



FROM IDEAS TO ACTION

CIPEC ANNUAL REPORT 2015



Canadian
Industry
Program for
Energy
Conservation

Canada

FROM IDEAS TO ACTION

CIPEC ANNUAL REPORT 2015



Canada

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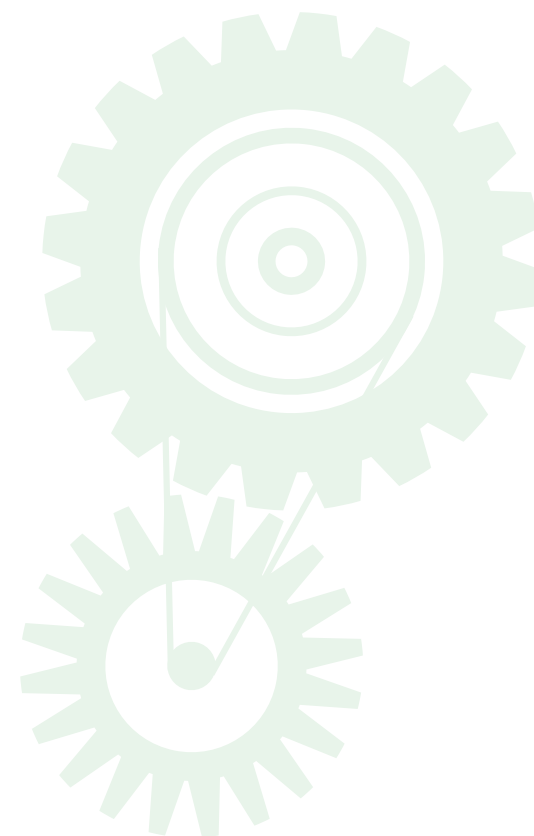
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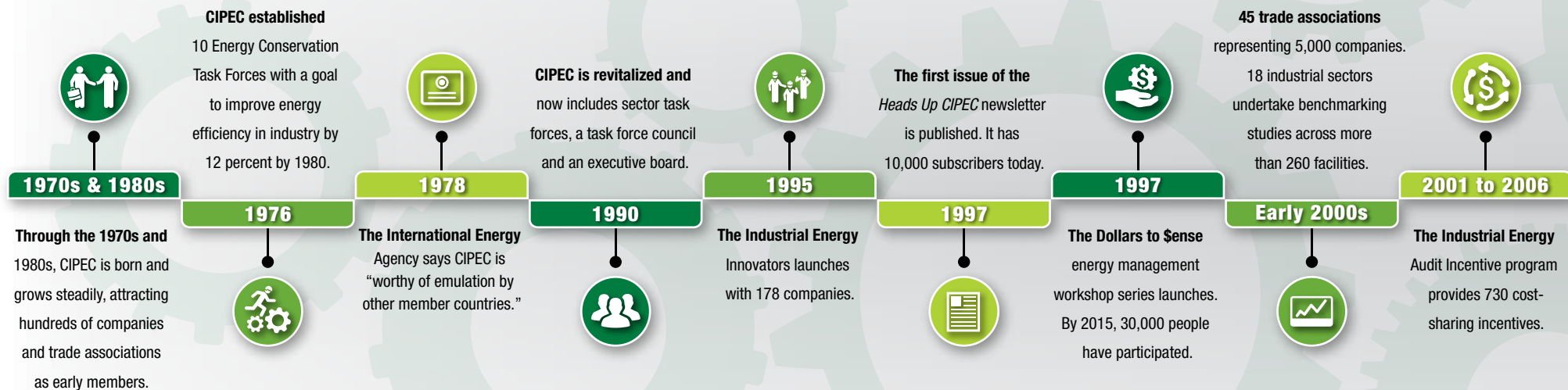
Contents

Celebrating 40 Years: Facts at a Glance	2	Industry Sector Profiles	17	CIPEC Leader Companies by Sector	66
About CIPEC	4	Aluminum	18	CIPEC Trade Associations	83
Our Mission	5	Brewery	20	Contacts – NRCAN, OEE, Industry Division	84
Contact CIPEC	5	Cement	22		
Message From the Chair	6	Chemicals	24		
The Results	8	Construction	26		
Program Milestones – CIPEC’s Evolution Over 40 Years	9	Dairy	28		
ISO 50001 Energy Management Systems Standard	13	Electrical And Electronics	30		
Energy Efficiency Programs and Tools for Industry	14	Electricity Generation	32		
Networking Opportunities	14	Fertilizer	34		
Licenced Energy Management Workshop Services	14	Food and Beverages	36		
Webinars	14	Forest Products	38		
Cost-Sharing	14	Foundry	40		
Classes 29, 43.1, and 43.2 and CRCE Tax Savings	15	General Manufacturing	42		
Technical Support	15	Lime	46		
The Year In Review	16	Mining	48		
		Oil Sands	50		
		Petroleum Products	52		
		Plastics	54		
		Steel	56		
		Transportation Equipment Manufacturing	58		
		Upstream Oil and Gas	60		
		CIPEC Who’s Who	62		
		CIPEC Executive Board Members	63		
		CIPEC Task Force Council Members	64		



Celebrating 40 Years

– Facts at a Glance



“The small and dedicated group of people from industry and government probably did not realize in 1975 that the energy conservation program they put in place would be so successful and that, after 10 years of operation, a further 5-year plan for reducing the use of energy would be charted.”

William Cowling
Chairman of the Council of the Canadian Industry Program for Energy Conservation
Chairman, Courtaulds Canada Inc.

CIPEC Annual Report
1975–1985

"CIPEC has made great progress in its first quarter century, thanks in large part to the Government of Canada's support for voluntary action. The combined resources of business and government have made CIPEC an exceptional success story and a model for other organizations around the world."

W. Warren Holmes
Chair, CIPEC Executive Board
Senior Vice-President, Canadian Mining Operations, Falconbridge Ltd.

CIPEC Annual Report
1999–2000

The first industrial energy conference honours companies that have made a significant and innovative contribution to energy efficiency. By 2011, Leadership Awards recognize specific companies and individuals.



2005

CIPEC begins to participate in the Energy and Mines Ministers' Conference, introducing major energy saving tools and research in later years.

CIPEC receives \$27 million for the ecoENERGY program. By 2011, 500 agreements are funded under ecoACTION, saving \$11 million for industry and eliminating 130,000 tonnes in GHG emissions.



2007



2008

Industrial Energy Innovators become CIPEC Leaders. Thousands of companies sign on – 2,393 by 2015.

The Energy Efficiency for Industry webinar series launches. By 2015, more than 3,100 people have participated.



2010



2011

The ecoENERGY Efficiency for Industry program starts up, coinciding with the launch of ISO 50001 certification.



2012

St. Marys Cement and 3M become the first two Canadian companies to achieve ISO 50001 certification.



2015

17 Canadian companies are ISO 50001 certified by 2015.

"Our vision has finally come of age. Now virtually all levels of government and much of industry are supportive of what we have worked so hard to accomplish all along, which is to promote and support energy efficiency in every way we can. Truly, CIPEC Leaders have achieved results that all Canadians can be proud of, and will continue to do so in the future."

Andy Mahut
Manager, Energy Practices, U.S. Steel Canada Inc.
Chair, CIPEC Executive Board

CIPEC Annual Report
2015

About CIPEC

The Canadian Industry Program for Energy Conservation (CIPEC) is a voluntary industry-government partnership established to improve Canada's industrial energy efficiency.

The 20-member CIPEC Task Force Council includes volunteer representatives from CIPEC's 21 industrial sectors, which encompass 2,393 CIPEC Leader facilities and more than 50 trade associations. The Task Force Council provides a forum for sectors to share ideas and recommend ways to address common needs. It includes representatives from every CIPEC sector task force. Each CIPEC task force represents companies engaged in similar industrial activities. Overall direction is provided by the CIPEC Executive Board, made up of private-sector leaders who are champions of industrial energy efficiency and who provide advice on industrial energy efficiency programs and related issues to the Government of Canada.

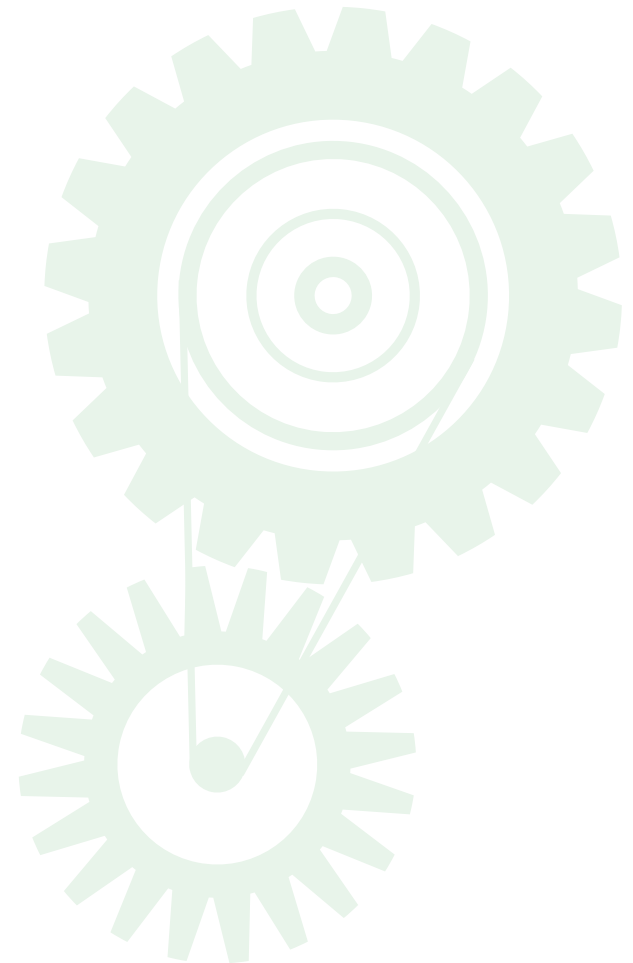
In the CIPEC partnership, change emerges from consensus and joint action developed through open communication. CIPEC continues to be the focal point for industry's action on energy efficiency in Canada.

CIPEC's role is to promote greater energy efficiency and to recognize and reward trendsetters. At its industrial energy efficiency conference, CIPEC presents the CIPEC Leadership Awards to honour Canadian companies that have demonstrated a significant and innovative contribution to energy

efficiency. In 2011, the Future Leaders Award category was created to honour post-secondary students and recent graduates whose projects or initiatives have impacted industrial energy efficiency in a considerable way.

Part of CIPEC's mandate is a strong communications and awareness program anchored in its *Heads Up CIPEC* newsletter, which has a readership of more than 10,000 subscribers. CIPEC also raises awareness of the goals and benefits of improved energy performance. The Task Force Council and sector task forces are constantly working toward broadening participation, encouraging information sharing and bolstering awareness of the role and achievements of CIPEC members.

CIPEC volunteers include successful business leaders and nationally recognized players. The profiles of these leaders and their strong belief in CIPEC's principles attract new members from industry, building on the successful partnership between industry and government.



Our Mission

To promote effective voluntary action that reduces industrial energy use per unit of production, thereby improving economic performance while participating in meeting Canada's climate change objectives.

JOIN CIPEC

Participate in CIPEC by registering your company's commitment to energy efficiency improvements and greenhouse gas (GHG) reductions. Signing up as a CIPEC Leader is free and provides eligibility for a broad range of benefits:

- Cost-sharing for:
 - Implementing the Energy Management Systems standard (ISO 50001).
 - Process integration (PI) studies.
 - Computational fluid dynamics (CFD) studies.
 - Other energy management projects.
- Opportunities to network with other industrial energy managers and practitioners.
- Free monthly webinars on innovative energy practices such as:
 - Energy management information systems (EMIS).
 - ISO 50001 Energy Management Systems standard.
 - PI and CFD.
 - Combined heat and power (CHP) systems.
 - Motor systems management.
 - Compressed air.
- Boiler efficiency.
- RETScreen® Clean Energy Management software.
- Eligibility to nominate your organization for a CIPEC Leadership award.
- Technical guidebooks and tools.
- *Heads Up CIPEC* – a monthly e-newsletter that provides the latest energy efficiency information.

Follow us on



@CIPEC_PEEIC



CONTACT CIPEC

cipec.gc.ca
info.ind@nrcan-rncan.gc.ca

Message From the Chair

As CIPEC marks 40 years of achievement, we have a great deal to celebrate. First, 40 years is a long time. To be in operation continuously over four decades, realizing consistent membership growth and making continual energy efficiency improvements is a success by itself. The world we live in is in many respects almost unrecognizable compared to the world in which CIPEC was founded in 1975.



Yet CIPEC members continue to perform. I am proud to report that our membership today stands at 2,393 Leaders and more than 50 industry associations.

Our great work has meant that CIPEC is recognized internationally as an example of an effective government-supported vision of industrial energy efficiency. Back in our early days of 1978, the International Energy Agency said we were “worthy of emulation by other member countries.” So, from the beginning we have been seen as an organization that has set realistic yet visionary energy efficiency goals for industry.

Much has changed since then. When CIPEC was founded, reducing energy use was considered quirky and was an afterthought for most of industry. Today, energy efficiency has become mainstream. It is clear that there is plenty of enthusiasm for cleaning up the environment, mainly in the context of reducing GHGs and preventing further climate change. The 2015 United Nations Climate Change Conference in Paris, France, and recent actions of

federal and provincial governments in Canada have shown us that. At the same time, governments are focused on ensuring healthy, thriving economies.

Historically, some observers have viewed these two goals as opposed to one another, but CIPEC has always seen that they are compatible. This is how CIPEC is visionary. We stand at the intersection of these two major concerns by encouraging energy efficiency while at the same time supporting industries through their transitions to cleaner operations and demonstrating how they can benefit financially from consuming less.

One tool in particular has helped create renewed enthusiasm among Leaders and potential Leaders. That is the ISO 50001 Energy Management Systems standard, which CIPEC helped create and that we continued to champion this year. A review of our [case studies](#) shows the success that several Canadian companies have achieved by improving their energy efficiency by implementing the ISO standard. Significant savings were also a result.

Other CIPEC programs have achieved great things as well:

- Our popular Dollars to \$ense Energy Management workshops for industry have served more than 30,000 participants since they started up in 1997.
- The energy management webinar series has attracted more than 3,100 participants over 49 sessions, teaching companies about the skills and tools that can make them more energy-efficient.

Those are impressive numbers.

After 40 successful years of collaboration with industry, CIPEC continues to be a living example of what Canada does very well: work together to create solutions that support the advancement of business while bringing great benefits to everyone. Our vision has finally come of age. Now virtually all levels of government and much of industry is supportive of what we have worked so hard to accomplish all along, which is promote and support energy efficiency in every way we can. Truly, CIPEC Leaders have achieved results that all Canadians can be proud of and will continue to do so in the future.

