



Canadian Industry Program for Energy Conservation (CIPEC)

Capacity Building, Training, Tools and Partnerships

www.cipec.ca

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**Office of Energy Research and
Development**



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Presentation Purpose

- To provide an overview of the capacity building and training programs and tools that Canada provides through the Canadian Industry Program for Energy Conservation (CIPEC).



Energy efficiency supports the Government of Canada's environmental and economic priorities

Climate change & decarbonisation of the economy

- Can deliver 49% of GHG emissions reductions needed by 2030 (IEA)
- Among the lowest-cost options for reducing GHG emissions (McKinsey & Co.)
- The “first fuel” and the cheapest and cleanest energy source (IEA, *Economist*)
 - Energy use avoided in IEA countries was larger than the supply of oil, electricity or natural gas in 2011

Canada avoided 85 Mt of GHG emissions in 2013

Carbon pricing

- Addresses market barriers that prevent investments in cost-saving energy efficiency opportunities (e.g., lack of information, behavioural failures)
- Can reduce the overall carbon price needed to meet GHG reduction targets
- Jurisdictions that have introduced a carbon price have simultaneously introduced more ambitious energy efficiency programs

Economic growth

- Reduces energy costs and increases disposable income for consumers
- Helps industry reduce operating costs and boost productivity and competitiveness
- Creates clean jobs – the energy efficiency industry employs 100,000 Canadians (ECO Canada)

Canadians saved \$38 billion on their energy bills in 2013

Clean innovation & technology

- Drives deployment and commercialization of clean technologies, products and processes
- Increases affordability and adoption of clean technologies
- Can expand Canada's share in the over \$300 billion global market for energy efficiency (IEA)

CIPEC Background

- **Created in 1975, CIPEC is a voluntary partnership between the Government of Canada and private industry**
- **With productivity improvements and GHG emissions reductions now the main drivers, CIPEC continues to play a leading role in promoting industrial energy efficiency**
- **Today, CIPEC continues to be an open and expanding network of about 24 industrial sub-sectors representing more than 98% of all industrial energy use in Canada**
- **Companies intent on better managing their energy use can participate in the CIPEC partnership by becoming a CIPEC Leader**



Key Success Factors for CIPEC

- **Build on success**
 - Strong, established relationships and partnerships
 - Successful products, training programs and tools
- **Leverage common interests**
 - Industry
 - Other levels of government
 - Experienced service delivery organizations
- **Look to the international community**
 - Sharing information and best practices
 - Establishing partnerships, collaboration
 - Celebrating success



CIPEC Structure

Industry

**Companies,
Associations**

Coordination of
awareness sessions,
technical
information and
OEE offerings

Networking
and sharing
industry data

**CIPEC Executive Board
and Task Force Council**

**Process Targets &
Action Plans**

**CIPEC Sector
Taskforces**

Natural Resources Canada

**Government of
Canada
Programs and
Policy Cycles**

Industry
Data and
Advise

Issues

Input

Natural Resources
Canada provides
support to CIPEC
Executive Board &
Taskforce Council
and the individual
CIPEC Task Forces



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The CIPEC Approach

1. Raise Awareness

- Heads Up CIPEC electronic newsletter
- Case study videos and articles
- Outreach, communications and social media activities

2. Build Knowledge

- Energy management workshops
- Technical guides, tools and support
- Biennial energy conferences
- Internships for new professionals

3. Take Action

- Financial support for energy management projects
- Program co-delivery through regional partners
- Government of Canada tax incentives
- In-house expertise and guidance

4. Reap Rewards

- Improved energy management practices
- Lower operational costs and lower GHG emissions
- CIPEC Leadership and International Awards Programs



1. Raise Awareness

Employee Awareness Information

- Helps employees understand energy efficiency and build an energy-saving culture

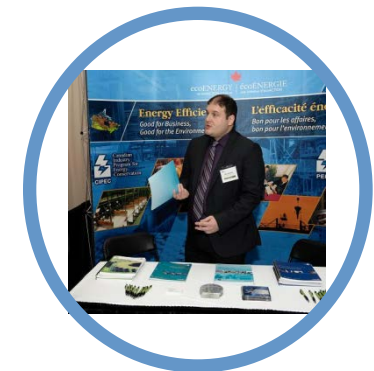


Online newsletter

- Provides case studies and technical information on industrial energy efficiency
- Reaches more than 10,000 subscribers

Outreach and communications

- Conferences and trade shows
- Case studies and success stories through NRCan and international partners
- Industry representatives promote CIPEC, energy efficiency
- Social media – LinkedIn, Twitter



2. Build Knowledge

Dollars to \$ense Energy Management Workshops



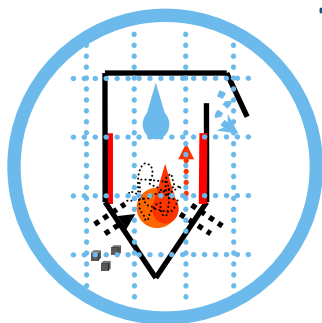
- Topics include: energy planning, monitoring, energy financing
- More than 30,000 individuals trained since 1997
- Modular format, 3rd party delivery (Canadian Institute for Energy Training)
- New audiences: International, Remote/Northern communities

