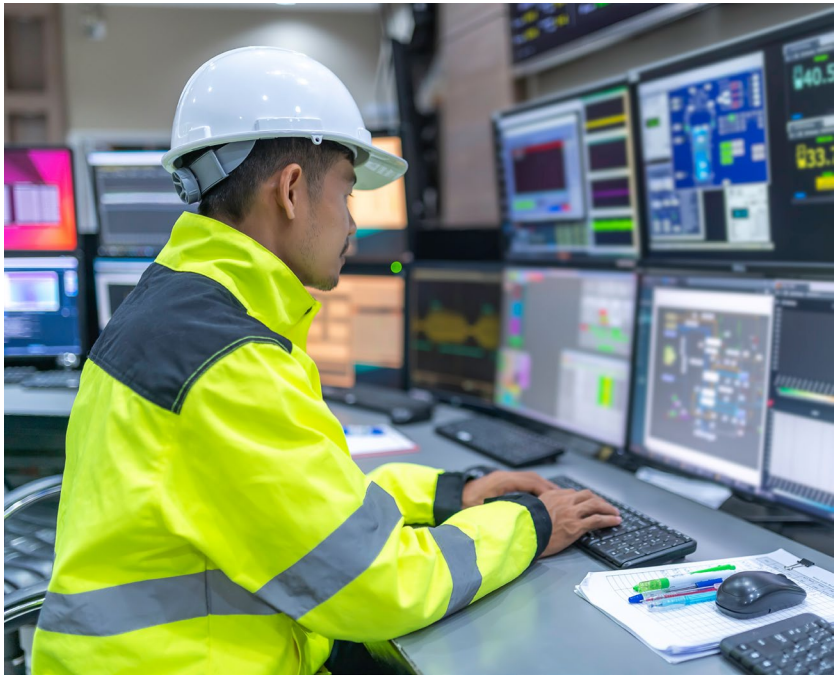
Strategic Energy Management (SEM) Overview

- The initiative supports single industrial facilities or cohorts to develop and implement SEM activities that embed energy & GHG emissions management through a combination of education, coaching, peer-to-peer knowledge sharing & technical support
- Current SOE SEM curriculum has been expanded to include savings from all fuel sources
- Performance incentives up to $100,000 per year, and earned enabling incentives up to $5000

Energy Practitioners Training

- This initiative offers **free** training to organizations and energy practitioners on the following:
- Expanded Energy Management Program offerings, processes and requirements
- Energy Management Information System (EMIS)
    - i. What EMIS is right for your facility
    - ii. How to get the most from your EMIS
- Sustaining operational energy savings

Energy Management Information Systems (EMIS)



- Industrial facilities with an annual baseline energy consumption of less than or equal to 400,000 GJ are eligible to receive $50,000
- Industrial facilities with an annual baseline energy consumption of greater than 400,000 GJ are eligible to receive $250,000, up to 50% of the eligible project costs, for the installation of an EMIS.

SEM Drives Results

"Magna's reputation for world-class manufacturing is built around a strong commitment to continuous improvement.

The implementation of Strategic Energy Management best practices has played a critical role in helping us achieve ongoing energy and cost reductions across our facilities."

Senka Donches

Manager of Energy Efficiencies

Magna International

27 MAY 2025

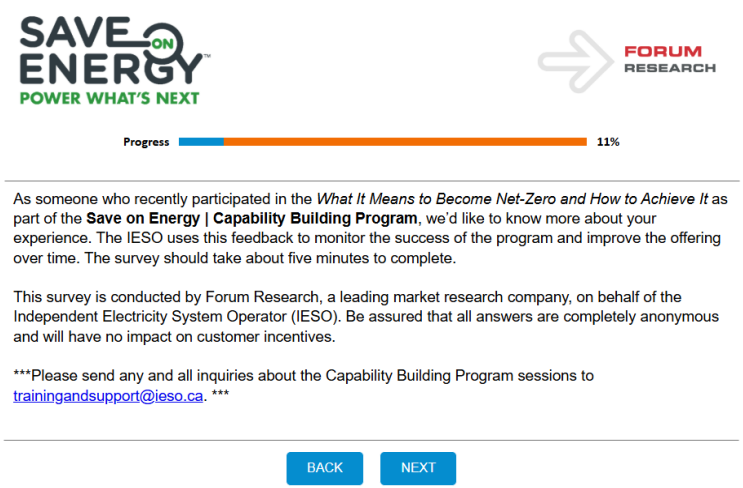
Selecting the right EMIS for your needs

Jay Mullin
Energy Management Coach

ieso
Connecting Today.
Powering Tomorrow.