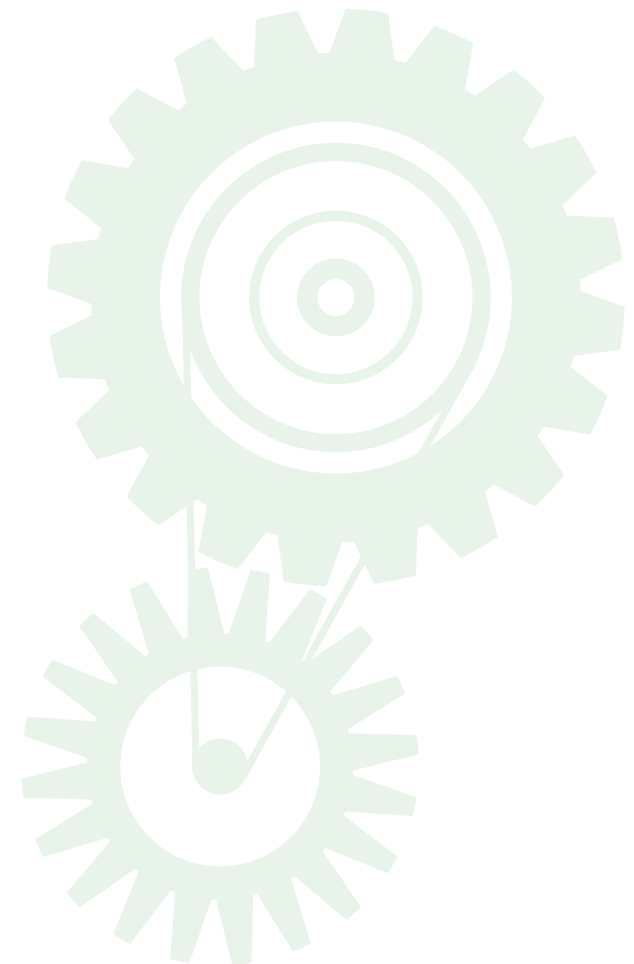
In closing, I would like to acknowledge the great work of CIPEC Task Force Council Chair Martin Vroegh, outgoing Chief of Industrial Partnerships Melissa Sutherland, and Sarah Stinson, Director of the Industry Division. I would also like to thank all of the great people who work at Natural Resources Canada (NRCan) to support CIPEC's goals. As well,

I thank the many dedicated people from industry who give their time and talent to work in the sector task forces and represent the needs and interests of their industries.

Sincerely,



Andrew Mahut
Chair, CIPEC Executive Board



The Results

The Canadian Industry Program for Energy Conservation (CIPEC) is an industry-government network consisting of 2,393 members, representing 21 industrial sectors and over 50 trade associations, and is the focal point for industry action on energy efficiency in Canada.

All CIPEC members have signed letters of commitment with NRCan reflecting industry's support for voluntary initiatives that lead to energy and cost savings, and commitment to providing NRCan with annual summaries of the energy savings projects and observed energy savings.

Since 2011, under the ecoENERGY Efficiency for Industry program, 53 CIPEC Leaders have voluntarily implemented an energy management project.

Over this same period, 17 CIPEC Leaders have voluntarily become certified to the ISO 50001 Energy Management System standard which requires them to continuously improve their energy performance.

Through effective energy management projects, industrial facilities have demonstrated significant improvements in energy efficiency, reductions in energy costs and improved energy performance.

For example:

- Chrysler Group LLC's Brampton assembly plant was the first automotive plant in Canada to achieve ISO 50001 certification resulting in energy cost savings of more than \$2 million annually.
- IBM's Bromont manufacturing plant was the first IBM facility worldwide to become ISO 50001 certified in 2013 and saw a 9.2 percent reduction in energy consumption and \$550,000 in energy cost savings that year.
- Lincoln Electric's Toronto facility became ISO 50001 certified in 2013 and saw a 22 percent energy savings that year.
- 3M Canada's Brockville plant was able to save \$350,000 in energy costs between 2011 and 2013 just in the work performed to achieve ISO 50001 certification.

Program Milestones – CIPEC's Evolution Over 40 Years

In 1975, the Government of Canada and 50 senior energy industry executives met to talk about strategies for dealing with the OPEC oil crisis, which had begun two years before. That meeting was effectively the birth of CIPEC.

Within a year, CIPEC had established 10 Canadian Industry Energy Conservation Task Forces with a goal to improve energy efficiency in industry by 12 percent by 1980. The work was ambitious, and it was a success. By 1978, the International Energy Agency said that CIPEC was “worthy of emulation by other member countries.” Over the next few years, CIPEC attracted hundreds of companies as early members and more than a dozen trade associations.

In 1990, The Government of Canada's Green Plan for a Healthy Environment signalled renewed interest in CIPEC and provided a focus for a renewed voluntary industry-government partnership. In 1991, the industry and the government planned a new organization that included sector task forces, a task force council and, for the first time, an Executive Board to provide top-down leadership as well as advice to the Minister of NRCan on industrial energy efficiency matters.

By the early 2000s, CIPEC's ranks had swelled to 45 trade associations representing 5,000 companies. Meanwhile, CIPEC launched the Energy Managers Network and enabled 18 industrial sectors to undertake benchmarking studies across more than 260 facilities. CIPEC played a key role in establishing the Industry Demand-side Management and Energy Efficiency Working Group. And, in 2009, CIPEC was awarded the Champion of Energy Efficiency in Industry Award by the American Council for an Energy-efficient Economy. Today, CIPEC is more robust than ever, representing 2,393 members across Canada.

Read on to learn about some of CIPEC's most important achievements and innovations over 40 years.

RECOGNIZING CIPEC INNOVATORS AND LEADERS

CIPEC has a long tradition of recognizing innovators and leaders in industrial energy efficiency. In 1995, we launched the Industrial Energy Innovators (IEI), and 178 companies pledged almost immediately to implement, review and report on their energy efficiency measures.

In 2008, IEIs became CIPEC Leaders, and over the next several years, thousands of companies signed on as Leaders. In 2015, the grand total stood at 2,393. CIPEC has recognized its Leaders since the beginning by presenting Leadership awards at its biennial energy conferences.

FUNDING ENCOURAGES ENERGY EFFICIENCY

Industrial Energy Audit Incentive program

The Industrial Energy Audit Incentive program ran from 2001 to 2007 and encouraged many companies to undertake energy audits by providing them with either \$5,000 or 50 percent of the total cost. Energy audits target specific areas of a facility's energy systems, establishing a baseline for companies so they can gauge the effectiveness of their energy improvement initiatives. The incentive motivated hundreds of companies to gather the information they needed to make sound energy management decisions. In 2005–2006, CIPEC expanded the audit program by introducing the Process Integration pilot program and the Combustion Diagnosis pilot. From 2001 to 2006, CIPEC provided more than 730 cost-sharing incentives under its audit suite of programs.

ecoACTION program and ecoENERGY Retrofit – Small and Medium organizations

In 2007, the Government of Canada reaffirmed its commitment to CIPEC by committing \$27 million over four years for the ecoACTION program. As part of ecoACTION, CIPEC introduced the ecoENERGY Retrofit program for small and medium-sized enterprises.

The program saw a good deal of uptake right away, with 70 companies signing on in 2008, saving roughly 270,000 gigajoules (GJ) of energy. The announcement of cost-sharing arrangements for companies willing to introduce PI and CFD into their energy efficiency efforts led to even greater uptake.

By the end of the ecoENERGY Retrofit program in 2011, more than 500 agreements had been funded. Those agreements saved companies \$11 million in energy costs and eliminated 130,000 t of GHG emissions. From the PI studies alone, more than 50 CIPEC Leaders saved 6,500 terajoules (TJ) in fossil fuel and biomass per year, which translates to \$54 million and eliminates 311 kilotonnes (kt) of GHG emissions.

ecoENERGY Efficiency for Industry

In 2011, CIPEC introduced four years of funding for a new suite of programs under ecoENERGY Efficiency for Industry. This new funding was for cost sharing for PI and CFD studies, energy assessments and ISO 50001 certification pilot projects.

The ecoENERGY Efficiency for Industry program began to offer cost-shared assistance of up to 50 percent of eligible costs to a maximum of \$40,000. The assistance was for industrial companies that implement energy management projects – including CAN/CSA-ISO 50001 Energy Management Systems standard pilots – and for two types of energy studies: PI and CFD.

By March 2016, the program had helped industry save 8.2 petajoules (PJ) of energy and reduce GHG emissions by 0.9 megatonnes (Mt).

PROGRAMS AND TOOLS HELP COMPANIES REDUCE AND SAVE ENERGY

Tools that promote energy efficiency

Since the Government of Canada Action Plan pledged in 2001 to support the development of new tools and services for companies exploring energy efficiency options, CIPEC has been a leader.

One early foray into developing and distributing targeted tools was producing an audit manual and tool for the 2006 Energy and Mines Ministers' Conference. Another was creating a boiler efficiency calculator tool in 2009, which attracted 1,085 registered users.

In 2010, CIPEC published the *Energy Management Information Systems Planning Manual and Tool*, which makes energy performance visible across an organization so multiple parties can participate in energy efficiency. From 2007 to 2011, CIPEC published energy efficiency benchmarking for most industrial sectors.

Heads Up CIPEC keeps its membership informed

CIPEC produced the first issue of its now popular *Heads Up CIPEC* newsletter in 1997 with just a handful of subscribers. Since then, *Heads Up* has covered a wide range of efficiency news for industry. It announces and reports on important energy conferences and shares the successes and best practices of Canada's most energy-efficient organizations and their leaders. *Heads Up* also promotes NRCan's energy

efficiency workshops. In 2002, the newsletter went online and since then has grown substantially in popularity. Today, *Heads Up* has more than 10,000 subscribers.

ISO 50001 Energy Management Systems standard

ISO standards set requirements, specifications, guidelines and characteristics that companies can use consistently to ensure that their materials, products, processes and services fit their purpose. In 2009, CIPEC played a significant role in global negotiations that developed an ISO standard for energy management – called ISO 50001 – ensuring that the Canadian voice was heard. This valuable exercise illustrated the best of CIPEC members and government officials working together in the interest of Canadian competitiveness and environmental progress. The CAN/CSA-ISO 50001 Energy Management Systems standard was launched in 2011.

That same year, CIPEC provided cost sharing for companies that wanted to certify under ISO 50001. In 2012, St. Marys Cement in North York, Ontario, and 3M in Brockville, Ontario, became the first two companies in Canada to achieve certification – a significant undertaking. By 2013, seven CIPEC Leaders had become ISO 50001 certified, which prompted CIPEC to produce several ISO case studies and videos, available on the [CIPEC website](#). In 2013, the Standards Council of Canada developed an accreditation process for ISO 50001 registrants. Notably, the process of certification has become simpler since a Canadian firm became a registrar. By 2015, 17 Canadian companies across six industrial sectors had become ISO 50001 certified.

Dollars to \$ense Energy Management workshops

In 1997, CIPEC began to offer the popular Dollars to \$ense Energy Management workshop series. The workshops teach companies how to reduce their energy use, lower their operating and production costs, create better work environments, and increase their operational efficiency. By 2005, Dollars to \$ense had attracted 9,000 participants, and CIPEC began to customize its workshops to appeal to a wider variety of industries.

Over the next several years, CIPEC updated and improved the series, adding such subjects as energy efficiency financing, EMIS and building recommissioning. Attendance soared, attracting an additional 11,000 participants. Between 2012 and 2015, the workshop series continued to keep pace with the times, with the notable addition of an ISO 50001 implementation workshop. By 2015, more than 30,000 people had participated in Dollars to \$ense workshops.

Energy Efficiency for Industry webinars

In 2010, CIPEC introduced its Energy Efficiency for Industry webinar series, which invites companies to learn skills and use targeted tools in their efforts to become more energy-efficient. Webinar topics are diverse, including the benefits of and best practices for using complex systems such as EMIS and RETScreen clean energy management software. Another topic is ensuring compressed air and motor systems are being managed as efficiently as possible. One webinar outlines the ISO 50001 Energy Management Systems standard and the best route to becoming ISO 50001 certified. These webinars have attracted more than 3,100 participants over 49 sessions.

Biennial energy conferences

In 2003, NRCan began to host a biennial industrial energy conference where CIPEC honours companies that have made a significant and innovative contribution to energy efficiency. The first conference coincided with CIPEC's 30th anniversary. At the second conference in 2007, CIPEC began to award companies for their energy efficiency efforts.

The event brings together Canada's leading energy subject-matter experts to share best practices and new innovations in industrial energy efficiency. Now called the Energy Summit, the conference offers sessions on a wide range of topics, including energy procurement strategies, manufacturing and the factory of the future.

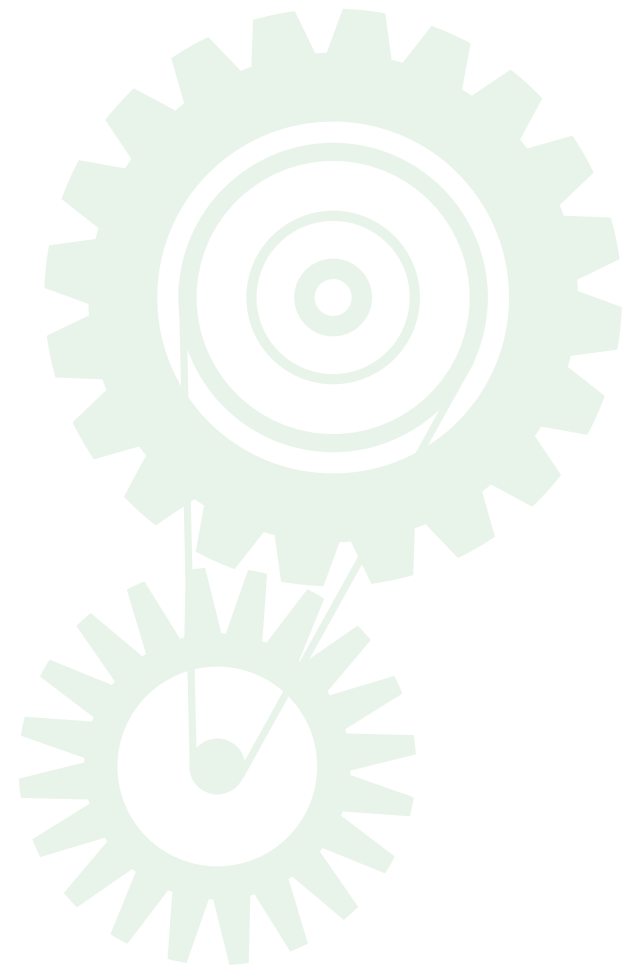
In 2011, the Future Leaders Award category was created to honour post-secondary students and recent graduates whose projects or initiatives have had an impressive impact on industrial energy efficiency. Today, the conference uses Leadership Awards to recognize companies that have demonstrated a significant and innovative contribution to energy efficiency. Over time, industry leaders have come to view the conference as an essential source of information and networking.

Council of Energy and Mines Ministers' Conference

In 2005, CIPEC was invited to participate in the Energy and Mines Ministers' Conference (EMMC) – an annual gathering of federal, provincial and territorial ministers responsible for energy and mining portfolios. The conference is a key meeting at which ministers discuss ways they can collaborate to advance energy and mining development across the country. In 2006, CIPEC introduced the *Energy Savings Toolbox – An Energy Audit Manual and Tool* that acts as a manual, theoretical framework and instructions for how to carry out the 10 steps of an energy audit.

In 2007, CIPEC helped write the watershed document *Moving Forward on Energy Efficiency in Canada: Achieving Results to 2020 and Beyond*, which sprang from that year's EMMC and an ongoing federal-provincial energy dialogue that began in 2006. The document provides tools for governments that want to pursue energy efficiency and conservation in their own unique ways.

