

The Canadian Industry Program for Energy Conservation

*One Stop Shopping on
Industrial Energy Management*

Presentation to
International Association for Impact Assessment
Vancouver, April 2004
Philip B. Jago



Natural Resources
Canada

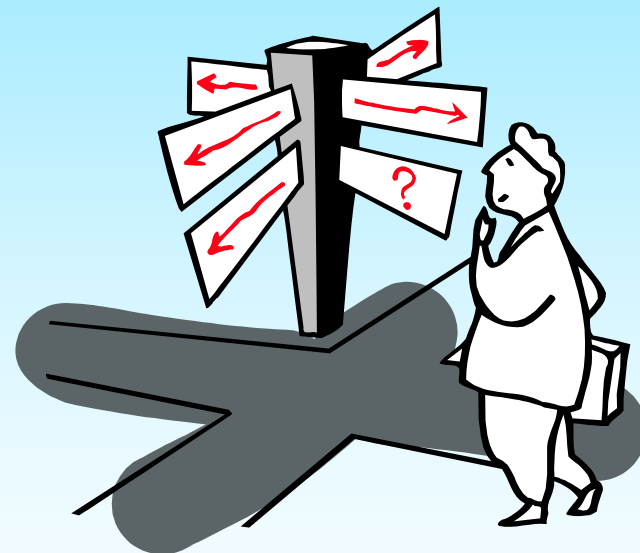
Ressources naturelles
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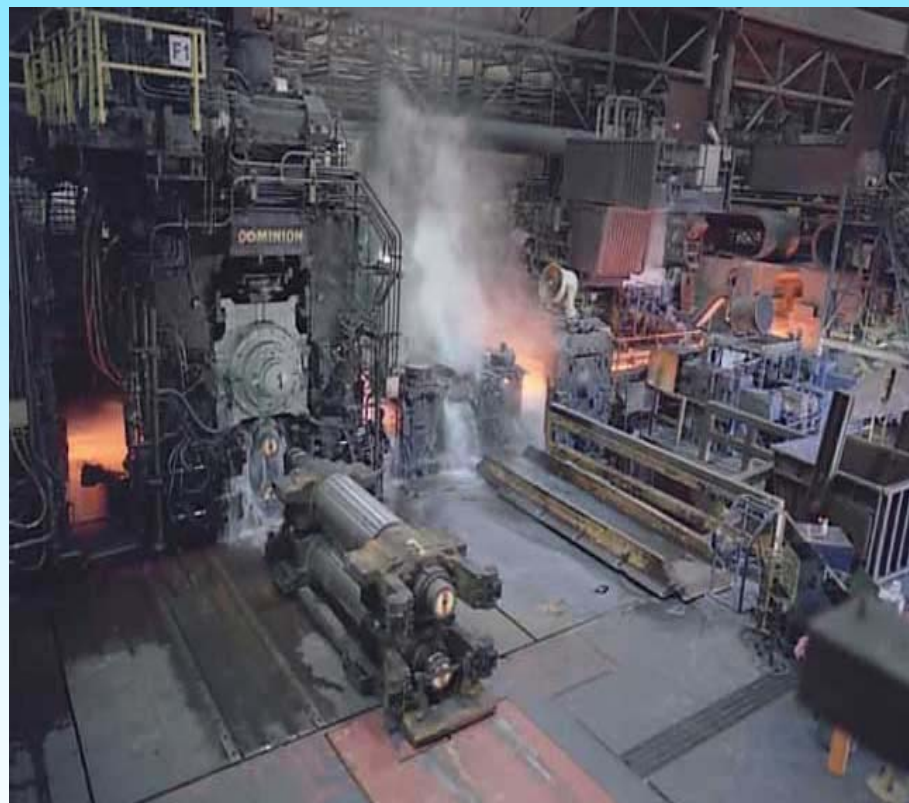
Presentation Overview

- Why Energy Efficiency
- Barriers and Obstacles
- Program Philosophy
- CIPEC
- Industrial Energy Innovators
- Sector and Company Services
- What we can do



Why Energy Efficiency?