SAVE ON ENERGY
POWER WHAT'S NEXT

Upcoming survey: We want your feedback!



- Check your email! A survey is coming your way soon.
- Why? Help us improve our training programs.
- Who? Conducted by Forum Research on behalf of the IESO.
- Time? Takes only 5 minutes to complete.
- Confidentiality: Your responses are anonymous and won't impact participation or incentives.

The survey will be sent from:
surveyinfo@forumresearch.com

Follow along in the Participant Workbook!

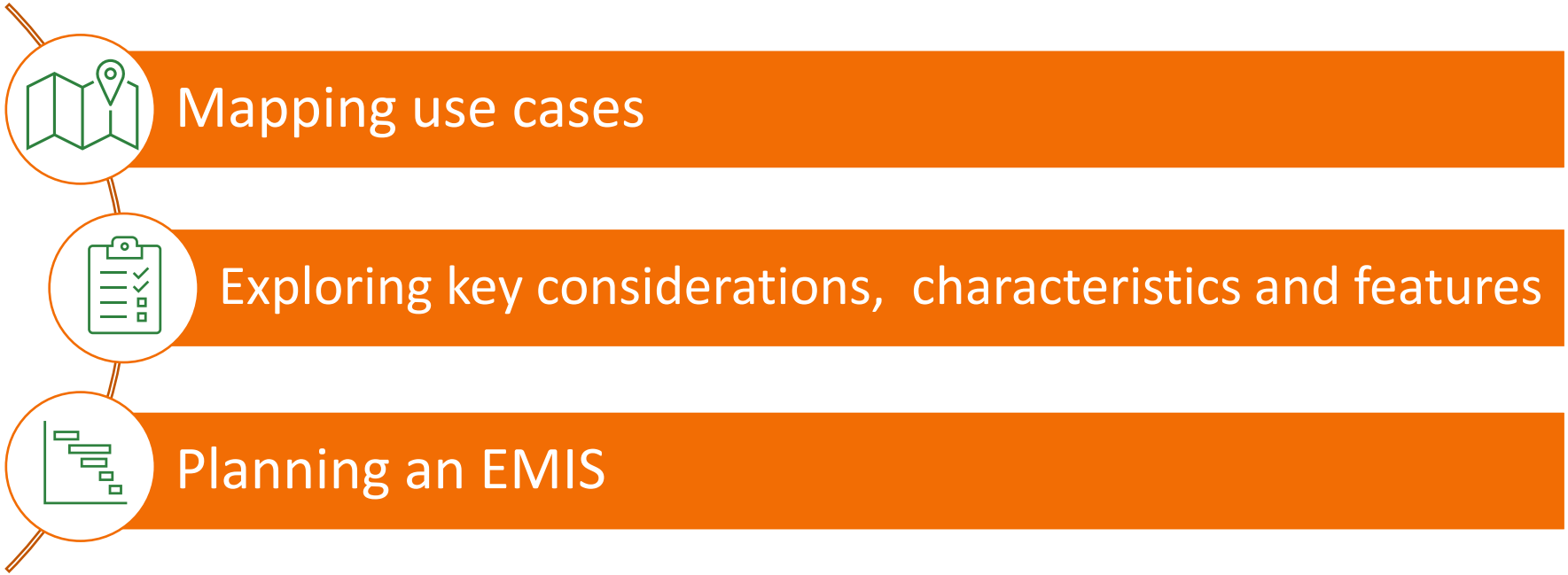
Have the workbook open or printed out

Where to find the workbook:

- Click the link in the chat
- Download a copy to your computer
- Open and follow along

Watch for this icon to help follow along

Define, identify, and plan an appropriate EMIS



What is an EMIS?

What is an EMIS? Cont'd

Combination of hardware and software.

- Meters and sensors
- Data infrastructure
- Servers or cloud storage
- Software platform

What are the benefits of using an EMIS?