In 2011, CIPEC presented its *Energy Management Information Systems Planning Manual and Tool* at the conference. In 2015, CIPEC presented the *Maximizing Canada's Energy Advantage – Canadian Industrial Energy Efficiency* report, several case studies and a synopsis of the energy efficiency programs available across Canada.



ISO 50001 Energy Management Systems Standard

Published in June 2011, the ISO 50001 Energy Management Systems standard establishes an energy management framework for all types of organizations and companies. The voluntary standard could quickly become a de facto requirement for businesses competing in today's globalized world.

An increasing number of Canadian organizations are seeking ISO 50001 certification because of the multiple economic and environmental benefits to be gained.

ISO 50001 follows the Plan-Do-Check-Act cycle for continual improvement of the energy management system. It enables organizations to integrate energy management into their other initiatives to improve quality, environmental performance and other management systems.

The standard is the product of the collaborative work of many countries striving to improve energy management. Canada helped develop the standard and continues to be involved in other global energy initiatives such as the Clean Energy Ministerial (CEM), which is a global forum to share best practices and programs that encourage and facilitate the transition to clean energy.

The CEM's Energy Management Working Group (EMWG) identifies best practices, creates and disseminates resources, and offers technical expertise to support efforts to promote energy management.

EMWG publishes Canadian case studies to illustrate the benefits of ISO certification. In addition, the CEM website provides ISO 50001 case studies from other countries that apply to several industrial sectors.

Currently, 17 organizations in Canada are certified to ISO 50001, while several others are in the process of implementing the standard. Organizations have reduced their annual energy consumption by as much as 22 percent in the initial years after becoming certified.

Initiatives are being undertaken to improve the Canadian support for organizations implementing energy management systems. The Standards Council of Canada and NRCAN have developed an ISO 50001 auditor certification protocol to

develop professional skills needed to conduct high-quality audits. The Canadian Mirror Committee, which includes representatives from industry, government, consultants and special interest groups, has developed an energy management strategy plan to promote the uptake of energy management to industry.

The CEM initiated its first edition of the [Energy Management Leadership Awards](#) to be presented at the CEM7 conference in June 2016 in San Francisco, California. Several prestigious awards in clean energy leadership will recognize organizations that have developed an energy management system (EnMS) that has been certified by a third-party to the ISO 50001 standard.

To encourage and support ISO 50001, NRCAN offers cost-shared assistance for organizations that are implementing the standard.

Energy Efficiency Programs and Tools for Industry

NRCan offers several energy efficiency and renewable energy programs and services to meet the needs of Canadian industry.

NETWORKING OPPORTUNITIES

- Canadian Industry Program for Energy Conservation (CIPEC)

LICENCED ENERGY MANAGEMENT WORKSHOP SERVICES

DOLLARS TO \$ENSE ENERGY MANAGEMENT WORKSHOPS

Hundreds of organizations have reduced operating costs by adopting energy-saving practices offered through the [Dollars to \\$ense Energy Management workshops](#). The workshops are facilitated by leading experts in energy efficiency and give owners, managers and operators of industrial facilities a competitive edge in managing energy costs.

Contact NRCan to find out more about workshops.

Email: nrcan.ipd-dpi.nrcan@canada.ca

WEBINARS

Webinars are free online workshops for CIPEC Leaders that feature real-world examples. Topics include the ISO 50001 Energy Management Systems standard, EMIS, PI and CFD, CHP systems, motor systems management, compressed air, boiler efficiency, RETScreen® Clean Energy Management software and more. Webinars are offered monthly.

For more information, send an email to info.ind@nrcan-nrcan.gc.ca.

COST-SHARING

CIPEC Leaders can leverage CIPEC resources to implement ISO 50001. The Energy Efficiency for Industry program is offering cost-sharing to industrial companies to perform ISO 50001 implementation pilots, energy assessments and other energy management projects.

NRCan will provide up to 50 percent of the cost, to a maximum of \$40,000, for

- [Implementation pilots for the ISO 50001 Energy Management Systems standard](#).
- [PI studies](#).
- [CFD studies](#).
- Energy management projects.

To be eligible, a company must have written approval of its technical proposal from NRCan before beginning the project.

For more information on the ISO 50001 Energy Management System standard, visit nrcan.gc.ca/energy/efficiency/industry/cipec/5379.

Or send an email to info.ind@nrcan-nrcan.gc.ca.

CLASSES 29, 43.1, AND 43.2 AND CRCE TAX SAVINGS

Companies that invest in manufacturing and processing equipment may take advantage of Class 53 in Schedule II of the *Income Tax Regulations* (the Regulations). This tax incentive allows for the capital costs of certain manufacturing and processing equipment acquired after 2015 and before 2026 to be written-off at 50 percent per year as a capital cost allowance (CCA) on a declining balance basis.

Companies that invest in clean energy generation and energy conservation equipment such as cogeneration systems, photovoltaic panels, wind turbines and bio-fuel production equipment may be able to write-off the capital costs of such equipment at accelerated CCA rates under Class 43.1 or 43.2 in the Regulations.

Under Class 43.1 or 43.2, the capital costs of qualifying equipment can be written-off at 30 or 50 percent per year, respectively, on a declining balance basis. Without these accelerated write-offs, many of these assets would be depreciated at annual rates of between 4 and 30 percent.

The eligibility requirements for Class 43.1 and 43.2 are generally the same, except that for Class 43.2, equipment must be acquired after February 22, 2005, and before 2020 to be eligible, and fossil-fuel cogeneration equipment must meet a higher efficiency standard to qualify.

NRCan is the technical authority for Classes 43.1 and 43.2. Further information on what equipment qualifies for Class 43.1 or 43.2 is in the *Technical Guide to Class 43.1 and 43.2*. In addition to Class 43.1 or Class 43.2 CCA, the Regulations allow expenses incurred during the development and start-

up of renewable energy and energy conservation projects to be handled in several ways. Canadian Renewable and Conservation Expenses (CRCE) can be fully deducted in the year incurred, carried forward and deducted in future years, or financed through flow-through shares. Further information on the project expenses that qualify as CRCE is provided in the *Technical Guide to Canadian Renewable and Conservation Expenses (CRCE)*.

Budget 2016 proposes to expand eligibility for the accelerated capital cost allowance for clean energy generation equipment under Class 43.1 and Class 43.2 to include electric vehicle charging stations and electrical energy storage equipment. Further information on the proposed changes may be found on pages 21–24 of *Tax Measures: Supplementary Information*, which may be downloaded from the [Budget 2016 website](#).

TECHNICAL SUPPORT

- Canadian Industry Program for Energy Conservation (CIPEC)
- [technical guides, benchmark studies and tools](#)

ISO 50001 – ENERGY MANAGEMENT SYSTEMS STANDARD

Published in June 2011, the [ISO 50001 Energy Management Systems standard](#) establishes an energy management framework for all types of organizations and companies. This voluntary standard could quickly become a de facto requirement for businesses competing in today's globalized world.

ISO 50001 IMPLEMENTATION WILL:

- Help organizations make better use of their existing energy-consuming assets.

- Create transparency and facilitate communication about the management of energy resources and the promotion of energy efficiency throughout the supply chain.
- Lead to significant reductions in energy costs, GHG emissions and other environmental impacts.
- Promote energy management best practices and reinforce good energy management behaviours.
- Help facilities evaluate and prioritize the implementation of new energy-efficient technologies.
- Allow integration with other organizational management systems, such as environmental and health and safety systems. It is compatible with other performance improvement approaches (SEP, Lean, Theory of Constraints, Six Sigma, 5S, etc.) and energy management systems.

ENERGY MANAGEMENT INFORMATION SYSTEMS – PLANNING MANUAL AND TOOL

The Energy Management Information Systems tool makes energy performance visible to different levels of the organization so that actions can be taken to create financial value for the company. The tool is also a performance management system that helps reduce energy consumption and cost.

For more information on the *Energy Management Information Systems – Planning Manual and Tool*, visit nrcan.gc.ca/energy/efficiency/industry/cipec/5223.

Or send an email to info.ind@nrcan-rncan.gc.ca.

The Year in Review

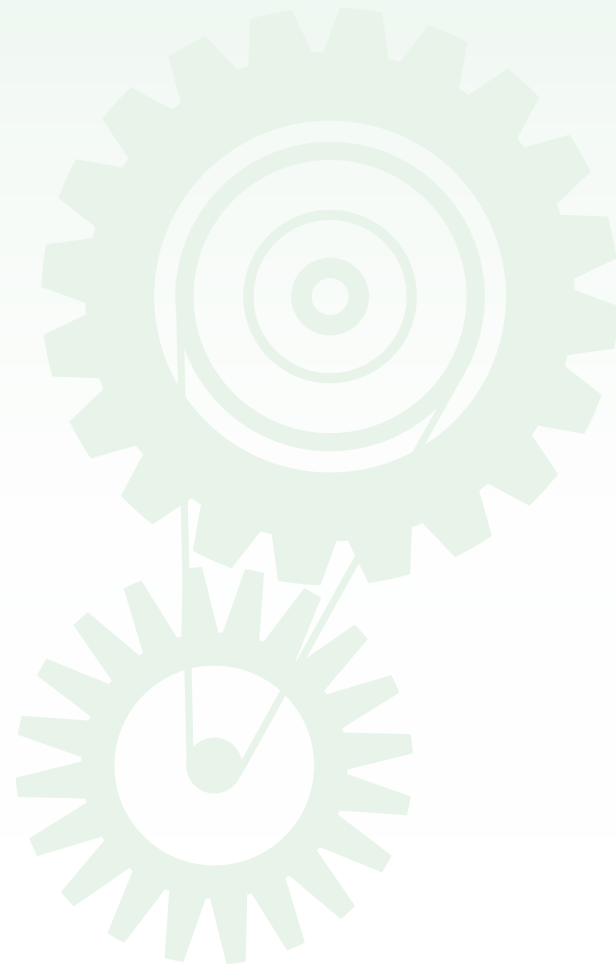
CIPEC members continued to make advances in energy efficiency during the past year. These impressive gains were realized thanks to strong leadership and dedication from the CIPEC Executive Board, the Task Force Council and the 17 task forces, together with support from the Office of Energy Efficiency (OEE).

CIPEC Leaders that were certified to the ISO 50001 Energy Management System standard include FCA Canada Inc. (Etobicoke and Windsor), 3M Canada Perth (Plant 301 and 302), Schneider Electric Canada Inc., and Global Wood Concepts Ltd.

The number of CIPEC Leaders stands at 2,393.

Dollars to \$ense Energy Management workshops were delivered to more than 1,000 people, bringing the total to more than 30,000 attendees since the workshops were first offered in 1997.

More than 565 people attended 8 CIPEC webinars. Since the first webinar in 2011, more than 3,100 people have attended 49 webinars.



Industry Sector Profiles

Accurate measurement and meaningful data are fundamental to measuring energy improvements. Data used in this annual report is collected by Statistics Canada, with funding from NRCan and Environment Canada, and supplemented by information received from associations that participate in CIPEC, as well as other private and government organizations. The data represents entire industrial sectors, not just CIPEC members.

Statistics Canada data for the manufacturing sector is collected through the annual Industrial Consumption of Energy (ICE) survey, which covers about 4,300 establishments in the manufacturing sector. For each establishment, the survey gathers information on energy fuel consumption for 13 fuels. Survey results are used to track energy efficiency improvements, calculate CO₂ emissions and inform Canadians about energy conservation.

Statistics Canada began streamlining the questionnaire and data collection process in 2004. The changes included standardizing some special industry questionnaires, making provisions for respondents to explain any major changes in energy consumption and thus minimize follow-up inquiries, and converting fuels to a standard unit of measure. Data analysis and interpretation involve the collective effort of NRCan's OEE, CIPEC trade associations and the Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC) at Simon Fraser University in Burnaby, British Columbia. The CIEEDAC produces energy intensity indicators for each sector based on production and gross domestic product (GDP).

Much of the ICE data is available online. Statistics Canada data is published in CANSIM Table 128-0005 – Energy fuel consumption of manufacturing industries in natural units, using the North American Industry Classification System (NAICS) and CANSIM Table 128-0006 – Energy fuel consumption of manufacturing industries in gigajoules, also using the NAICS.

For more information, see the Statistics Canada website at statscan.ca.

The OEE publishes *Energy Efficiency Trends in Canada* annually at oee.nrcan.gc.ca/corporate/statistics/neud/dpa/data_e/publications.cfm.

Data from the CIEEDAC is available at www2.cieedac.sfu.ca/index.html.

Additional Sources:

[Alberta Energy Regulator](#). 2013. Fort McMurray office. Data excludes in situ production.

[Beer Canada](#), Ottawa. March 2015.

[Canadian Dairy Information Centre](#). March 2015.

Canadian Fertilizer Institute (CFI), 1990, 1999-2009, November 2010 and 1995-1998, March 2006.
Natural Gas – 1990, 1999-2006, November 2010.
Natural Gas – 1995-1998, March 2011.

[Informetrica Limited](#), *T1 Model and National Reference*. Forecast. March 2015.

Natural Resources Canada, *Production of Canada's Leading Minerals*. March 2015.

Natural Resources Canada, *Minerals & Metals Sector*. March 2015.

[Portland Cement Association \(PCA\)](#)

The *CAPP Responsible Canadian Energy Report 2013*. Canadian Association of Petroleum Producers.



Aluminum

PROFILE

The aluminum sector comprises companies engaged primarily in extracting alumina from bauxite ore, producing aluminum from alumina, refining aluminum by any process, and rolling, drawing, casting, extruding and alloying aluminum and aluminum-based alloy basic shapes. Canada's aluminum sector is ranked fourth in the world in annual primary aluminum production after China, Russia and the Middle East and is the second-largest exporting country after Russia. The combined output of the aluminum plants in Canada is a major contributor to Canada's national and local economies. There are nine aluminum smelters in Quebec and one in British Columbia. Arvida, Quebec, hosts an alumina refining site, while coke calcination plants are located in Arvida and in Kitimat and Strathcona, British Columbia.

ACHIEVEMENTS

Finding efficiencies in an energy-intensive industry

Aluminum production is highly dependent on energy. Roughly 35 percent of its production cost is for the energy required to extract aluminum from alumina in the electrolysis cell. This process reality motivated aluminum

manufacturers to improve and reduce their energy intensity, despite an increase in aluminum production in recent years.

All 10 aluminum smelters operated by Alcoa, Alouette and Rio Tinto Alcan have achieved member certification from Hydro-Québec's Energy Savers' Circle. The companies' energy efficiency measures include process improvements, rigorous analysis of energy consumption for optimization and the development of effective energy efficiency strategies. Meanwhile, because much of the aluminum production taking place in Canada relies on hydroelectricity, which is clean and renewable, Canadian aluminum ingots stand out worldwide for their low carbon footprint.

Alcoa's commitment to sustainability

Alcoa Canada Global Primary Products (GPP Canada) ensures its long-term success by building on three pillars of achievement: economic, social and environmental. In 2014, GPP Canada made substantial improvements on the environmental pillar, realizing a 7 percent reduction in GHG production in the Baie-Comeau, Quebec, region compared to 2012 levels. This was largely due to the closure of the Söderberg potlines. By the

end of 2013, the company's total direct GHG emissions had decreased by nearly 37 percent compared to 2001.