- Energy operating costs are up (esp. natural gas)
- Environmental Pressures (Climate Change)
- Energy efficiency can:
 - Generate significant cost savings
 - Improve competitiveness
 - Reduce GHG emissions
 - Conserve energy resources



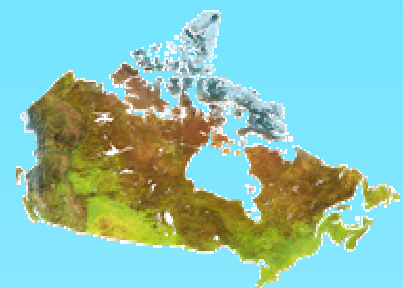


Why Energy Efficiency? Energy Operating Costs Are Up

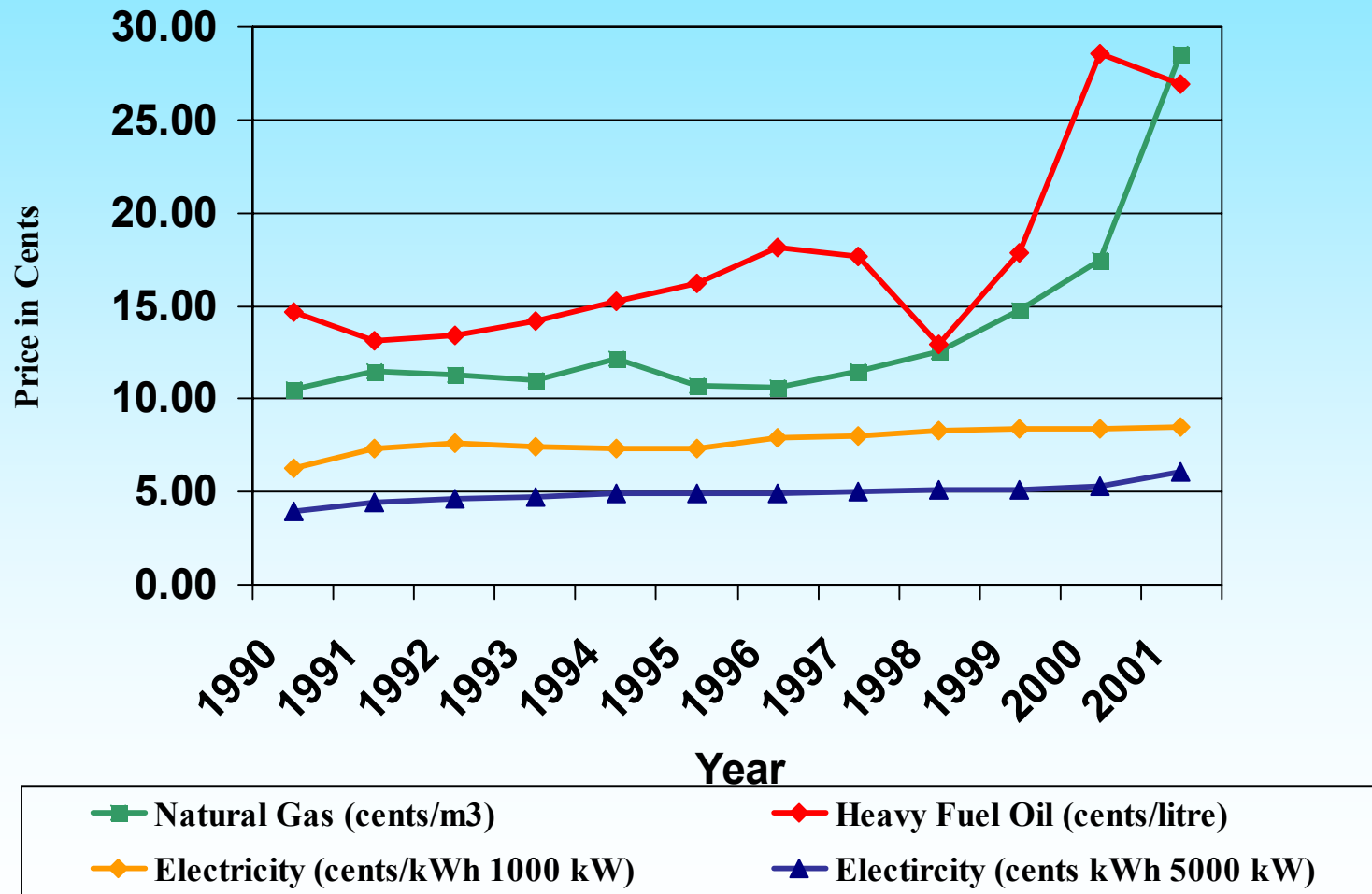
1st Qtr 2000 – 1st Qtr 2003:

- Selling Prices -2.8%
- Wage Rates +10.2%
- Raw Materials +12.4%
- Payroll Taxes, Benefits +15.5%
- Electricity +21.4%
- Industrial Fuel +78.6%





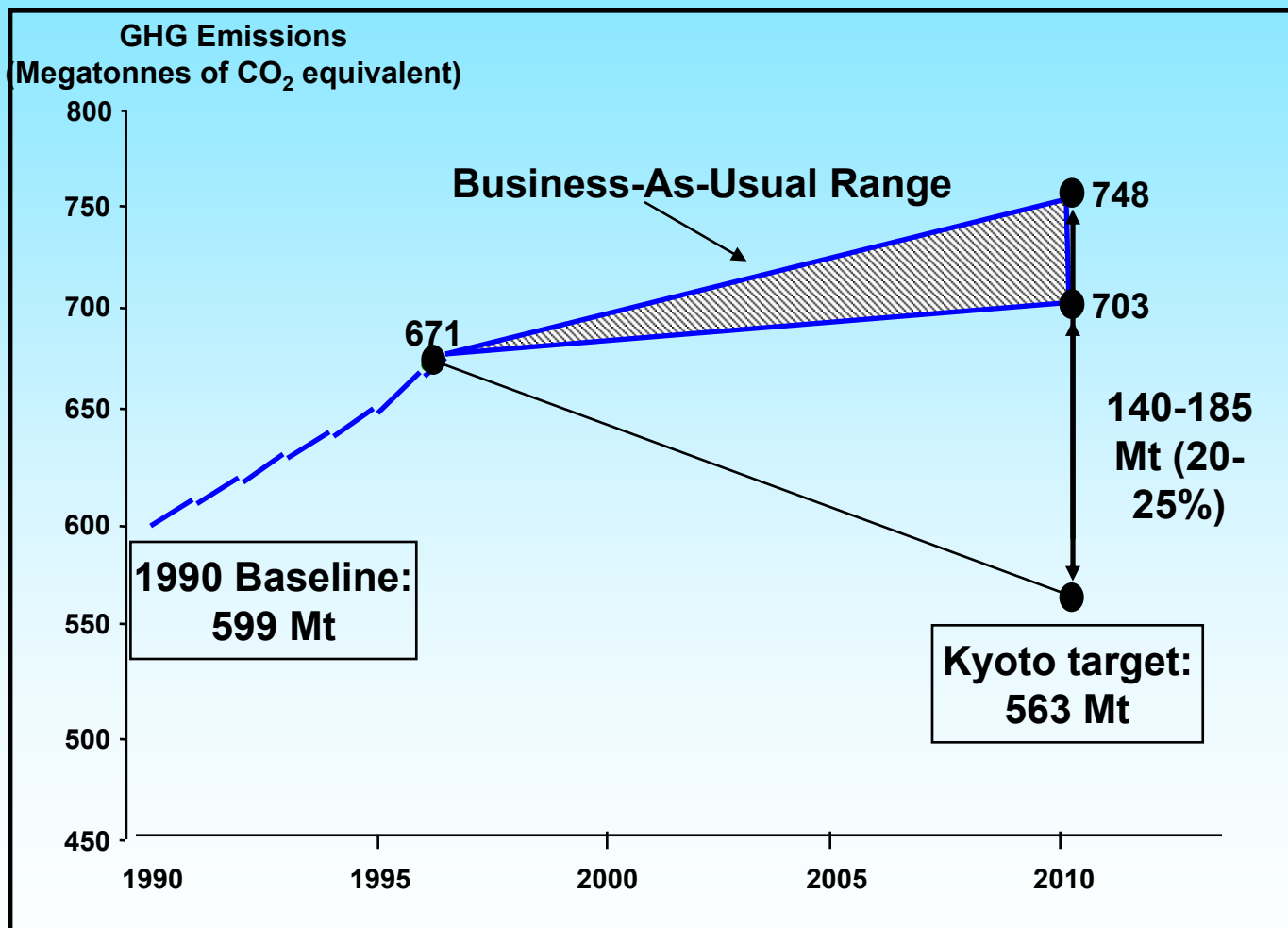
Why Energy Efficiency? Energy Prices are Up





Why Energy Efficiency?