Technical Webinars

- Free, two-hour webinars on a variety of technical topics
- Webinars attract 100-200 participants per session
- Some industrial sector-focused, held in partnership with associations



Technical information, online tools and software



- Benchmarking studies, energy management handbooks and toolkits
- Tools to calculate energy use and select motors (CanMOST)
- CANMET Process Integration software
- RETScreen software assesses project's financial viability and risk

2. Build Knowledge (cont.)



Energy Summit Conferences

- Biennial conference held since 2003
- Energy Summit 2016 - 90% of total costs covered by partners and sponsors
 - Over 220 professionals - industry, utilities, consultants, government

Green Jobs Internship Program

- Provides college and university graduates opportunities to work in a position that will benefit the environment
 - Interns gain environmental and/or energy management experience
 - Builds energy management capacity across industry
 - Hiring organizations qualify for 80% funding (maximum of \$10,000)
 - Administered by established and experienced organizations



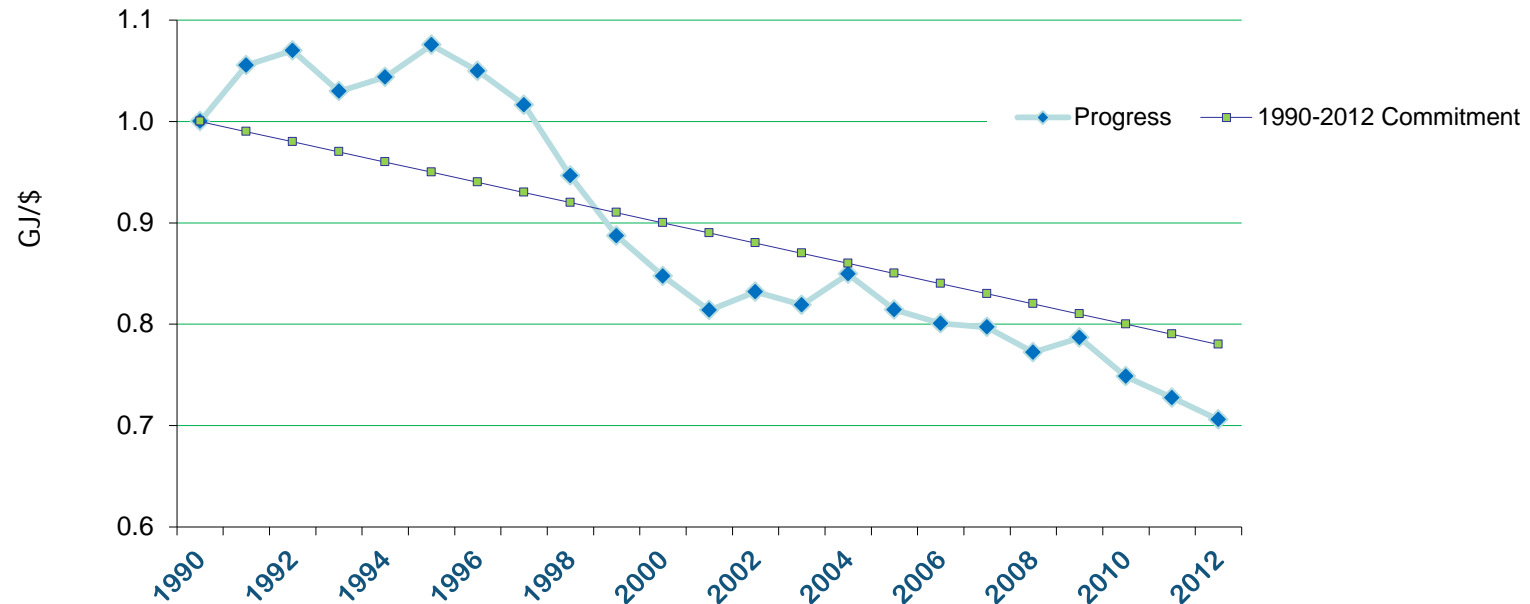
3. Take Action

- Encourage adoption of energy management systems such as ISO 50001, Process Integration studies, and Computational Fluid Dynamics studies by offering financial support
- Funding partnerships with provinces
 - British Columbia - up to \$80,000/50% of costs
- Offer tax incentives that help companies undertake clean energy projects
- Work with industry associations, provinces and international partners to encourage action
 - Towards Sustainable Mining initiative
 - ENERGY Star for Industry - Cement, Steel and Fertilizer
 - North American Trilateral Cooperation



4.Reap Rewards – Improved Energy Intensity

Mining, Manufacturing and Construction Energy Intensity (GJ/\$)



- The mining, manufacturing and construction sectors improved energy intensity by an average of 1.3 percent per year between 1990 and 2012
- Improved energy efficiency enabled Canadian industry to avoid approximately \$3.3 billion in purchased energy in 2012

4.Reap Rewards (cont.)

CIPEC Leadership Awards

- Outstanding achievements of CIPEC Leaders
- Five categories incl. Energy Performance Management, Employee Awareness and Training, Integrated Energy Efficiency



Clean Energy Ministerial Energy Management Leadership Award

- New Gold – New Afton Mine (Global CEM award winner)



MAKING ENERGY VISIBLE

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