In addition, GPP Canada's three smelters continue to be Distinction members of Hydro-Québec's Energy Savers' Circle. The closure of the Söderberg potlines contributed once again to success for GPP Canada by reducing the smelters' energy intensity to 48.84 gigajoules/tonne (GJ/t Al) of aluminum in 2013 compared to 49.27 GJ/t Al in 2012.

Through other projects, each smelter was also able to reduce fuel consumption. At the Bécancour smelter, fossil fuel consumption decreased from 2.66 to 2.58 GJ/t Al, mainly from the installation of new automated burner ramps for the anode baking furnace.

Aluminerie Alouette

Energy efficiency is a priority at Aluminerie Alouette as a means of ensuring sustainable growth and development. By optimizing its processes in 2014, Alouette was able to significantly decrease its GHG emissions in the final months compared to the early months.

The company is also dedicated to using fuel in innovative and environmentally beneficial ways, such as using natural gas

(subject to availability in Northern Quebec) in its anode baking furnace. Alouette is also careful about its use of water; water used for industrial purposes is reused in the smoke treatment centres' cooling towers.

The future of the Canadian aluminum industry

In reaction to more stringent standards for fuel consumption, the automotive sector in Quebec continued to develop aluminum for use as a strong, lightweight material that improves vehicles' fuel efficiency. The Ford Motor Company, a pioneer in adopting aluminum for body parts, released its popular F-150 pickup truck with an aluminum body in 2015. This will likely spur change across the industry as the supply chain adjusts to accommodate automobile manufacturing needs.

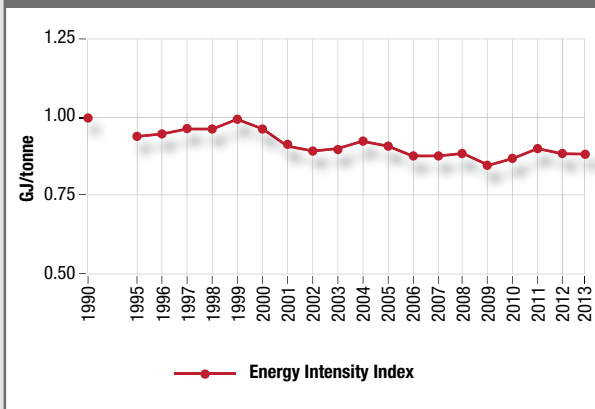
The aerospace sector has similarly turned its attention to aluminum, although other composites are also vying for position as the material of choice. In aerospace, one important business driver is to reduce operating costs per passenger – and creating lighter aircraft is a key means of accomplishing that.

For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5255.



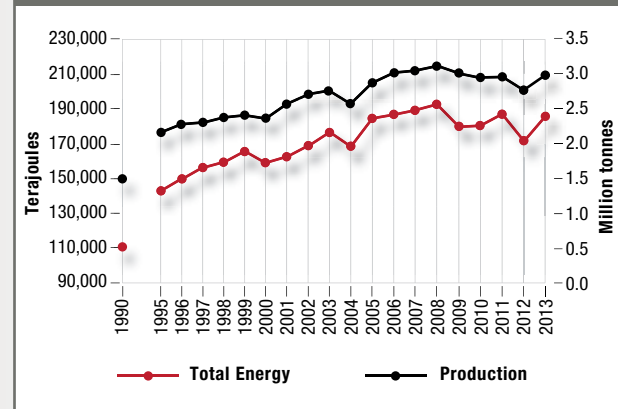
HIGHLIGHTS Aluminum Sector – NAICS 331313

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



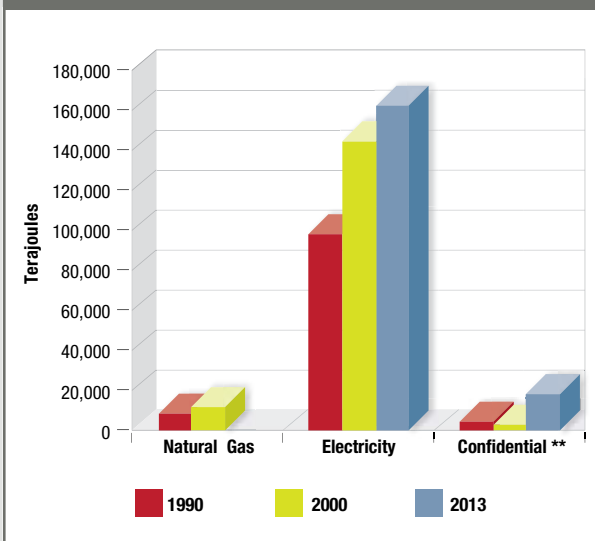
Energy intensity decreased by 0.2 percent between 2012 and 2013.

Total Energy and Physical Output (1990–2013)



Between 2012 and 2013, total energy consumption increased by 6.5 percent, and total production increased by 6.7 percent.

Energy Sources



** Confidential includes heavy fuel oil, middle distillates, natural gas and propane.

Electricity consumption increased by 6.4 percent between 2012 and 2013.



Brewery

PROFILE

The Canadian brewery industry includes about 371 licensed breweries, which is an increase of 40 percent over the past five years. Economic activity in the beer economy accounts for 0.9 percent of Canada's GDP and a combined \$5.8 billion in federal, provincial and municipal tax revenues.¹

Mergers and acquisitions, along with the establishment of microbreweries and craft breweries, have changed the industry in recent years. According to Statistics Canada's Canadian Business Patterns database, large firms often employ more than 500 workers at a single establishment, while small microbreweries employ fewer than 50 people. The production, marketing, distribution and sale of Canadian beer generate more than 163,200 jobs.

Energy and utility costs typically represent 3 to 8 percent of a brewery's expenditures. Between 1990 and 2012, the average amount of energy Canadian brewers consumed to produce 100 L of beer declined by 58 percent.

ACHIEVEMENTS

Optimizing efficiency in Waterloo

Waterloo Brewing Co., Ontario's largest Canadian-owned brewery, took a multi-pronged approach in 2015 to reducing its energy use. With more than 150 motors running its bottling processes, the company saw great potential in installing variable-frequency drive (VFD) controllers and automation. Spikes in electricity consumption have been eliminated as a result. Waterloo Brewing Co. also installed VFDs to regulate the flow of glycol when less cooling is required in the beer filtration process.

But the company did not stop there. It also improved lighting conditions in the facility by replacing 100 lights and lamps with LED and T-5 lamps. In all, Waterloo Brewing Co. has reduced its annual utility bill by 13 percent – or 290,000 kilowatt-hours (kWh) – and saved more than 40 kW in electricity demand. This translates to more than \$21,000 in electricity cost savings.

Industrial lighting project a “no-brainer”

Vancouver Island Brewery upgraded its lighting to address employees' concerns about poor lighting conditions in the workplace. The results have been nothing but positive.

After employees indicated that their workplaces were “a little dark” in some areas, the brewery researched options. Then it undertook a top-to-bottom upgrade, removing 400-W metal halide lights in its Victoria, British Columbia plant and installing T-5 fixtures in their place. The upgrade saves the company roughly 130,000 kWh of electricity a year, despite increased production. The lower electricity bill, combined with a Power Smart incentive of \$18,930 from BC Hydro, has created an extraordinary 1.2-year payback period for the brewery. The brewery is also saving money on maintenance costs and producing more natural lighting, which has delighted its employees.

¹ beercanada.com/economic-impact-beer

Careful energy oversight in Quebec

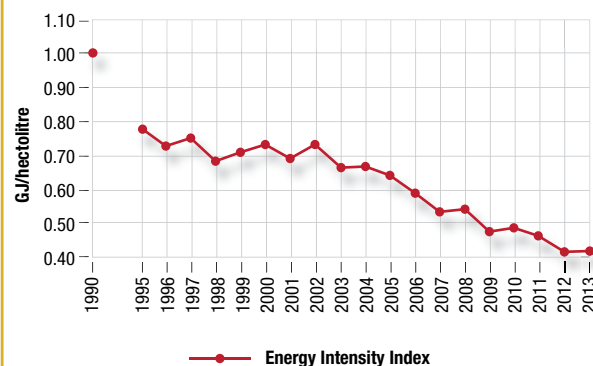
The Quebec Brewers Association continued last year to target water stewardship and energy use as fundamental concerns for the sector. Water is an essential ingredient in brewing, so maintaining quality and reducing consumption remain key issues. On energy use, the Quebec industry continues to seek ways to improve efficiency in its brewing process, electricity usage and fuel usage for distributing products.

For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5251.



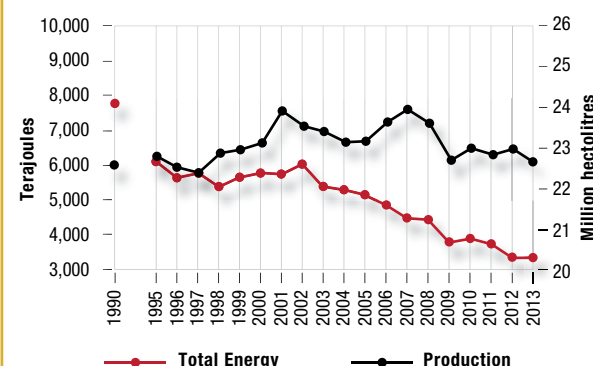
HIGHLIGHTS Brewery Sector – NAICS 31212

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



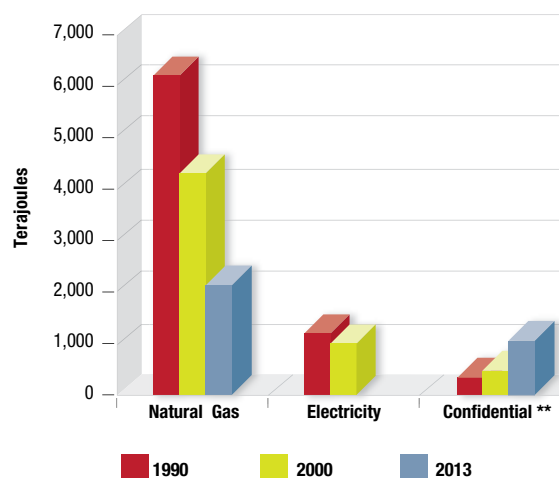
Energy intensity increased by 0.8 percent between 2012 and 2013.

Total Energy and Physical Output (1990–2013)



Between 2012 and 2013, total energy consumption decreased by 0.7 percent while total production decreased by 1.5 percent.

Energy Sources



** Confidential includes electricity, heavy fuel oil and middle distillate.



Cement

PROFILE

A key player in Canada's construction sector, the cement industry provides a reliable material essential to building and maintaining the country's communities and critical infrastructure. The combined cement and concrete industry contributes an estimated 170,000 direct and indirect jobs to the Canadian economy and more than \$80 billion in direct, indirect, and induced economic impact.

In 2014, Canada's eight cement companies operated 16 manufacturing facilities across the country and produced roughly 12 million t of cement. Energy accounts for about 40 percent of total input costs in the manufacturing process. Between 2003 and 2013, the industry increased its energy efficiency by almost 8 percent and continues to aggressively pursue strategies to reduce its reliance on the use of fossil fuels.²

ACHIEVEMENTS

Steady innovation across multiple companies and technologies

Lafarge Canada Inc.'s new Innovation Hub in Edmonton – itself made of highly efficient

precast concrete – is a laboratory and showcase for such materials as polished thermal floors, concrete walls that engage thermal mass, radiant in-floor heating and a rain and water reclamation system. Lafarge uses the Hub as an innovation centre, where researchers find ways to reduce the environmental footprint of products and buildings.

CarbonCure Technologies, in Dartmouth, Nova Scotia, continued to reduce the carbon footprint at masonry and ready-mix concrete plants by retrofitting them with an innovative technology. CarbonCure's technology injects waste CO₂ that is stored onsite at a client's plant into mixed concrete, where the CO₂ is permanently converted into a fine solid material that blends with the concrete. In the process, carbonate ions react with calcium in the cement to create a nano-version of calcium carbonate (limestone). Several structures have been built using the promising new technology, including a Pan Am Games Pool in Markham, Ontario, and the Tridel Hullmark Centre in Toronto.

At Lakehead University in Thunder Bay, Ontario, researchers are developing additives that make concrete significantly stronger while reducing GHG emissions. A type of sugar called polyol is added to

concrete and holds the mix together more effectively with less material. The additive is being tested and improved by the GreenCentre Canada, a centre that helps commercialize environmentally focused chemistry innovations.

A cogeneration system with little economic risk

In 2015, St. Marys Cement's CBM Leaside Toronto Ready Mix plant installed a new 800-kW CHP system that will bring significant economic benefits and also provide far greater reliability in the event of a power failure. CHP systems, also called cogeneration systems, simultaneously produce electricity and heat from a single fuel source. Surplus heat from the system's generator will be used to heat the office building and also drive an air-conditioning system during summer. The new CHP system promises thermodynamic efficiency of 80 or more. One of the great benefits of a CHP system is that it provides a reliable power supply that will enable the plant to continue production during a power failure.

A key aspect of this massive upgrade was the economic model supporting it. MCS Energy provided St. Marys with a complete solution based on selling electricity to the

² www.cement.ca

plant. The arrangement means that St. Marys benefits from onsite cogeneration without any capital investment – and with energy costs within the operating budget.

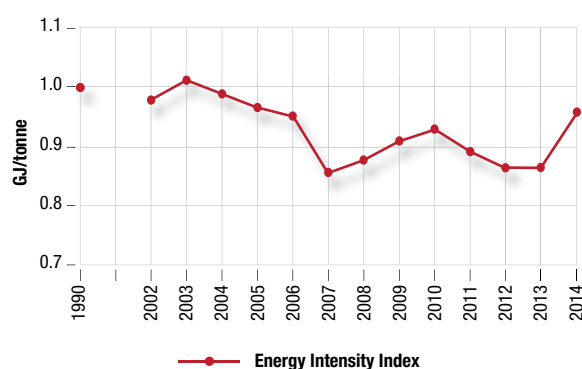
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5241.



HIGHLIGHTS

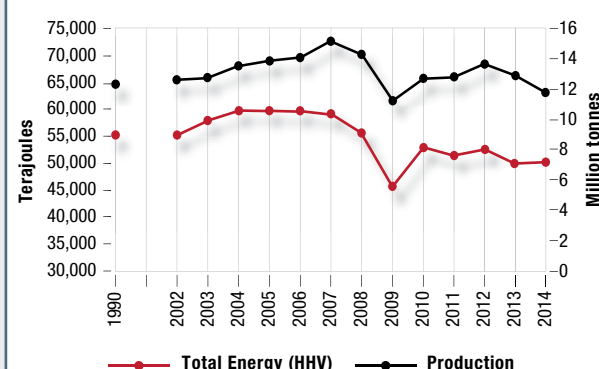
Cement Sector – NAICS 327310

Energy Intensity Index (1990–2014)
Base Year 1990 = 1.00



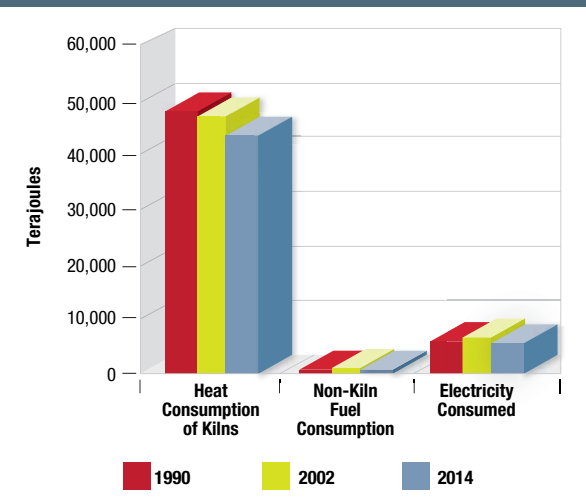
Energy intensity increased by 10.8 percent between 2013 and 2014.

