



**Partners in
Project Green**

A Program of Toronto and Region Conservation Authority

Energy Leaders Consortium

Updates on Enbridge and IESO Incentives

January 31, 2023

We respectfully acknowledge that we are situated on the Traditional Territories and Treaty Lands, in particular those of the Mississaugas of the Credit First Nation, as well as the Anishinaabe of the Williams Treaty First Nations, the Huron Wendat, the Haudenosaunee, and the Metis Nation.

As stewards of land and water resources within the Greater Toronto Region, Toronto and Region Conservation Authority appreciates and respects the history and diversity of the land and is grateful to have the opportunity to work and meet on this territory.



Additional Resources

- yrnature.ca/acknowledging_land
- edgeofthebush.ca
- native-land.ca
- Text 1-855-917-5263 with your City and Province to learn whose traditional territory you're on
(standard text messaging rates may apply)



Agenda

| Time | Activity |
|-----------------|--|
| 1:00pm – 1:10pm | Introduction and Updates <i>from PPG</i> |
| 1:10pm – 1:25pm | Enbridge Gas Incentive Program Updates |
| 1:25pm – 1:40pm | Save on Energy & IESO Incentive Program Updates |
| 1:40pm – 2:00pm | Q&A / Discussion |





Introduction

Upcoming ELC Sessions

| Date | Topic |
|-------------------|---|
| February 16 @ 1pm | Member Roundtable – BASF Presentation (Virtual) |
| March 7 @ 2:30pm | Site Visit – GTAA Meeting & Tour with evening networking & recognition event (In-person) |
| April TBD | Educational Session – Decarbonizing Industry with Trane Technologies (Virtual) |
| May TBD | Member Roundtable – Trillium Health Presentation (Virtual) |
| June TBD | Site Visit – Sheridan College Meeting & Tour (In-person) |

**Please contact Matt Brunette if you are interested in hosting an ELC Site Visits or presenting at a Member Roundtable this year



Save the Date!

March 7th Networking Event

- **Location:** Greater Toronto Airports Authority
- **Time:**
 - 2:30pm-4:30pm ELC meeting & tour
 - 4:30pm-6:30pm Networking & recognition
- Networking event will include photo opportunities, recognition gifts, and more!
- Formal invite to follow with more information



Updates and Reminders

- 2022 ELC member reporting – **Deadline Jan 31st EOD**
- Digital Image Release Form – **Deadline Jan 31st EOD**
- ELC Code of Conduct
- PPG & CarbonHound Pilot
- Member Spotlights & Case Studies



Today's Speakers



Louis Fournier, IESO
Louis.Fournier@ieso.ca



Anna Shen, Enbridge
Anna.Shen@enbridge.com



George Hantzis, Enbridge
George.Hantzis@enbridge.com



A blue-tinted photograph of three people walking through an industrial facility. On the left, a man in a white hard hat and safety vest. In the center, a woman in a dark dress and boots. On the right, a man in a suit and tie. They are looking at a document held by the man in the suit. The background shows industrial equipment and a large open space.

Enbridge Gas Incentive Program Updates

2023 Incentive Updates

Helping commercial and industrial customers improve natural gas energy efficiency



Fixed Prescriptive Incentive program

Equipment eligible for fixed incentives



1 Air curtain

2 Condensing make-up air (MUA)

3 Demand control kitchen ventilation (DCKV)

4 Demand control ventilation (DCV)

5 Destratification fan

6 Dock door seal

7 Energy recovery ventilator (ERV)

8 Heat recovery ventilator (HRV)

9 Ozone laundry

[See website for details](#)



Commercial Custom Offer



Retrofit Projects with Gas Savings

\$0.25/m³

Up to 50% of energy efficiency upgrade costs, to a maximum of \$100,000/project

Energy Assessments and Meters

Up to 50% of eligible costs, to a maximum of \$10,000/site* if recommended by an Enbridge advisor