The Climate Change Challenge



Barriers & Obstacles

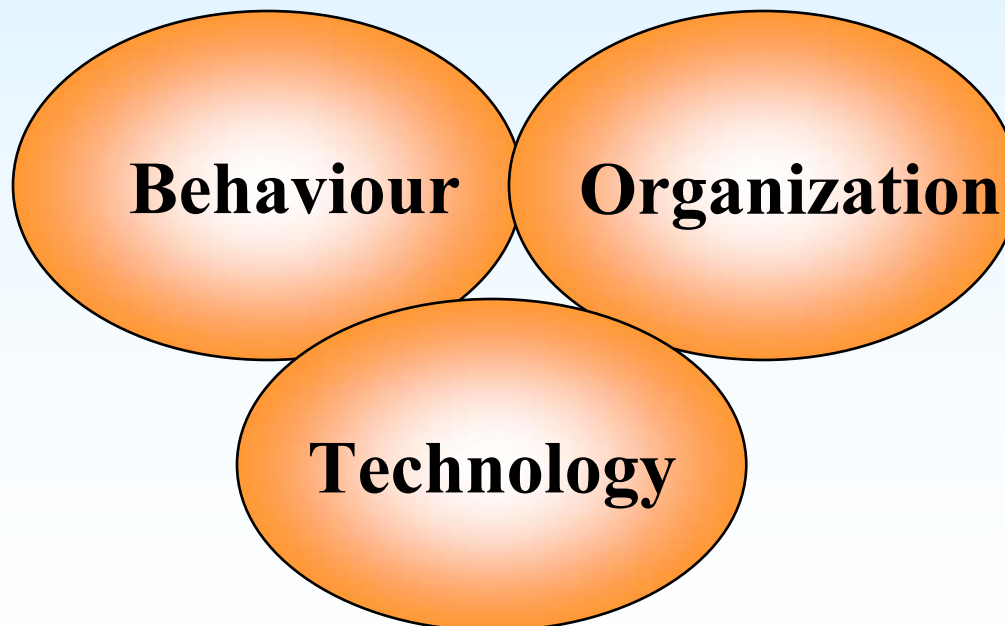
- Access to capital
- Emissions/Energy a low priority
- Technical knowledge
- Staff, management time
- Risk
- Savings return to system
- Awareness of opportunities

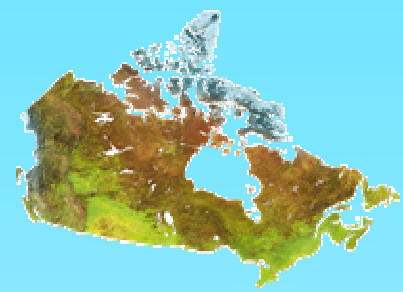




Program Philosophy

To improve energy efficiency industries often need to focus on – new technologies, employee behavior and organizational cultures - CIPEC serves these goals.

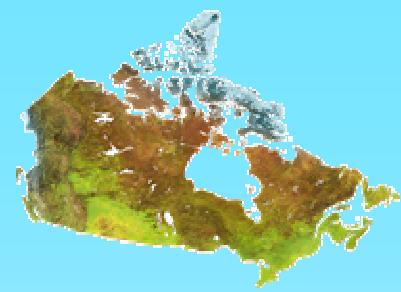




Program Philosophy (cont.)

- **You can't manage what you can't measure**
- **What gets measured gets done**
- **Nothing happens unless the Boss says so**
- **Energy Efficiency is a minimum \$3 Billion
Win/Win opportunity for Canadian Industry**





Canadian Industry Program for Energy Conservation (CIPEC)

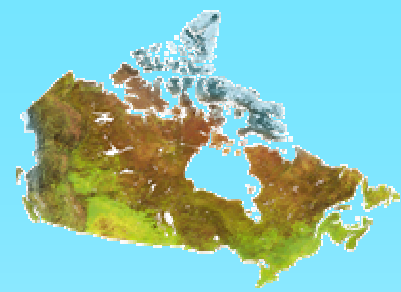


- A unique industry-government partnership since 1975
- Encourages adoption of energy efficiency as a tool to:
 - Cut costs
 - Improve productivity
 - Reduce emissions
- Provides information, advice, training, incentives and celebration



Why CIPEC?