Total Energy Consumption and Physical Output (1990–2014)



Between 2013 and 2014, energy consumption increase by 0.4 percent while production decreased by 9.4 percent.

Energy Sources



The heat consumption of kilns increased by 2.2 percent and electricity consumption decreased by 13.4 percent between 2013 and 2014.



Chemicals

PROFILE

Canada's diverse industrial chemicals sector produces organic and inorganic chemicals and synthetic resins and rubbers. Members of the [Chemistry Industry Association of Canada \(CIAC\)](#) produce about 75 percent of industrial chemicals manufactured in Canada.

Chemical manufacturing sites are concentrated in three provinces, and the chemical output comes from Ontario (43 percent), Alberta (26 percent) and Quebec (19 percent). The overall chemical industry employs 80,900 people directly and 400,000 indirectly.

Year-end sales of all chemicals for 2014 were estimated at \$54.2 billion, which is 5 percent more than the previous year. Operating profits for Canadian operations set a new record in 2014, rising 15 percent to \$8.3 billion. Profitability was driven largely by a combination of lower input costs and higher selling prices for chemical products.

The overall chemical sector exported two thirds of domestic production, with 76 percent of that going to the United States, 4 percent to China, and 2 percent to each of Japan, Italy, the United Kingdom, Mexico and Belgium. Total exports in 2014 were \$35.5 billion – 11 percent more than in 2013.

ACHIEVEMENTS

Energy conversion a major focus at BASF

BASF Canada continues to live up to its reputation as a corporate leader by increasing its use of CHP to generate both electricity and steam for its operations. The cogeneration systems that BASF uses have a fuel efficiency of nearly 90 percent and are frontrunners among energy conversion methods suitable for industry.

Worldwide, BASF uses more than 25 gas turbine plants to cogenerate heat and power. This meets roughly 70 percent of the corporation's electricity needs and produces extraordinary savings on fossil fuels for heating.

The 13 million megawatt-hours (MWh) of electricity that the turbines produce corresponds to 2.4 million t in prevented emissions. BASF has been named one of Canada's Top Foreign Corporate Citizens by Corporate Knights, the Toronto-based media and investment advisory company.

EVONIK Degussa Canada

EVONIK Degussa Canada considers economic and ecological concerns to be equally important as the company becomes increasingly vigilant about its energy use. Many factors come into play in EVONIK's steady improvements, including determining the best uses for the company's cogeneration plants and the most efficient ways to use integrated structures that link chemical production and energy generation. The company also considers using renewable energy where possible – provided the supply of energy is reliable and reasonably cost-efficient. Many of EVONIK's EnMSs are based on the high standards of ISO 50001.

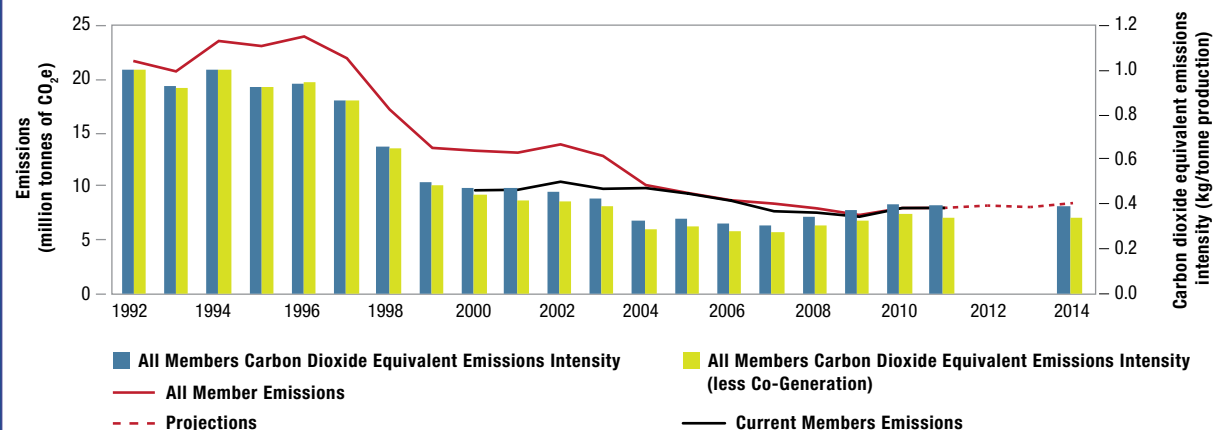
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5261.



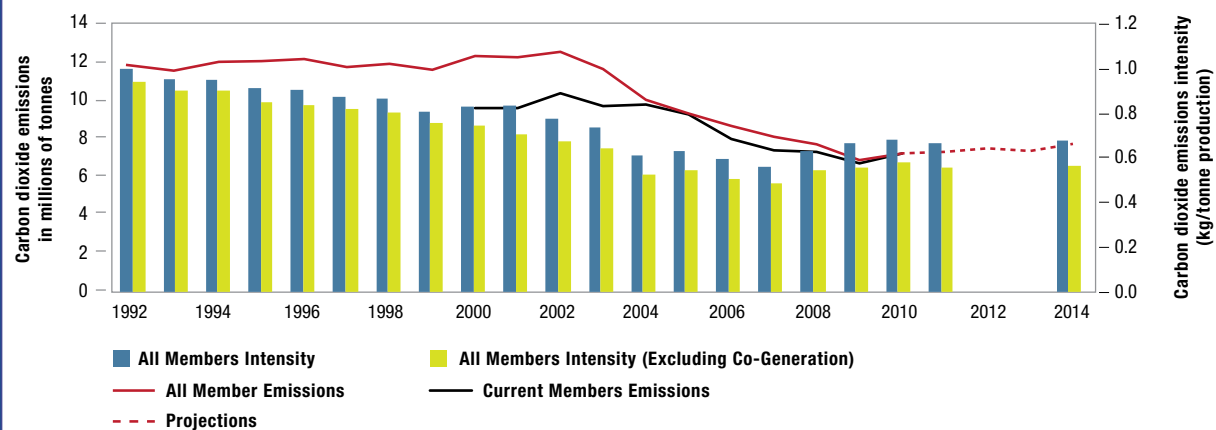
HIGHLIGHTS

Chemicals Sector – NAICS 325

Carbon Dioxide Equivalent Emissions Performance



Carbon Dioxide Emissions Performance





Construction

PROFILE

Canada's construction industry has a bright future; it is expected to become the fifth largest construction sector in the world. Today, the construction industry employs 1.37 million workers in Canada, which accounts for 7 percent of the total workforce. It generates \$90 billion in economic activity, or 7 percent of Canada's total GDP. The construction industry's burgeoning success is driven primarily by global demand for natural resources and the need to modernize Canada's aging infrastructure.³

Canadian Construction Innovations (CCIInnovations) is the construction industry's representative with CIPEC. CCIInnovations was established in 2013 to drive discussions about innovation within the Canadian construction industry. More specifically, the organization provides a framework for industry to collaborate and innovate with the ultimate aim of increasing competitiveness. The following are some areas in which CCIInnovations experienced significant achievements this year.

ACHIEVEMENTS

Drones can increase productivity and reduce environmental impact

Drones have great potential within the construction sector, in everything from site planning, to construction documentation, to safety inspections. Companies can use drones equipped with sensors for environmental reporting, for investigating potential building sites for remote projects, or for assessing hard-to-access bridges for maintenance and construction. These applications all show promise for eliminating heavy equipment, which has significant implications for reducing energy use and GHG emissions.

The use of drones is just now emerging in the construction industry, and Canada is a leader. In 2015, CCIInnovations released an easy-to-read *Booklet on the Use of Drones in the Construction Industry* that describes, among other things, the range of drones on the market today, what they cost, what they do, bylaws and regulations that companies should know about, and the peripheral equipment (3D modelling, sensors, etc.)

a company might want to put to use via drones. The booklet is the only concise, construction-related resource available.

Lots of room for modular construction to grow

Modular construction saves energy and reduces waste by enabling construction companies to better plan their projects in advance. With most material elements of their projects fully designed, companies' productivity increases when they use modular techniques; and better productivity always leads to less energy consumption. Modular construction is seen as a key driver for innovation in construction and for value-added marketing of Canadian resources. As an added bonus, it promotes worker safety.

In fall 2015, Concordia University together with the Building Modular Institute, the University of Alberta, CCIInnovations and Canam Group Inc. hosted a workshop on modular construction. The event revealed that in North America less than 2.34 percent of construction is modular, showing that this construction method has great potential to grow. CCIInnovations will actively pursue initiatives to shift attitudes and practices in favour of modular construction.

³ Canadian Construction Association

Clearinghouse to generate fresh ideas

CCIInnovations launched a clearing house this year with chat rooms designed for people to speak openly about the construction industry, as well as projects and activities they would like to see CCIInnovations undertake. One area of focus for the chat rooms is energy conservation to address issues such as the best ways to handle conservation and how industry can come together to work toward common ends. CCIInnovations expects the chat rooms to generate ideas that the organization can act on in the coming months and years.

Owners' opinions of industry performance

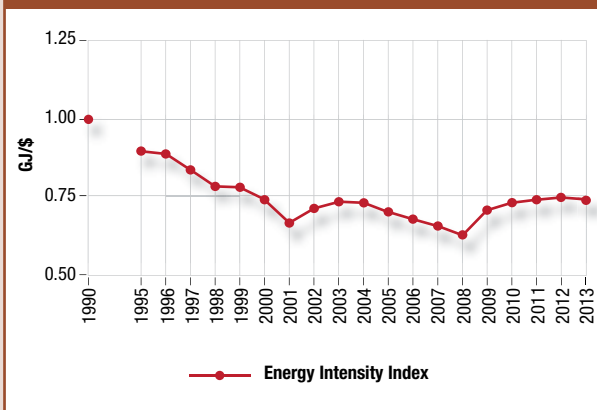
In the fall of 2015, CCI conducted a study with input from construction owners to assess the main challenges in construction. They also performed a gap analysis to determine how research, collaboration and trends can best align with industry needs. This analysis will become a very useful tool for CCI in determining the clusters (research areas) that need to be prioritized. In the coming months, CCI will consult further with industry on the findings on this study.

For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5271.



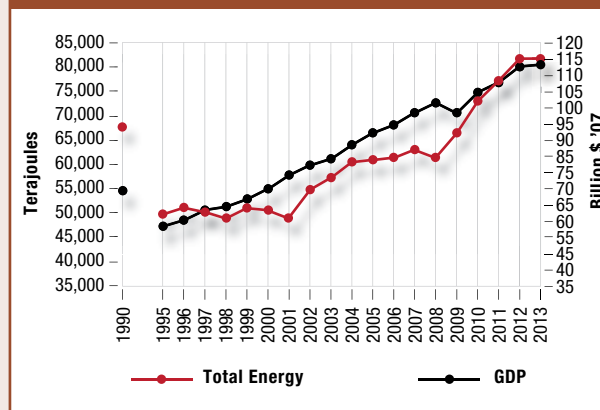
HIGHLIGHTS Construction Sector – NAICS 23

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



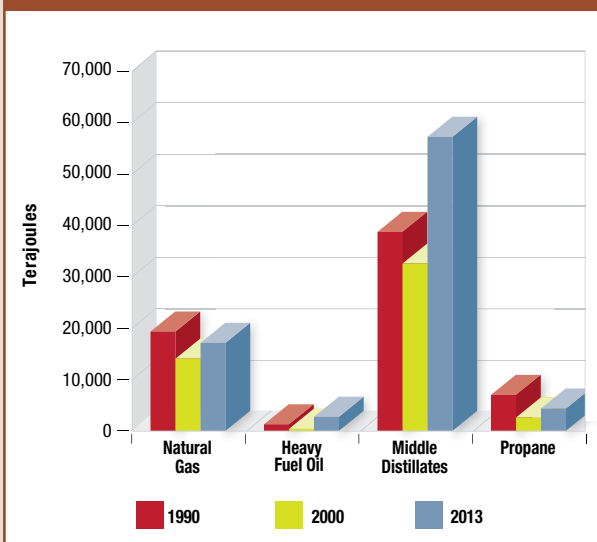
Energy intensity decreased by 0.94 percent between 2012 and 2013.

Total Energy and Economic Output (1990–2013)



Between 2012 and 2013, total energy consumption decreased by 0.17 percent, while total production increased by 0.77 percent.

Energy Sources



Between 2012 and 2013, natural gas consumption increased by 1.21 percent, while middle distillates consumption decreased by 0.43 percent.



Dairy

PROFILE

In 2014, Canada's dairy industry generated \$6.07 billion in net farm income. Of the 11,962 dairy farms in Canada, the three largest manufacturers – Saputo Dairy Products Canada, Agropur cooperative and Parmalat Canada Inc. – operate 444 dairy plants.

Dairy producers supply two principal markets: the fluid market, which accounts for 28.2 hectolitres (hL) of total production and which includes flavoured milks and creams and the industrial market, which represents 49.9 hL of supply to make products such as butter, cheese, yogurt and ice cream.

Canadians looking for healthy and nutritious products continue to have access to an ever-expanding range of high-quality and innovative Canadian dairy products. Newer dairy products include Greek-style yogurt, prebiotics and probiotics, lactose-free products, and calcium or omega-3 fortified products. Milk protein products continue to be used as ingredients in a growing array of foods, such as infant formula, sports and nutritional beverages and confections.

The Canadian cheese industry has entered a mature phase. We see two areas of evidence of this. One is the extensive know-how that the industry has developed by

adopting and experimenting with a variety of cheese-making traditions. The second area is the more than 1,000 varieties of cheese (cow, goat, ewe and water buffalo) that have resulted from this experimentation. Many Canadian cheeses are recognized around the world for their quality and taste.⁴

ACHIEVEMENTS

Delevan Canada sustainability awards

Every year, Delevan Canada presents the Dairy Farm Sustainability Award to Canadian dairy farmers who have demonstrated leadership in sustainable farming. Award winners are those who have been proactive in their adoption of sustainable on-farm management practices that go beyond regulatory requirements. Winners also demonstrate continuous improvement in various aspects of sustainable dairy farming, such as the ways in which they use natural resources and how they care for animals. Here are short profiles of three award finalists for 2015.

Community leaders in environmentally friendly farming

The owners of Ferme Bois Mou in Saint-Félix-de-Kingsey, Quebec, are leaders and

innovators in environmentally friendly farm practices. Their goal is to build a healthy future for their family, their neighbours and the next generation of farmers. Ferme Bois Mou focuses its mission primarily by investing in new technologies and practices that not only protect the environment, but also increase their farm profitability. Their practice of direct seeding in all fields has reduced machinery use and costs and improved soil structure and yields. They have used an agri-environmental fertilization plan since 1998, updating it with help from agronomists every year. They follow a careful waste reduction and recycling program and recover water from their refrigeration system to minimize their water use.