*maximum depends on annual gas consumption

Boiler Limited-Time Offer

Commit by Jun. 30 and commission by Oct. 31 to get

\$0.40/m³ for condensing boilers & related controls

\$0.30/m³ for high-efficiency boilers & related controls

Up to 75% of energy efficiency upgrade costs, to a maximum of \$100,000

Industrial Custom Offer



Manufacturing Retrofit Projects

\$0.20/m³ for the first 50,000 m³

\$0.10/m³ beyond 50,000 m³

Up to 50% of energy efficiency upgrade costs, to a maximum of \$200,000

Energy assessment & meter incentives also available to industrial customers

Agricultural Projects (Retrofit, NC)

NC = New Construction

\$0.10/m³

Up to 50% of energy efficiency upgrade costs, to a maximum of \$200,000/project

Limited-Time Offers for Ag Retrofit

\$0.20/m³ if commissioned by Jul. 1

\$0.15/m³ if commissioned by Aug. 19

Up to 75% of energy efficiency upgrade costs, to a maximum of \$200,000

Energy Solutions Advisors can help



Understand business needs and set goals to save.



Identify and prioritize energy projects.



Calculate estimated savings on all energy sources.



Help build your business case.



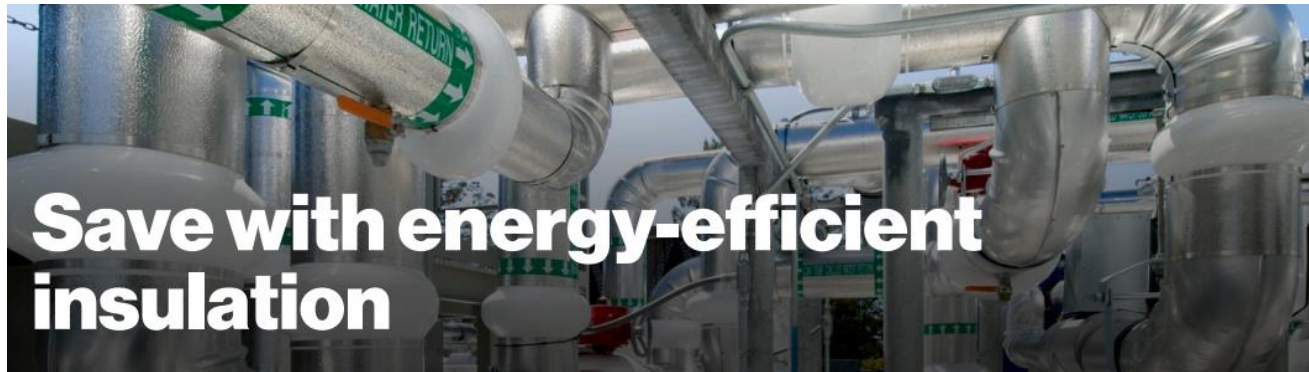
Provide technical support.



Award financial incentives to speed up payback.

Expert advice at every step

Insulation Case Study



About the technology

Insulation acts as a barrier to help keep warm air where you want it: its material used to fill the spaces behind walls and above ceilings, in hard-to-reach places and even small gaps and crevices. Because heat flows naturally from warmer areas to cooler ones, insulation slows heat flow by reflection and/or absorption, which in turn increases energy efficiency and improves comfort levels.

In the winter, heat moves directly from warm spaces to unheated spaces and outdoors. During summer months, heat moves from the warm outdoors to the cooler interior of your building. Adding insulation helps stop this heat transfer.

Insulation effectiveness is measured with an R-value. "R" stands for resistance to heat flow. The higher the R-value, the more you reduce energy loss. Determining which R-value is right for your building depends on where in Ontario it's located.