- CIPEC companies get results: effective energy management by CIPEC companies resulted in \$3.4 billion in savings in 2002 and avoided GHG emissions of 25.4MT since 1990
 - This is equivalent to the amount of energy required by a city twice the size of Toronto.
- Over the past 5 years, the increase in energy consumption among non-CIPEC participants was ***more than double*** that of CIPEC participants.

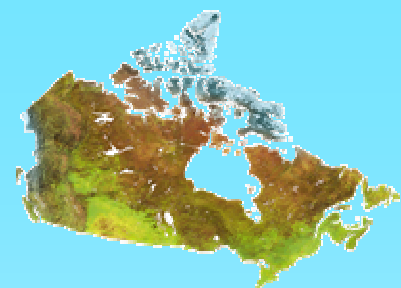


Industrial Energy Innovators

Company Level Program

- Industrial Energy Audit Incentive
- Energy efficiency workshop discounts
- Coverage in CIPEC newsletter, Annual Report
- Funding eligibility (new buildings, warehouse & office retrofits)
- Energy efficiency Benchmarking studies, Publications, and Employee Awareness Days
- Over 500 participants





How to Become an Innovator

1. Submit letter to Chair of CIPEC Executive Board
2. Establish energy efficiency targets
3. Quantify base-year energy consumption
4. Report annually on measures implemented, results achieved

INDUSTRIAL ENERGY INNOVATORS



PROGRAM INFORMATION



Make a Difference

Are you searching for innovative ways to cut costs and increase your competitiveness? If so, then become an Industrial Energy Innovator. As an innovator, your company will gain access to products and services to help you manage your energy use more efficiently – a sure way to reduce production costs.

Industrial Energy Innovators (IEI) is part of the Canadian Industry Program for Energy Conservation (CIPEC), a joint industry-government program sponsored by Natural Resources Canada (NRCan)/Office of Energy Efficiency. Today, more than 300 companies from a diverse group of industrial sectors have registered their commitment to energy-saving improvements with CIPEC.

Join this select group of companies that are making energy efficiency a priority. Not only will your bottom line benefit, but you will also contribute to a healthier environment and lend support to Canada's efforts to reduce greenhouse gases (GHGs) that contribute to climate change.

Membership Benefits

Financial Incentives

As an Industrial Energy Innovator, you will be eligible for a Government of Canada incentive of up to \$5,000 to have an energy audit done at your facility. You will also receive discounts for NRCan "Dollars to Jars" workshops, which are designed to provide you with practical advice on how to identify energy-saving opportunities, monitor energy use and develop an energy master plan. What's more, NRCan will conduct, authorized, on-site workshops for Industrial Energy Innovators so that all your operational and maintenance staff can benefit from expert energy management training.

A Wealth of Information at Your Fingertips

NRCan industry offices are on hand to help you find the information you are looking for, whether it is information on energy-related incentive programs,

support for research and development, technical guidelines or case studies. As an innovator, you will be first in line to find out about new energy management products and services through regular updates from NRCan.

Recognition for Corporate Responsibility

When you register as an Industrial Energy Innovator, you will receive a plaque to proudly display at your company. Your company's name will be added to NRCan's Industrial Energy Efficiency Web site where all innovators are listed. It will also be included in CIPEC's annual report, which is distributed to senior government and corporate decision makers across Canada. With your input, we will also feature your company in *About Up 2006*, an on-line newsletter produced twice monthly by NRCan and distributed to more than 3000 subscribers in industry and government.

Membership Obligations

Becoming an Industrial Energy Innovator means making a public commitment to establish energy efficiency targets, quantify base-year energy consumption and GHG emissions and report annually on energy-efficient measures that you have implemented and the results achieved. To help you prepare your report, you will find reporting templates on NRCan's Industrial Energy Efficiency Web site.