At Ferme Bois Mou, animal care and comfort are priorities, soil erosion is virtually non-existent, and fall cover-crop planting has improved nutrient retention in the soil and decreased herbicide costs by keeping weeds at bay. To spread their message throughout the farming community, Ferme Bois Mou has hosted many open houses and lectured about their agri-environmental practices.

An environmentally successful family enterprise

The sixth-generation Perryhill Farm is an active community leader that continually finds new ways to improve the farm's

⁴ *Canadian Dairy Industry at a Glance*. Canadian Dairy Information Centre. October 2015.

efficiency, sustainability and profitability. Its owners have instituted several environmental, animal health and record keeping solutions to ensure the health of their farm today and for the next generation.

They have implemented reduced tillage and improved soil fertility by carefully testing and tracking to prevent soil depletion. They have also developed a new nutrient management plan to minimize the use of fertilizer, cutting their annual fertilizer use by close to 45 t.

Perryhill Farm developed a rigid health program for its herd, including new mastitis protocols, and designated cow comfort as a priority. Two results are a somatic cell count averaging 100,000 and improved milk production (15 percent). Underlying

all these improvements is a careful cost-tracking system instituted by one of the owners, who is a business graduate.

UBC Dairy Education and Research Centre

UBC's Dairy Education and Research Centre is a hub for innovation on animal care as well as environmental and sustainable farming practices. The centre is home to one of North America's largest dairy cattle research and education facilities, housing 500 Holsteins and 250 lactating cows. It is a unique platform in which research is funded mainly by dairy farmers so they can demonstrate to customers that they are responding to calls for better ways of farming.

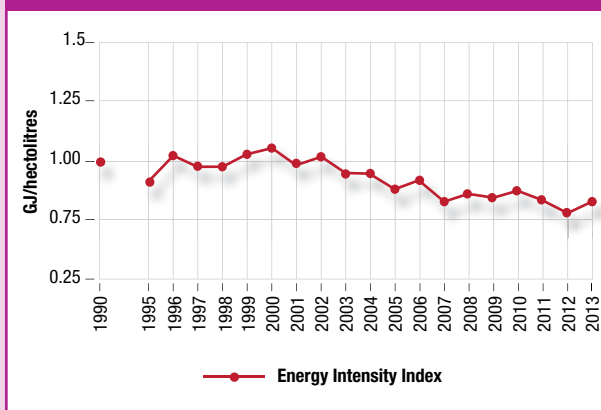
Since it was established in 1997, the centre has developed several innovations for encouraging sustainable farming practices. These include manure processing that is significantly less wasteful of resources than former practices, water conservation in which water is reused for several purposes, recovery of phosphorus from manure for reuse as a slow-release fertilizer, and wildlife conservation, which has produced a healthier than normal population of bears and other wildlife.

For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5243.



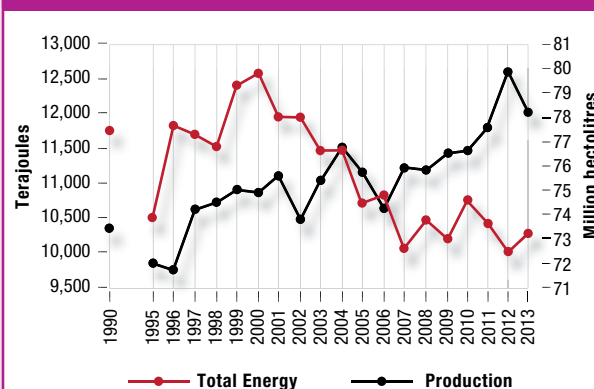
HIGHLIGHTS Dairy Sector – NAICS 3115

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



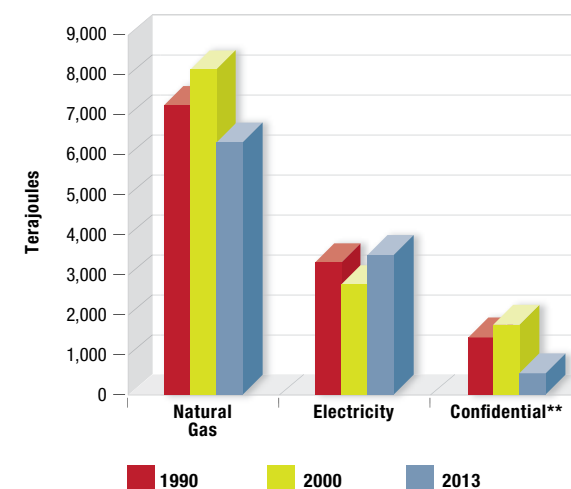
Between 2012 and 2013, energy intensity increased by 4.94 percent.

Total Energy and Physical Output (1990–2013)



Production decreased by 2.01 percent, while energy consumption increased by 2.83 percent between 2012 and 2013.

Energy Sources



** Confidential includes heavy fuel oil, propane and wood.

Between 2012 and 2013, natural gas consumption increased by 1.69 percent, and electricity consumption increased by 6.19 percent.



Electrical and Electronics

PROFILE

The electrical and electronics sector includes a diverse array of companies that produce lighting, communications and electronic equipment, cabling, office equipment, industrial equipment and other electrical products, such as power and distribution transformers.

Electro-Federation Canada (EFC) is a national, not-for-profit association that represents over 250 companies that manufacture, distribute, and service electrical and electronics products in Canada. EFC contributes over \$10 billion to the Canadian economy and employs over 40,000 workers in more than 1,200 facilities across the country.

ACHIEVEMENTS

Power Measurement receives highest distinction

Power Measurement is a manufacturing plant in Victoria, British Columbia, that builds devices to measure energy use. Since the company was acquired by Schneider Electric 10 years ago, it has grown substantially (tripling the size of its energy management division). At the same time, it significantly increased its commitment to energy efficiency.

Power Measurement was recently one of the many Canadian companies to achieve ISO 50001 certification after reducing its annual energy consumption by 30 percent. It has also achieved the highest level of certification: “Superior Energy Performance (SEP) – Platinum.”

On the road to ISO 50001

Partner Technologies Incorporated manufactures transformers in Regina, Saskatchewan. It has made important investments in energy efficiency, including an EnMS, that it expects will eventually lead it to ISO 50001 certification. The company’s chief executive officer, who sits on the CIPEC Executive Board, does a great deal to steer the company toward its energy efficiency goals. Recent improvements have included replacing mercury vapour and fluorescent lights with LED lights to reduce energy use during manufacturing.

But Partner Technologies’ energy efficiency story is about more than just working toward a more energy-efficient manufacturing plant. The company also produces an energy-efficient product. Partner Technologies manufactures residential, commercial and industrial transformers that have ratings of up to 3,000 kilo-volt amperes that greatly reduce energy costs associated with energizing

the transformers. For industrial applications, the company offers higher grades of steel that allow for even greater energy savings. It also manufactures substation solutions and protective devices that have small environmental footprints.

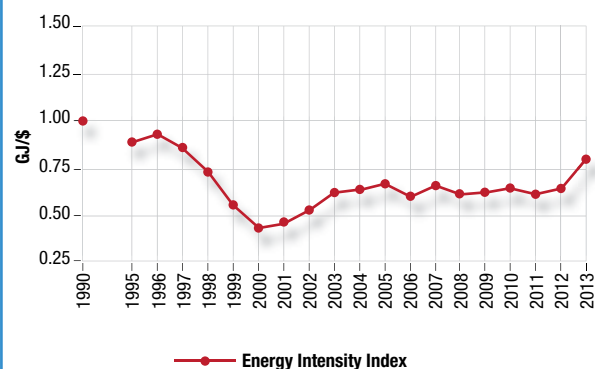
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5267.



HIGHLIGHTS

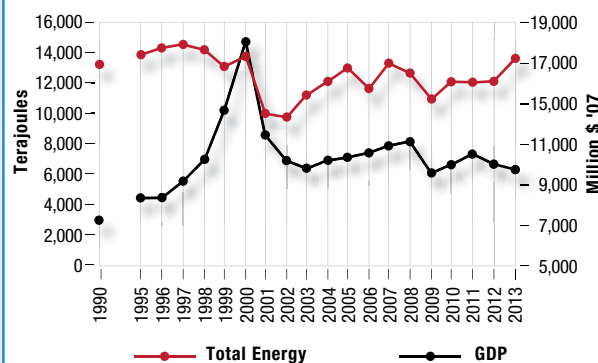
Electrical and Electronics Sector – NAICS 334 and 335

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



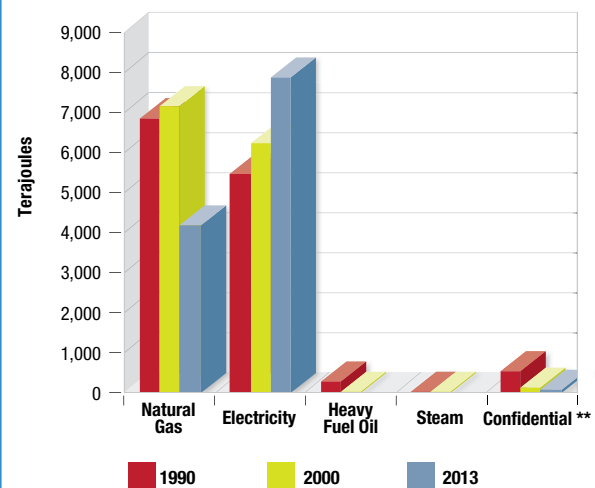
Between 2012 and 2013, energy intensity increased by 22.08 percent.

Total Energy and Economic Output (1990–2013)



Total energy consumption increased by 13.97 percent, while total production GDP decreased by 6.64 percent between 2012 and 2013.

Energy Sources



** Confidential include middle distillates, propane, wood and heavy fuel oil.

Between 2012 and 2013, natural gas consumption increased by 23.02 percent, and electricity consumption increased by 9.19 percent.



Electricity Generation

PROFILE

The electricity generation, transmission and distribution sector maintains a reliable and highly efficient electricity system while powering industries, businesses and homes across Canada. Represented by the [Canadian Electricity Association](#) (CEA), the sector provides a reliable, essential service and is a significant contributor to the economy and the well-being of Canadians. Association members are committed to producing, delivering and using electricity in an efficient manner while promoting conservation and demand-side management. In an ongoing effort to improve its environmental performance, the sector invests in advanced technologies and enhanced environmental management practices.

ACHIEVEMENTS

Strong environmental performance across the industry

The CEA's 2013 annual report details the industry's strong environmental, social and economic performance. Overall, GHG emissions are declining (nearly 17 percent since 2009). This is the result primarily of decommissioning several coal-fired power

plants, switching fuel from coal to natural gas and introducing more renewable generation to the fuel mix. Also since 2009, CEA members have reduced sulphur dioxide, nitrogen oxide and mercury emissions by 24.6, 11.5 and 50.1 percent, respectively.

Meanwhile, CEA members have invested in energy efficiency measures such as state-of-the-art lighting and high-efficiency turbine runners and transformers (see the following articles). In addition, more members are implementing environmental management systems (EMS). In fact, in 2013, 87 percent of CEA members had an EMS in place that was ISO 14001-compliant. The remaining 13 percent were set to implement the system or a comparable one in the near future.

Ontario Power Generation Inc. Biomass Conversion Initiative

Ontario Power Generation's (OPG) Biomass Conversion Initiative received the CEA's Environmental Commitment Award during the association's 6th Annual Sustainable Electricity™ Awards. OPG was recognized for its innovative approach to switching the fuel it uses in electricity generation from coal to biomass. In 2014, OPG retired its coal-fired power plants (one of the largest climate change initiatives ever undertaken in North America) and converted two coal-fired power plants to wood pellet biomass.

Canada's first storage facility for battery energy

The town of Field, British Columbia, is located entirely within the rugged Yoho National Park and receives electricity from a radial distribution centre 55 kilometres (km) away. A combination of isolation and challenging terrain means that power outages are frequent in Field, and repairs can be difficult.

In 2013, with funding from NRCan's Clean Energy Fund, BC Hydro built a state-of-the-art storage facility for battery energy for Field that delivers up to seven hours of backup power during service disruptions. The batteries are charged by clean energy sources and have reduced the need for diesel power as a backup energy source. In addition, BC Hydro introduced voluntary alerts to tell residents when they are on battery power, which encourages residents to conserve energy during supply outages.

Manitoba Hydro helps finance upgrades

Manitoba Hydro's Power Smart for Business PAYS (Pay As You Save) financing program helps companies manage the capital costs of upgrading to energy-efficient technology. The program offers extended financing for upgrades such as LED lighting; high-

efficiency furnaces, boilers and geothermal heat pumps; CO₂ sensors; and low-flow toilets and urinals. Within the first six months of the program's launch in 2013, Manitoba Hydro had received 17 applications from customers that ranged from manufacturing plants to convenience stores.

Nalcor uses energy only when it is needed

Nalcor Energy's Holyrood Thermal Generation Station in Newfoundland and Labrador uses an electric heat trace system (EHTS) to ensure the pipeline that transfers fuel shipments to storage tanks has a consistent, year-round temperature. Because shipping fuel is seasonal, Nalcor saw an opportunity to significantly reduce energy consumption. It lowered the temperature set points for the EHTS during the months there are no deliveries. This change will save 344,000 kWh of electricity per year.

Nova Scotia Power is plugging leaks

High-turbine exhaust pressure is the leading contributor to fuel loss in Nova Scotia Power's fleet of thermal units. And the problem is made worse by condenser air-in leakage (AIL). The utility repaired leaks on seven of its thermal units in 2013 for a projected fuel savings of nearly \$1 million annually. To accomplish this, Nova Scotia Power implemented an AIL monitoring and control program. First, it found leaks by using multi-sensor test probes and portable helium tracer gas equipment. Second, it serviced the seven thermal units.

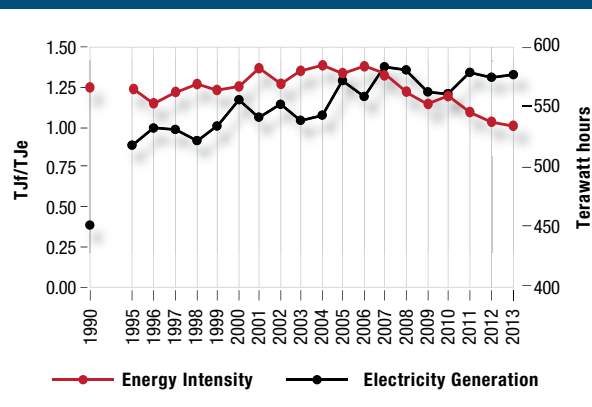
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5279.