Common types of insulation include cellulose, fibreglass, rock wool, spray foam and rigid board. The type of insulation you need depends on where it will be installed, what R-values are required to meet code or desired efficiency and your budget. Some types of insulation can also help minimize noise coming from outside (sirens, traffic, etc.), further adding value and improving occupant comfort. A qualified contractor can help you choose the best option.

enbridgegas.com/insulation

Benefits



Reduce heating and cooling use



Improve occupant comfort



Save on ongoing energy costs



Lower noise levels



Reduce wear and tear on HVAC system

Application

To determine the correct level of insulation required, a professional contractor can complete an assessment, which typically includes:

- Thermal evaluation of pipes and equipment
- Energy loss calculations
- Energy-saving recommendations, with payback analysis

New and existing commercial buildings typically add insulation to:

Building envelope

- Roof space
- Ceilings
- Walls

HVAC system

- Boilers
- Piping
- Ducting

Insulation Case Study



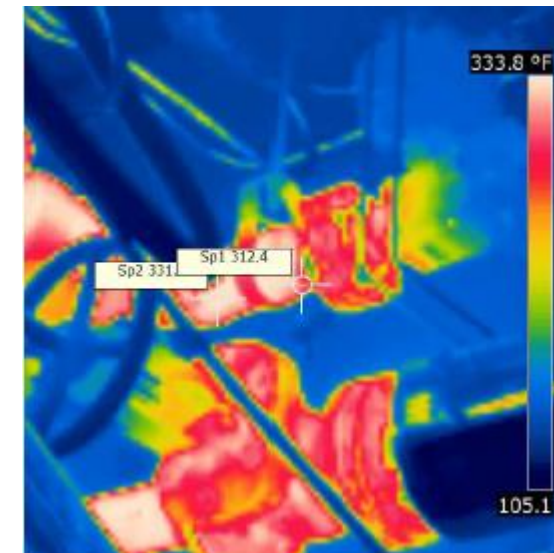
Cost of Audit \$8,800

Audit Incentive \$4,400

Cost of Insulation \$73,000

Insulation Incentive \$20,756

Gas Savings \$66,280



| Item | Location | Description | Ambient temp. in degree F. | Hours of Operation | Service temp. in degree F. | Pipe size | Lineal foot | Fittings | Flanges | Flanged Valves | Insulation | Closures | Costing Lineal ft. equivalent | Heat loss Lineal Ft. equivalent | Economic insulation thickness | Btu heat loss bare surface per foot | Btu heat loss insulated surface per foot | MMBtu savings per year | CO2 emission reductions tons per year | NOx emission reductions pounds per year | Natural Gas energy savings per year | Equivalent unit cost of insulation | Insulation total item cost | Integrated Simplified ETI Payback in Years | Photo# | Comments | |
|-----------|----------------|-------------|----------------------------|--------------------|----------------------------|-----------|-------------|----------|---------|----------------|------------|----------|-------------------------------|---------------------------------|-------------------------------|-------------------------------------|--|------------------------|---------------------------------------|---|-------------------------------------|------------------------------------|----------------------------|--|---------|----------|--|
| 1st floor | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Cond. Tk rm #1 | condensate | 83 | 8,760 | 200 | 3.00 | 6 | 4 | 1 | 0 | T | A | 14 | 12 | 1.0 | 245 | 20 | 23.7 | 1.9 | 8 | 144 | 13.75 | 193 | 1.3 | | | |
| | | | 83 | 8,760 | 200 | 1.50 | 3 | 5 | 0 | 0 | T | A | 13 | 6 | 1.0 | 140 | 13 | 6.7 | 0.5 | 2 | 41 | 12.50 | 163 | 4.0 | 334/335 | 2" pump | |
| | | | 83 | 8,760 | 200 | 1.00 | 6 | 6 | 0 | 0 | T | A | 15 | 8 | 1.0 | 100 | 10 | 6.3 | 0.5 | 2 | 38 | 11.00 | 165 | 4.3 | | | |
| | | | 83 | 8,760 | 200 | 4.00 | 40 | 4 | 1 | 0 | T | A | 53 | 45 | 1.0 | 311 | 24 | 113.1 | 9.1 | 36 | 690 | 15.50 | 822 | 1.2 | | | |
| | | | 83 | 8,760 | 200 | 3.00 | 24 | 6 | 0 | 0 | T | A | 36 | 27 | 1.0 | 245 | 20 | 53.2 | 4.3 | 17 | 325 | 13.75 | 495 | 1.5 | | | |
| | | | 83 | 8,760 | 200 | 2.50 | 21 | 4 | 0 | 0 | T | A | 29 | 23 | 1.0 | 204 | 17 | 37.7 | 3.0 | 12 | 230 | 13.75 | 399 | 1.7 | | | |
| | | | 83 | 8,760 | 200 | 2.00 | 5 | 5 | 0 | 0 | T | A | 14 | 8 | 1.0 | 171 | 15 | 10.9 | 0.9 | 4 | 67 | 12.50 | 175 | 2.6 | | | |
| 2 | | HP steam | 83 | 8,760 | 330 | 2.00 | 8 | 6 | 0 | 1 | C | A | 23 | 14 | 1.5 | 466 | 59 | 49.9 | 4.0 | 16 | 304 | 20.00 | 460 | 1.5 | | | |
| | | | 83 | 8,760 | 330 | 2.00 | 3 | 3 | 0 | 0 | C | A | 9 | 4 | 1.5 | 466 | 59 | 14.3 | 1.1 | 5 | 87 | 20.00 | 180 | 2.1 | | | |
| | | | 104 | 3,700 | 330 | 3.00 | 25 | 12 | 7 | 21 | C | A | 173 | 103 | 1.5 | 618 | 71 | 208.5 | 16.8 | 67 | 1,272 | 22.00 | 3,806 | 3.0 | | | |