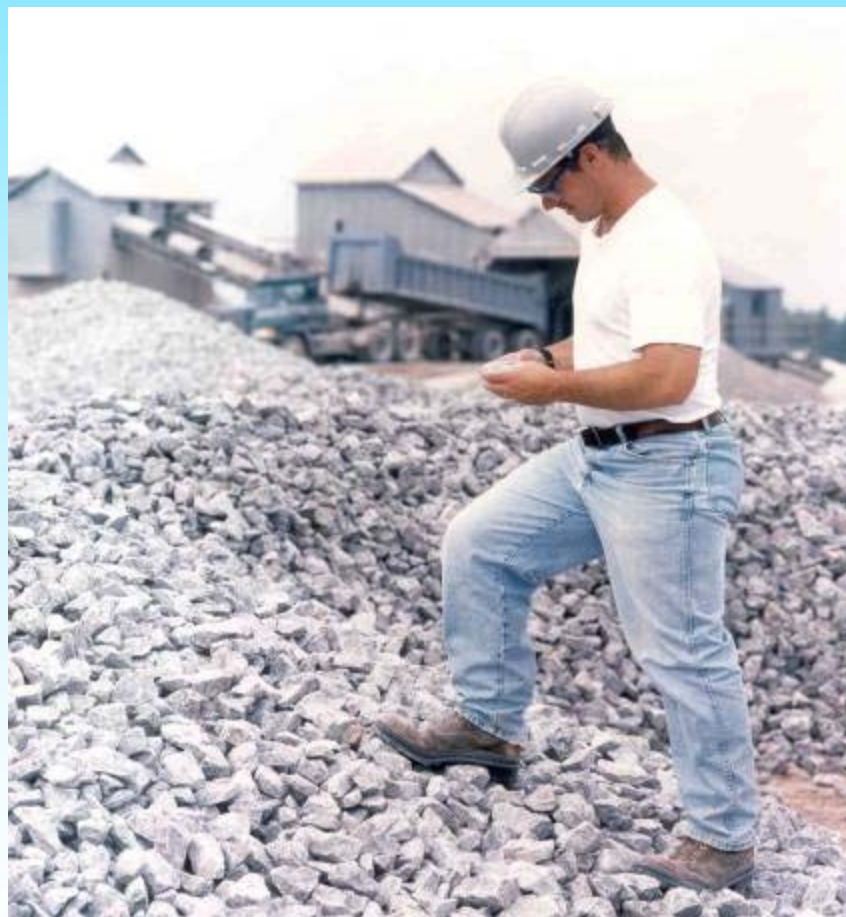
Industrial Energy Innovator companies also agree to register with Canada's Climate Change Voluntary Challenge and Registry Inc. (VCCR Inc.). Like most Industrial Energy Innovator companies, you may already be registered with VCCR Inc. If so, you may simply submit the same report to VCCR Inc. and IEI. All reports filed with VCCR Inc. are eligible for the annual VCCR Inc. Leadership Awards, which recognize the contributions of industrial, commercial and institutional organizations in meeting Canada's commitment to reduce GHG emissions. For more information, visit the VCCR Inc.'s Web site at <http://www.vccr.ca>.

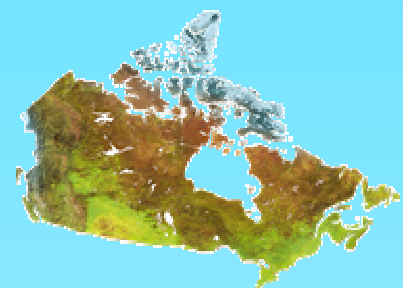




Industrial Energy Project Support

- Networking Opportunities
- Financial Support
- Employee-Training Assistance
- Information and Awareness
- Technical and Research & Development Support
- Benchmarking



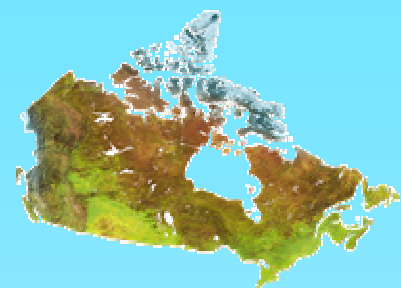


Networking Opportunities Task Forces/Energy Managers Network



Peer to Peer Ideas and Information Exchange
It's all about people like-minded people
with a common vision





Financial Support

Industrial Energy Audit Incentive

- 50% of audit cost to \$5,000
- Combine with utility funding
- Companies determine audit contractor, audit scope
- Energy Management Services Directory
- >200 audits completed or underway; total energy bill exceeds \$1.6 billion