HIGHLIGHTS

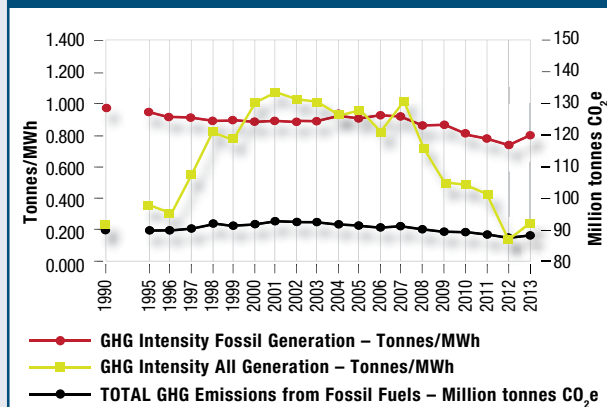
Electricity Generation Sector – NAICS 22111

Utility Production and Energy Intensity (1990–2013)***



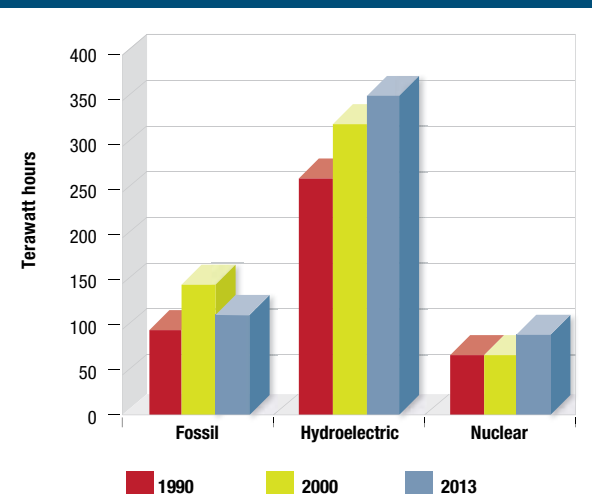
Electricity generation increased by 0.53 percent, while energy intensity decreased by 1.89 percent between 2012 and 2013.

Utility GHG Emissions vs Utility Production (1990–2013)***



Between 2012 and 2013, GHG intensity from fossil generation increased by 8.39 percent, GHG intensity for all generation increased by 8.72 percent and total GHG emissions from fossil fuels increased by 5.99 percent.

Utility Generation Sources (1990, 2000, 2013)***



*** This sector excludes industrial electricity generation.



Fertilizer

PROFILE

Canada supplies about 12 percent of the world's fertilizer materials. The fertilizer industry is essential to ensure the world's food needs are met in an economical and sustainable manner. Canada is the world's largest exporter of potash and elemental sulphur and a large producer of nitrogen. Represented by [Fertilizer Canada](#), Canadian companies in the sector contribute more than \$12 billion annually to the national economy.⁵

ACHIEVEMENTS

Moves toward efficiency minimize Agrium's legislated environmental costs

Directly and indirectly, Agrium generates GHG emissions through the production, distribution and use of its products. The Province of Alberta has passed the *Specified Gas Emitters Regulation* (SGER), which applies to facilities that emit more than 100,000 t of CO₂e per year. Facilities that exceed this threshold must decrease their emissions intensity by 12 percent relative to their 2003–2005 average baseline.

Agrium has three facilities in Alberta affected by SGER: Redwater Fertilizer Operations, Carseland Nitrogen Operations, and Fort Saskatchewan Nitrogen Operations. Due to Agrium's efforts to improve its efficiency in a number of areas, the cost of complying with SGER is expected to be lower than it would otherwise be. The projects include overall efforts to increase operational efficiency, the purchase of emission offset credits, and the operation of a cogeneration facility in partnership with TransCanada Energy Ltd. at Carseland that captures waste-heat and produces emission offset credits.

Reducing nitrous oxide emissions

Upstream

Agrium's Fort Saskatchewan facility has implemented a number of energy efficiency projects for nitrogen operations. Independent government-sponsored studies estimate that the industry may be able to realize a further 3 to 5 percent reduction in combustion emissions intensity.

Downstream

Agrium and the fertilizer industry have also been involved in the development and implementation of the Nitrous Oxide Emissions Reduction Protocol, which is designed to generate emission offset credits for farmers who reduce their nitrous oxide emissions using the [4R Nutrient Stewardship Principles](#).

For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5247.

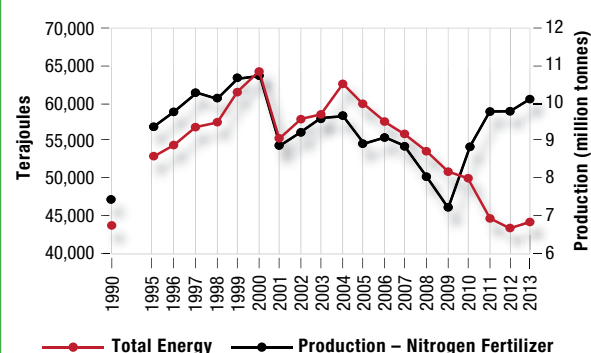
⁵ [Fertilizer Canada](#)



HIGHLIGHTS

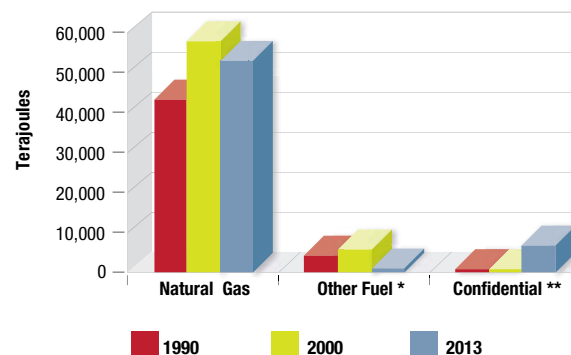
Fertilizer Sector (Nitrogenous) – NAICS 325313

Total Energy and Physical Output (1990–2013)



Between 2012 and 2013, production increased by 2.20 percent, energy use increased by 2.84 percent and energy intensity increased by 0.62 percent.

Energy Sources



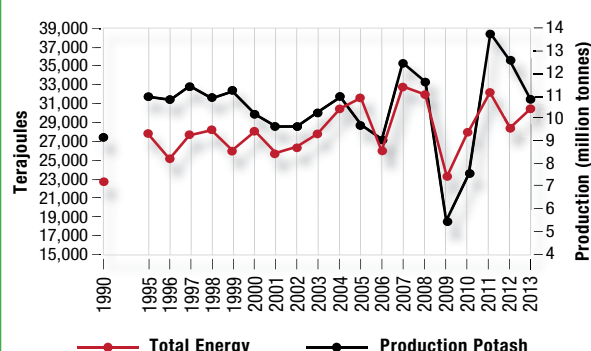
* Other Fuel includes: Middle Distillates.

** Confidential include heavy fuel oil, propane, wood, electricity and steam.

Between 2012 and 2013 natural gas consumption increased by 3.81 percent.

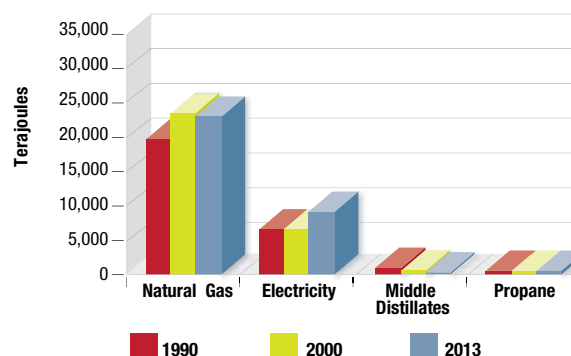
Fertilizer Sector (Potash) – NAICS 212396

Total Energy and Physical Output (1990–2013)



Between 2012 and 2013, production increased by 9.01 percent, energy use decreased by 11.83 percent and energy intensity decreased by 19.12 percent.

Energy Sources



Natural gas consumption decreased by 18.87 percent, while electricity consumption increased by 11.51 percent between 2012 and 2013.



Food and Beverages

PROFILE

Canada's food and beverage sector includes manufacturers that produce meat, poultry, fish, fruit and vegetables, flour and bakery products, oils and sugars, coffee, snack foods, soft drinks, and confectionery. The food and beverage processing industry is the largest of all manufacturing industries in Canada. It had the largest share (16 percent) of the manufacturing sector's GDP in 2013, as well as the largest share (16.7 percent) of jobs.

The industry produces goods using primary and processed products as inputs. About 38 percent of primary agricultural products produced in Canada are used as raw material inputs by the food processing industry.

The industry continues to grow; the value of its shipments more than doubled between 1992 and 2013 to \$98.8 billion. More than half of the total value of food processing shipments comes from the meat, dairy, grains and oil seed industries.⁶

ACHIEVEMENTS

Web-based platform helps wineries save water

The Bloom Centre for Sustainability started the Water & Wine web-based platform

to provide wineries with a cost-effective source of information about water and sustainable water management. The platform is a one-stop education solution with modules on strategic water and well management, water use monitoring, water consumption reduction and wastewater strength monitoring, and onsite wastewater treatment and alternative water sources. Bloom collaborated with the Wine Council of Ontario to build the platform, using extensive information collected over a two-year period. This included case studies, data collected from 25 wineries and information from strategic demonstration projects.

Biogas Association turns garbage into green energy

The Biogas Association's Closing the Loop program helps food processors meet their energy efficiency goals in two ways. First, the association offers an organic waste recycling service in which food processors send their organic waste to biogas facilities. Energy is extracted from the waste before it is recycled back into the soil, helping processors achieve impressive GHG emissions reduction. Second, food processors can use a combination of compressed natural gas (CNG) and renewable natural gas (from food recycling),

which is a sustainable and cost-effective alternative to using just conventional CNG.

Sons Bakery works toward 2020 goals

Sons Bakery, an industrial baking facility in Brampton, Ontario, is a CIPEC leader with a mission to make major reductions to its energy and water intensity by 2020. The company is well on its way, having installed a 75-horsepower (hp) VFD air compressor, upgraded plant lighting from 260 metal halide fixtures and T-12 lamps to T-8 LED lamps, reduced compressed air discharge pressure from 99 psi to 93 psi, and retrofitted the facility's 7-hp evaporator cooling fan with a 5-hp replacement. These projects alone have reduced Sons Bakery's energy use by more than 300,000 kWh a year. The facility has also upgraded its manual irrigation controller to a central controller, repaired leaks in the irrigation system, and relocated or capped non-essential heads – reducing its annual water use by about 1,500 cubic metres.

In late 2015, the facility was retrofitting the automatic blow-down controller to save more water and better control chemical use. Sons Bakery is looking forward to creating a Green Sustainability Team and an employee engagement program, as well as taking

⁶ *An Overview of the Canadian Agriculture and Agri-Food System 2015*. Agriculture and Agri-Food Canada

further steps toward using water and energy more efficiently.

New facility demonstrates commitment to sustainability from the start

Skjodt-Barrett of Brampton, Ontario is a manufacturer of food products and a product developer. The company implemented a full lighting retrofit, replacing T-12 halogen lamps with T-8 high-efficiency lamps throughout the 18,674 square metre facility. It also installed a rooftop water chiller and a new high-efficiency boiler, and insulated and upgraded steam pipes. Skjodt-Barrett will make more energy management improvements in the future by installing electric meters. The company recently moved to a new facility and plans to implement more energy efficiency projects as it ramps up to full production.

saveONenergy shares costs for energy efficiency upgrades

The saveONenergy Retrofit Program makes energy efficiency upgrades easier for Ontario companies by significantly reducing payback periods; many food and beverage manufacturers have used it. Weston Bakery took advantage of an \$18,600 cost-sharing arrangement to replace an aging compressor. Mondelez Canada used cost-sharing from both the program and from Toronto Hydro to upgrade its lighting system, add control systems to air compressors and install VFDs on operating systems. Leadbetter Foods implemented a complete upgrade of its lighting system, and Cupcakes of Westdale Village used a \$1,000 dollar cost-sharing arrangement for a lighting upgrade to T-8 lamps.

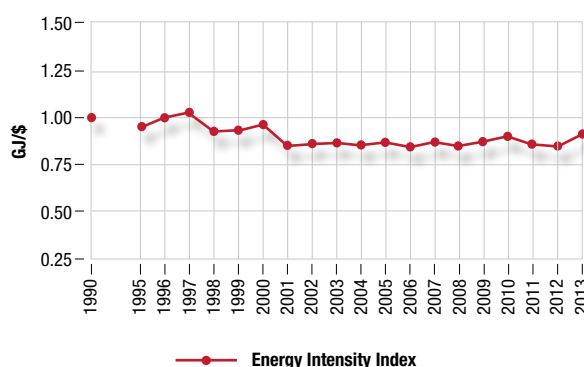
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5249.



HIGHLIGHTS

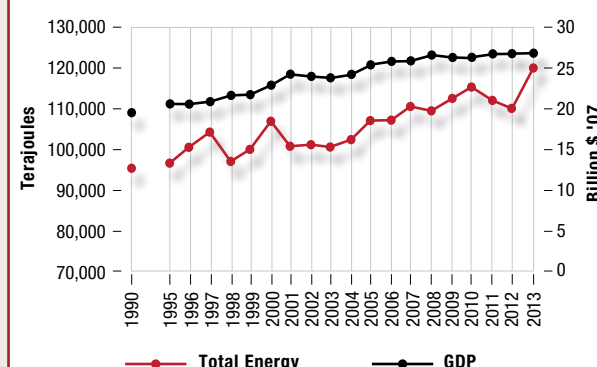
Food and Beverages Sector – NAICS 3121

Energy Intensity Index (1990–2013) Base Year 1990 = 1.00



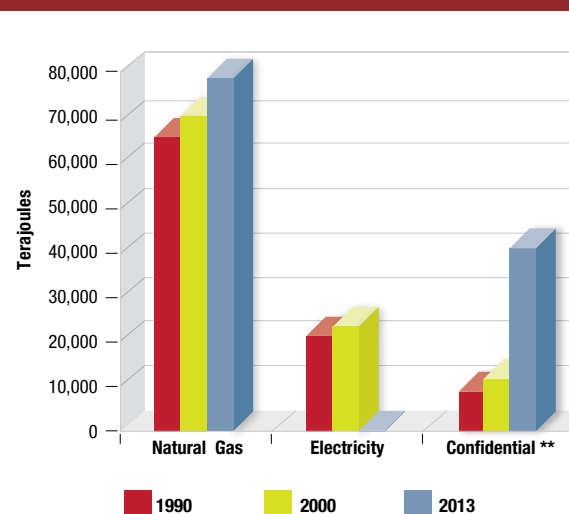
Between 2012 and 2013, energy intensity increased by 8.5 percent.

Total Energy and Physical Output (1990–2013)



The GDP increased by 0.4 percent and energy consumption increased by 9.0 percent between 2012 and 2013.

Energy Sources



** Confidential includes coal, heavy fuel oil, middle distillates, propane, wood and electricity.

Natural gas consumption increased by 17.0 percent between 2012 and 2013.



Forest Products

PROFILE

The forest products sector is composed of the wood products and pulp and paper industries. The wood products sector comprises about 700 facilities in primary and secondary manufacturing. The primary grouping includes commodity-based production facilities such as lumber and structural panels and more specialized production facilities that manufacture engineered wood products and assemblies. The secondary grouping encompasses a diverse range of facilities that manufacture prefabricated buildings, windows and doors, flooring, mouldings, containers and pallets, other millwork, and numerous other products.

The pulp and paper sector comprises about 95 facilities in primary manufacturing. The sector includes commodity-based production facilities such as pulp, newsprint, paper, tissue, sanitary and paperboard products. The pulp and paper sector is currently transforming to produce more specialized goods such as bio-based chemicals and bio-energy.