- Reduce energy consumption and GHG emissions
- Reduce utility costs
- Improve operational performance
- Improve decision making

EMIS use cases -1

2

Reduce energy consumption and costs

- Monitor energy consumption trends.
- Understand how energy use relates to operations.
- Identify opportunities to reduce energy waste.

In your participant workbook

Relevance

☆ ☆ ☆ ☆

EMIS use cases -2

Benchmark performance

- Compare energy performance between pieces of equipment.
- Compare energy performance over time.
- Establish control bands.

In your participant workbook

Relevance

☆ ☆ ☆ ☆

EMIS use cases -3

2

Improve decision-making

- Prioritize opportunities.
- Forecast energy consumption and costs.
- Support the business case for energy improvements.

In your participant workbook

Relevance

☆ ☆ ☆ ☆

EMIS use cases -4

2

Allocate energy-related GHG emissions and costs

- Measure energy consumption.
- Breakdown of energy use and costs be department or product.
- Monitor and verify carbon emissions.

In your participant workbook

Relevance

☆ ☆ ☆ ☆

EMIS use cases -5

Influence behaviour

- Reinforce standard operating procedures.
- Shut down equipment outside operating hours.
- Respond to demand response events.

In your participant workbook

Relevance

☆ ☆ ☆ ☆

EMIS use cases -6

2

Support preventative maintenance

- Provide and analyze energy data.
- Identify potential equipment faults.
- Detect performance degradation.

In your participant workbook

Relevance

☆ ☆ ☆ ☆

Types of EMIS: Basic

- Manual or basic automation for data entry
- Utility meters or some submetering
- Limited analysis capabilities

Example

- Facility energy consumption download from utility portal to Excel spreadsheet
- Data downloaded from data loggers to a spreadsheet, Power BI, or simple dashboard.

Types of EMIS: Advanced

- Automated data collection and analysis.
- Can support multiple sites.
- Integrates with other systems.

Example

- A large industrial manufacturing plant would implement an advanced EMIS to integrate energy data with process control systems to understand and optimize energy consumption based on complex operational parameters.

Types of EMIS: Real-time

- Real-time data collection and analysis.
- Can support multiple sites.
- Integration with supervisory control and data acquisition (SCADA) and process control systems.

Example

- Allows immediate comparison against dynamic targets based on operational parameters.
- It enables the timely detection and action required to address energy performance issues

Types of EMIS

Type of EMIS	Data Entry	Data Frequency	Site Scope	Integration Capabilities
Basic	Manual or automated	Daily to monthly	Single site	Simple analysis and reporting
Advanced	Automated	Daily to hourly	Single or multiple sites	Can integrate with other systems
Real-time	Real-time	Real-time	Single or multiple sites	Integration with SCADA and process control systems

Level of EMIS required

EMIS use cases	Basic	Advanced	Real-time
Reduce energy consumption and costs	☑	☑	☑
Benchmark performance	☑	☑	☑
Improve decision-making	☑	☑	☑
Allocate energy-related GHG emissions and costs	☐	☑	☑
Influence behaviour	☐	☐	☑
Support preventative maintenance	☐	☐	☑

EMIS key considerations

Key considerations - Data sources

Decisions to be made

- What will be metered?
- What meters are already in place?
- What meters (and specifications) will be needed?
- What other data sources should be captured?

Who to involve

- ❑ Engineering and instrumentation personnel
- ❑ Operations personnel
- ❑ IT department
- ❑ Department managers

Key considerations - Data integration and flexibility

4

Decisions to be made

- Can it integrate with existing metering and systems?
- Can it grow to accommodate new data sources?
- Will it be able to meet changing needs?

Who to involve

- ❑ IT department
- ❑ Engineering personnel
- ❑ Operations Management
- ❑ Management

Key Considerations - Data capture

Decisions to be made

- How will data be collected from meters?
- Will the data connections be wired or wireless?
- Is new network infrastructure required?

Who to involve

- ❑ IT department
- ❑ Instrument and Electrical Technicians
- ❑ Engineering personnel

Key Considerations - Reporting and analytics

Decisions to be made

- Can it analyse real-time data and historical trends?
- Can it meet all reporting needs, including regulatory?
- Can it create custom dashboards or reports?
- Can it provide notifications of certain events?