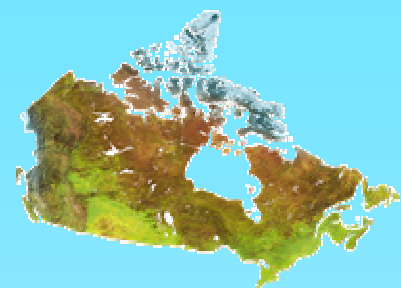




Financial Support Innovative Financing

- Energy Performance Contracting (EPC)
 - Self-funded projects are paid for by savings generated.
- Addresses lack of time, capital, internal expertise; helps manage cash flow, risk.
- DuPont Canada – 7 EPC projects with a total value of ~\$45 million and more are coming.
- Ford of Canada - EPC project to upgrade steam heating systems, expected energy savings of 225 million Btu/hour.





Financial Support Building Incentives

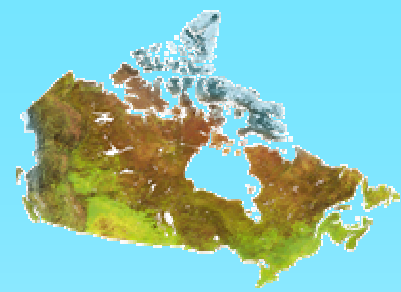
Industrial Building Incentive Program

- Encourages design of energy efficient industrial buildings
- Up to \$80,000 to IEI

Energy Retrofit Assistance

- Available for office or warehouse space:
 - Retrofit Planning – up to 50% of approved costs to a max. of \$25,000
 - Retrofit Projects – up to 25% of approved costs to a max. of \$250,000 and is based on the projected energy savings





Employee Training-Assistance Workshops

- “Dollars to \$ense” energy efficiency workshops:
 - 33% discount for IEIs
 - Workshops: Spot the Energy Savings Opportunities; Monitoring & Tracking; Energy Master Plan
 - Customized Workshops: Plant walk-through; tailored to company or sector
 - Savings of ?? Pj and ?? Tonnes of GHGs
- Smart Driver workshops
 - Fuel Management 101
 - SmartDriver Program: Heavy & Forestry Vehicles





Information and Awareness Publications & Support

Industry Publications

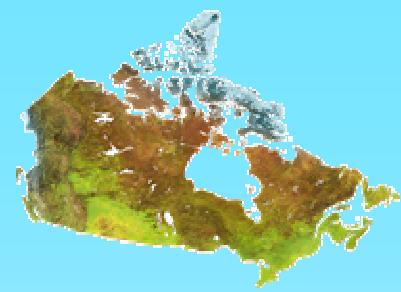
- *Heads Up CIPEC* (newsletter >10,000 readers), CIPEC Annual Report
- EE Guides: Motor Systems; Boilers and Heaters; Planning and Mgmt
- Sector EE Guidebooks

Support for Case Studies

Employee EE Awareness Days

- Provide support for increasing energy efficiency awareness among your employees



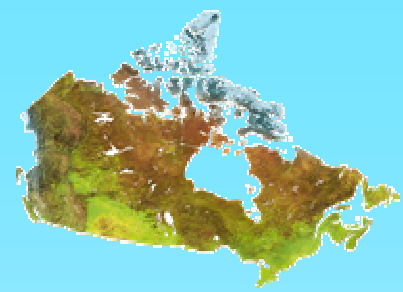


Technical and R&D Support EnerGuide for Industry

- Energy-rating program that provides the estimated energy consumption or efficiency of the product
- Rates the energy performance of a product with others in the same size and class
- For "off the shelf" equipment such as motors, dry-type transformers, HVAC lighting products, refrigerators, compressors, and pumps

ENERGUIDE





Technical and R&D Support CANMET Energy Technology Centre (CETC)

- Works with private & public sector partners to develop & deploy leading-edge energy products
- Cost-share programs assist companies' R&D:
 - Industrial Energy Research and Development
 - Emerging Technologies Program
 - Renewable Energy Technologies Program
- Provide free prior opinions on technical eligibility of energy conservation and renewable energy projects to qualify for tax write-offs