enbridgegas.com/experts

Contact an Energy Solutions Advisor





IESO & Save on Energy Incentive Program Updates

January 31, 2023

Presentation to PPG

By: Louis Fournier

Energy-Efficiency Achievements



Ontario has saved 16 terawatt-hours (TWh) of electricity as a result of CDM programs – enough to power a city the size of Ottawa for more than two years



Over 250,000 residential consumers and businesses have participated in a Save on Energy program since 2011



Over 80 million energy-efficiency actions have been undertaken since 2011.

- This includes coupons redeemed, inefficient appliances collected for recycling, and projects completed through the replacement or installation of new devices or equipment

2021-2024 CDM Framework – By the Numbers

- On October 4, 2022, the IESO received a second ministerial directive for the 2021-2024 CDM Framework to enable additional programming through a **\$342 million increase** to the budget, from \$692 million to a total budget of just over **\$1 billion**.
- This new funding and programming will deliver additional peak electricity demand savings of 285 megawatts (MW) and annual energy savings of 1.1 terawatt (TWh) by 2025
- The four-year framework is expected to achieve a total of **725 MW** of peak demand savings and **3.8 TWh** of electricity savings.

CDM Framework – New Programs for Spring 2023

The additional programming from the October 2022 directive is planned to be launched by spring 2023 consists of the following:

- A new **residential demand response program** for homes with existing central air conditioning and smart thermostats to help lower energy use at peak times
- **Targeted support for greenhouse growers** in Southwest Ontario, including incentives to install LED lighting, advanced controls or behind-the-meter distributed energy resources (DER), such as combined solar generation and battery storage
- Enhancements to the **Save on Energy Retrofit Program** for businesses, institutional and industrial customers to include custom energy-efficiency projects
- Enhancements to the **Save on Energy Local Initiatives Program** to reduce barriers to participation and to add flexibility for incentives for DER solutions.

CDM Framework – New Program Launches in 2023

The IESO also continues to develop new programs in response to customer feedback. The following programs will be launched in 2023:

- **Strategic Energy Management program**, an evolution of the Energy Manager program that provides training, resources and enhanced technical support to companies with a dedicated energy management team.
- **Existing Building Commissioning program**, to help companies find opportunities to optimize operations and improve energy efficiency based on their current facility requirements.
- **Commercial Midstream Lighting program** with lighting incentives for lighting distributors to increase sales of energy-efficient lighting through point-of-sale discounts
- **Additional local initiatives** in targeted areas of the province where electricity constraints exist.