Who to involve

- ❑ Managers, Operators, and Engineers
- ❑ IT department
- ❑ Energy and Environmental Managers
- ❑ Executives

Key Considerations - Ease of Use

Decisions to be made

- How easy is it to create custom reporting?
- Is it easy for different departments to get and understand the desired insights?
- How difficult is it to train and get people using it?

Who to involve

- ❑ Operations personnel
- ❑ Operations management
- ❑ Engineering
- ❑ Executives
- ❑ Accounts
- ❑ Planning and scheduling

Key Considerations - Security and data privacy

4

Decisions to be made

- Will data be stored on-site or in the cloud?
- Does it comply with security requirements?
- Can it meet uptime requirements?

Who to involve

- ❑ IT department
- ❑ Legal and Compliance departments
- ❑ Senior Management

Key Considerations - Vendor support and reputation

Decisions to be made

- Is there a track record on similar projects?
- Is there adequate support, troubleshooting, updates, and system monitoring?
- Is there a plan to adapt to emerging technology?

Who to involve

- ❑ The project team
- ❑ Procurement department
- ❑ IT department
- ❑ Senior management

Key Considerations - Costs

Decisions to be made

- What are the initial costs?
- What are costs for training and support with implementation?
- What are ongoing maintenance and support costs?

Who to involve

- ❑ Finance and Accounting departments
- ❑ Procurement department
- ❑ Project management
- ❑ Senior management

Case study: manufacturing facility

5

Goals

- Reduce energy consumption and costs.
- Allocate energy costs and GHG emissions to specific customers.
- Improve preventative maintenance practices to reduce downtime.

Priorities

- Collect reliable, frequent data across a large and crowded facility.
- Integrate energy data with relevant process and production data.
- Communicate actionable insights to many different audiences.

Thinking about your own EMIS project

5

Rate each of these key considerations from 1 to 5 on a scale of importance in general for an organization implementing an EMIS, where:

1 = Not Important

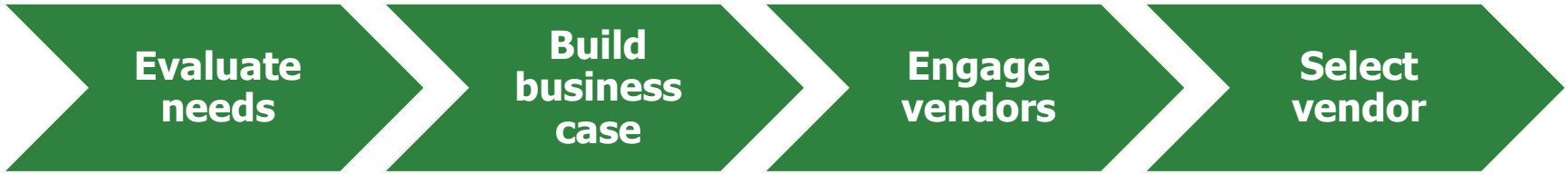
2 = Slightly Important

3 = Moderately Important

4 = Important

5 = Critical

Process to planning an EMIS



Evaluate needs

- Define the purpose of the EMIS
- Understand how it will integrate into current organizational management
- Demonstrate how this is relevant to organizational needs
- Define energy account centres
- Assess current and desired metering, data capture, data analysis and data reporting

Build the business case

- Develop consensus
- Aspired use cases
- Inventory of equipment
- Operating conditions

Identify and engage vendors

- Identify potential vendors
- List of your organizations approved vendors
- Contact prospective vendors
- Request a demonstration
- Share identified information gaps with prospective vendor

Evaluate and select a vendor

- Defining the Criteria
- Technical features and characteristics
- Non-technical requirements
- Assign relative weighting
- Define minimum hurdle scores
- Multiple assessors
- Deciding on the vendor
- Lowest cost / best value

EMIS funding is available!

The Expanded Energy Management Program from Save on Energy provides **up to $250,000** for the installation of an energy management information system

Stay connected with tools and resources

- Virtual one-on-one coaching: post-webinar support intake form for tailored support for organizations to manage energy resources effectively
- Monthly bulletin: sign up to receive monthly training updates on all Save on Energy training and support new tools and resources
- Live training calendar: visit this page to easily register for upcoming events and workshops
- Training and support webpage: visit this page to access all training and support materials

Thank you!

SaveOnEnergy.ca/Training-and-Support

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