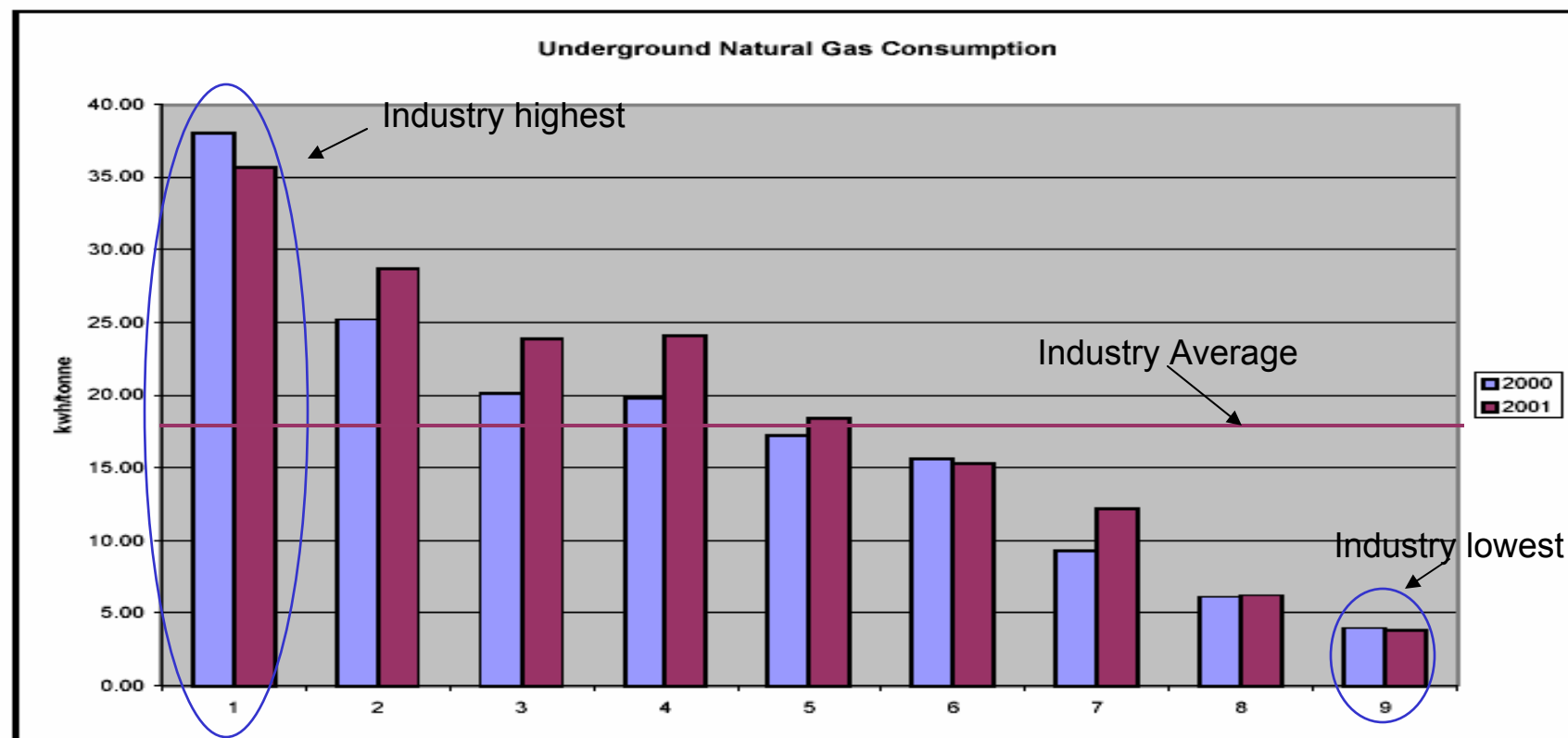


Benchmarking

- Comparisons with competing countries
- ID Best in Class Technology and Operating Practices
- Address Data reporting anomalies
- No Lime Companies



Key Results: Potash Benchmarking Inter-Plant Comparisons



- ID areas for potential improvement
- Ability to prioritize areas of greatest opportunity



Benchmarking (Phase 2)

Deal with Behaviour/Culture

One-2-Five[®] Diagnostic Sessions

Aspects of Energy Management:

- Areas of greatest opportunity ID
 - Awareness and training
 - Formalizing energy plans
 - Energy auditing (understanding opportunities)
 - Improved reporting, feedback and control systems





Why CIPEC? Why Not?

- Reduce energy costs and improve your bottom line
- Reduce greenhouse gas emissions
- Sharpen your competitive edge
- Obtain new information and customized training on energy efficiency
- Access strategic networking and partnership opportunities





Thank You/Merci

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