Retrofit Program

- Commercial, industrial, institutional, multi-residential and agricultural businesses can participate
- Offers financial incentives for equipment upgrades that reduce facility electricity consumption
- Designed to help Ontario businesses save energy, reduce costs and increase productivity



Retrofit update fall of 2022

| Measure | Update | Rationale |
|---|--|--|
| Refrigeration rack efficiency discus or scroll compressor | Added as a new prescriptive measure | Based on feedback from the market and the product's ability to reduce summer peak demand |
| Motors | Incentives available for new higher tiers (250 and 300 HP) | Based on feedback from the market |
| Variable frequency drives | Incentives available for new higher tiers (250 and 300 HP) | Based on feedback from the market |

Strategic Energy Management (SEM)

The Strategic Energy Management model will provide an enhanced technical support and resources to companies with dedicated energy managers

Launching in January 2023, SEM program will offer organizations greater flexibility and empower them to achieve additional cost savings through increased training opportunities, and access to industry tools and resources to support their energy-efficiency projects.



Existing Building Commissioning (EBCx)

- Designed to build capability for energy management organizations by training building owners/managers to enhance their facility management practices
- Provides incentives for building owners to undertake recommissioning services; provides pay-for-performance incentives for savings achieved
- Scheduled for launch in Q1 2023



Existing Building Commissioning

Three Phases:

- **Investigation Phase:** Investigation Report: incentive up to \$0.06/sq. ft., capped at \$50,000
- **Implementation Phase:** Incentive of \$0.03/kWh of Claimed Savings
- **Persistence Phase:** At the end of 12 months, incentive of \$0.03/kWh of confirmed savings

Industrial Energy Efficiency Program

- Project launched in April 2022
- Large industrial customers connected to the IESO-controlled grid or a distribution system.
- Third-party participants installing, operating industrial projects at large industrial customer facilities.
- Offers financial incentives to large, complex industrial projects for process upgrades and system optimization measures.



Industrial Energy Efficiency Program

- IEEP offers overall funding of nearly \$80 million to qualifying industrial participants over two **competitive** rounds of funding to be initiated in 2022 and 2023.
- Each round offers participants up to \$5 million per project in incentives
 - Highest-ranked applications to be eligible for funding
- Current funding round closes at 11:59 p.m. on February 13, 2023
 - Incentive contracts will be awarded in Q2
- Final funding round closes at 11:59 p.m. August 15, 2023
 - Incentive contracts will be awarded in Q4

IEEP – Eligibility Criteria for Participants, Facilities

- Non-residential customers with ownership of, or operational authority over, industrial facilities in which projects are implemented; or
- Third-parties who have authority to install and operate projects at facilities on behalf of the owners or operators of the facilities
- Facilities must be connected to, or behind the meter of another electricity consumer connected, either directly or indirectly, to the IESO-controlled grid or a distribution system

IEEP – Eligibility Criteria for Projects

- Projects must include measures that deliver a minimum electricity savings of 2,000 MWh, which must also result in a minimum 15% reduction of the electrical energy use within the project boundary defined by the applicant
- Projects may include multiple sub-projects, including sub-projects implemented at multiple facilities, where the overall project is bound by the minimum savings requirements described above
- Sub-projects must each produce a minimum savings of 500 MWh

IEEP – Electricity-Saving Measures

- Must be applied to, or support, an industrial process and result in measureable and enduring electricity savings
- Industrial process means the “extraction, growth, refinement, process, production, manufacture, or preparation of materials”
- Proposed technologies should be commercially available according to ISC Technology Readiness Level (TRL) 9, defined by Innovation, Science and Economic Development Canada as “actual technology proven through successful deployment in an operational setting”

Measurement and Verification (M&V) Plan

- Applicants must submit an M&V plan for their project(s) describing how the electricity savings will be measured
- The M&V plan must adhere to the International Performance Measurement and Verification Protocol EVO 10000-1: 2016 (or later)
- The plan will require baseline measurements before the project is implemented
- The M&V plan must be approved by the IESO in advance and will form part of the participant agreement

IEEP Incentives

- The applicant will propose the incentive amount needed to implement the project, and will be expected to demonstrate the amount is necessary to meet internal financial requirements
- The maximum incentive per project is \$5 million
- The incentive is capped at 75% of final eligible project costs, after subtracting any third-party contributions
- Projects must be completed within three years of contracting, or by December 31, 2026 (whichever is earlier)

Q&A





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A Program of Toronto and Region Conservation Authority



Thank You!