ACHIEVEMENTS

Catalyst Paper to “blow off steam”

With support from BC Hydro’s Power Smart program for thermo-mechanical pulp (TMP)

producers, Catalyst Paper is developing a project to use excess steam for power generation – a scheme that will generate 67 gigawatt-hours (GWh) of electricity and reduce the company’s energy costs by roughly \$5 million a year. That is enough to power 6,400 households. Power Smart will subsidize 75 percent of the cost of the project, helping Catalyst Paper become energy self-sufficient and reducing the energy load on BC Hydro.

Anaerobic digester technology is a first in the forest industry

A bioenergy project is underway at the Millar Western Forestry Products Ltd. pulp mill in Whitecourt, Alberta. The project will use innovative technology to generate bioenergy that the company can use as an alternative to fossil fuels. An anaerobic hybrid digester will remove organic material from the effluent stream and convert it to biogas, which will be used to fuel an onsite power station. The power station is expected to cogenerate and use an estimated 34,776 MWh of electricity as well as a substantial quantity of heat. The project was made possible by several grants, including NRCan’s Industrial Forestry Innovation Fund.

Employee awareness leads to “no cost” energy savings

Fortress Specialty Cellulose Mill in Thurso, Quebec, has shown that keeping energy efficiency top of mind among employees leads to tangible savings. The mill has created a dedicated position for an energy manager as part of an overall strategy for continuous improvement on energy efficiency. The program includes specific training for key employees on efficient fuel choices (a strategy that resulted in several thousand dollars in savings in two weeks), workshops for all 330 employees about the company’s energy efficiency goals, and dashboards located throughout the plant that display energy savings in real time.

Tolko Industries saves energy by using pinch analysis

At their Kraft Paper Division in The Pas, Manitoba, Tolko Industries turned to pinch analysis to identify and implement low- or no-cost projects for reducing the consumption of energy in its operations.

Pinch analysis considers all the energy flows in a given process and determines the minimum possible energy consumption in the presence of optimal heat recovery. Savings to date from several projects have reduced energy consumption and, most notably, decreased the amount of fossil

fuels consumed in the mill's power boiler. Tolko implemented pinch analysis with help from NRCan's ecoEnergy Efficiency for Industry Financial Assistance program as well as funding from Hydro Manitoba.

Funding helps the pulp mill accomplish numerous energy efficiency projects

AV Group Inc. received a \$2.37 million grant from NRCan for its pulp mill in Nackawic, New Brunswick, via the Pulp and Paper Green Transformation Program in 2010. Since then the mill has made great strides in improving its energy efficiency and reducing waste. Highlights include reducing the mill's water and energy consumption by recycling filtrate and upgrading the rotary lime kiln, which has reduced energy consumption. Other projects include retrofitting the cyclone evaporator, which reduced oil consumption, and upgrading a power boiler to reduce nitrogen oxide emissions.

Forest Products executive is named to Canada's Clean50

Richard Garneau, President and CEO of Resolute Forest Products Inc., has been named to Canada's Clean50 in the manufacturing and transportation sector. Clean50 is a group of leaders that the Delta Management Group recognizes for having contributed significantly to sustainable development or clean capitalism in Canada. Garneau says his company's vision includes explicit sustainability principles. Those principles have driven several projects, which have resulted in major energy savings, as well as a 67.5 percent reduction in GHG emissions since 2000.

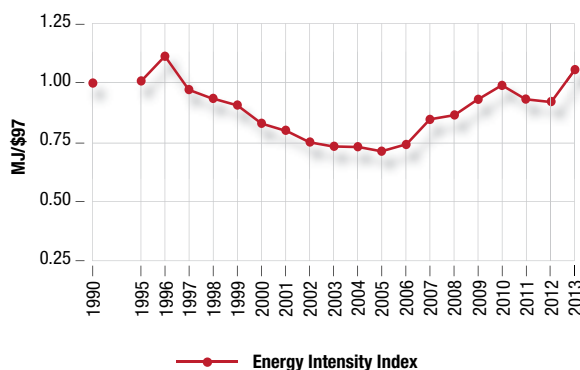
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5281.



HIGHLIGHTS

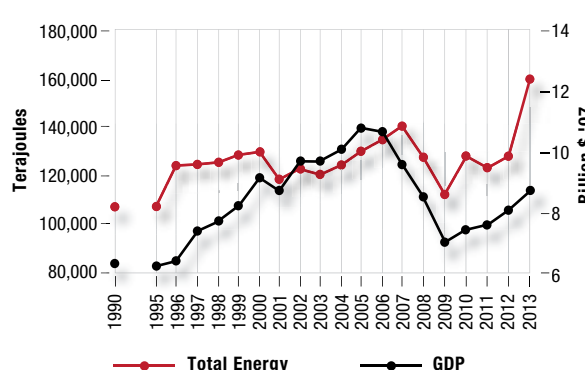
Wood Products Sector – NAICS 321

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



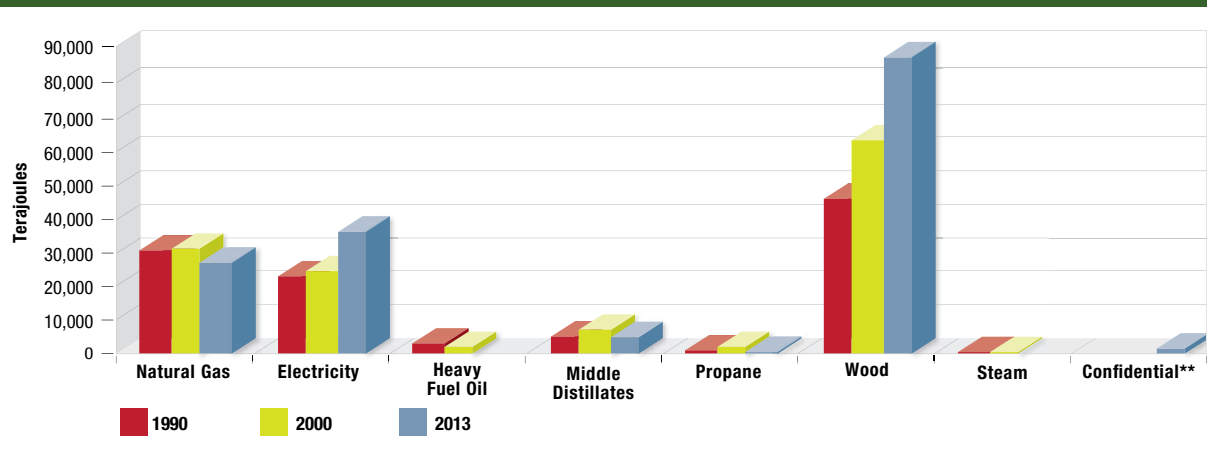
Between 2012 and 2013, energy intensity increased by 15.9 percent.

Total Energy and Economic Output (1990–2013)



Production increased by 7.7 percent and energy consumption increased by 24.8 percent between 2012 and 2013.

Energy Sources



** Confidential includes heavy fuel oil and steam.

Between 2012 and 2013, middle distillate consumption increased by 36.0 percent, wood consumption increased by 24.7 percent, electricity consumption increased by 20.1 percent, and natural gas consumption increased by 32.0 percent.



Foundry

PROFILE

The Canadian foundry industry is made up of about 150 companies that employ about 12,000 Canadians to produce metal castings, which is the first step in the value-added manufacture of most durable goods. The raw material is typically recycled metal, which conserves precious natural resources and energy and improves profitability – an important consideration given the intensely competitive global casting market into which the industry exports more than three quarters of its total production.

Foundry operations have become increasingly varied and complex in recent years. Value-added operations not only produce raw castings, they also design the parts, build the tooling, cast the prototypes and produce the components ready to install on customers' assembly lines. The materials include iron, steel, magnesium, aluminum, zinc, brass and bronze.

Many markets, industries and a myriad of specialty markets use the products. These include the automotive sector, agriculture, forestry, mining, pulp and paper, and heavy industrial machinery and equipment. The products are also targeted to construction, plumbing, soil pipe, municipal road castings, railway, petroleum and petrochemical, electric distribution, aircraft and aerospace, and defence.

ACHIEVEMENTS

CIPEC Board member encourages the foundry sector to participate

Bradley Robertson, Continuous Improvement Leader and EH&S Manager at ESCO in Port Hope, Ontario, brings the foundry perspective to the CIPEC's Executive Board, as well as endorsing CIPEC membership for other members of the foundry sector.

Robertson's main argument in favour of CIPEC membership is the high-level of partnership and collaboration it fosters. Industry networking through CIPEC brings forth collaborative innovation where ideas can be compiled and where all partners work together toward solutions that benefit everyone. As Robertson says, "It is a win-win situation." He notes that these benefits are especially important in the foundry sector because of the vast amount of energy that foundries require.

Nemak of Canada wins a *EnWin* GreenSTAR award

Nemak, a manufacturer of complex aluminum engine blocks for the automotive industry, has been awarded the prestigious GreenSTAR award for its extensive commitment to energy efficiency and sustainability. The award, presented by *EnWin* Utilities of Windsor, Ontario, recognized the manufacturer for a long list of energy efficiency upgrades and initiatives at Nemak's auto plant in Windsor. These include improvements to dust collectors, a lighting retrofit, re-insulation of an electric furnace, implementation of an energy management plan and much more.

Nemak's commitment to energy efficiency and sustainability is impressive: reduce the risk of injury, prevent all types of pollution, and promote proper and economic use of materials. In addition to winning the GreenSTAR award, Nemak's straightforward commitment has lowered the company's operating costs and put it on track to become ISO 50001 certified.

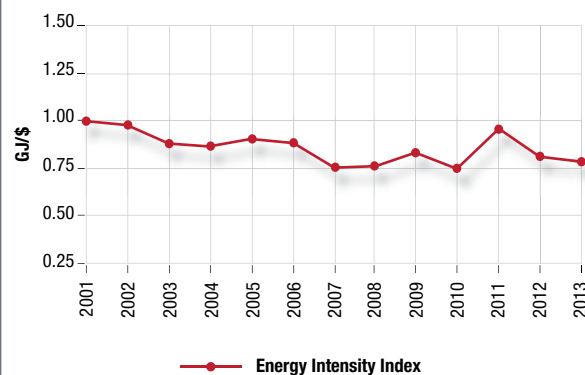
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5275.



HIGHLIGHTS

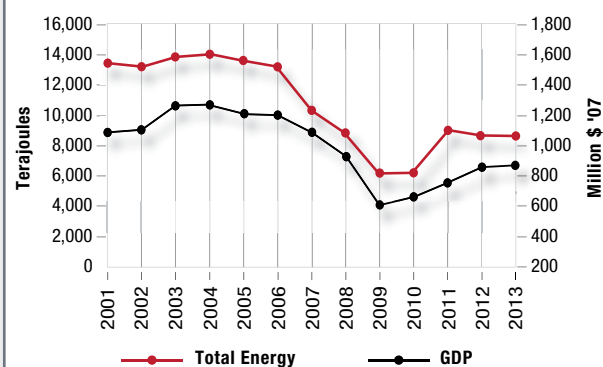
Foundry Sector – NAICS 3315

Energy Intensity Index (2001–2013)
Base Year 2001 = 1.00



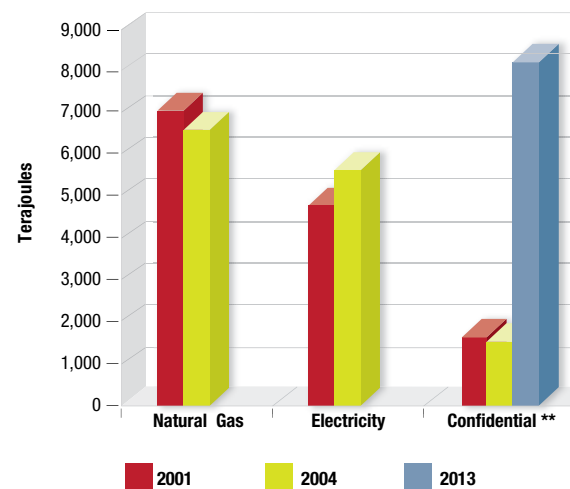
Between 2012 and 2013, energy intensity decreased by 2.4 percent.

Total Energy and Economic Output (2001–2013)



The GDP increased by 1.6 percent, while energy consumption decreased by 0.8 percent between 2012 and 2013.

Energy Sources



** Confidential includes natural gas, coal coke, heavy fuel oil, middle distillates, wood, electricity and propane.



General Manufacturing

PROFILE

Ontario and Quebec have sizable manufacturing sectors; there are also many manufacturers in British Columbia and the Atlantic and Prairie provinces. The general manufacturing sector includes a variety of industries not otherwise covered in the sector descriptions of this report, including leather, clothing, furniture, printing activities, glass and glass products, adhesives, tobacco products and pharmaceuticals, as well as construction materials such as floor coverings and insulation.

In 2014, more than 1.7 million Canadians were employed in manufacturing.⁷ Manufacturing accounted for 10 percent of the total Canadian GDP.⁸

ACHIEVEMENTS

Layfield Group embraces variable frequency drives

Layfield Group manufactures environmental products in Richmond, British Columbia. A 2012 energy audit of the company's 4,645-m² facility identified opportunities for efficiency improvements in various systems. One retrofit integrated a new VFD air compressor, which constantly adjusts motor speed to match the load. The VFD

helps deliver energy savings of about 130,000 kWh annually. The retrofit was supported by the PowerSmart program from BC Hydro, which covered 75 percent of the costs. Water-chiller motors were also retrofitted with VFDs for energy savings of about 60 percent. The company plans to replace all blower motors with VFD models over the next 10 years.

3M Canada certifies a second plant for ISO 50001

3M Canada's plant in London, Ontario, is the company's second facility to be certified compliant with ISO 50001, the Energy Management Systems standard. This is the latest step in a journey that will see all 3M facilities in Canada ISO 50001 certified by 2016.

Since 2011, the company has retrofitted lighting, improved the building envelope, repaired steam trap leaks, and conducted compressed air audits at the London plant. As a result, the facility has progressed from being the company's biggest energy user in Canada to now being second among all 3M facilities around the world for energy performance improvements.

The facility has surpassed the company's global corporate goal for facility energy

performance. In fact, the London plant won the 3M Platinum Award in 2014 and 2015. It also won the 2013 U.S. ENERGY STAR Challenge for Industry, having achieved energy consumption reductions of 13.2 percent over 2012.

KI Canada Corporation discovers the value of engaged and informed employees

A CIPEC Leader since 2007, this office-furniture manufacturer's recent projects include the installation of a new building automation system at its facility in Pembroke, Ontario. The project is expected to save more than 185,000 m³ of natural gas per year. The result is a cost saving of over \$55,000 and GHG emissions reduced by more than 350 Mt of carbon-dioxide equivalent (CO₂e). The system will further reduce maintenance costs for the heating equipment by decreasing unit run times.

KI has long known that employee awareness is one of the most important aspects of energy management, and perhaps the least costly. KI partnered with CIPEC, Ottawa River Power and Enbridge Gas in 2013 to launch a campaign featuring awareness events, workshops and training. Combined with various facility

⁷ Statistics Canada – Employment by industry

⁸ Statistics Canada – Gross domestic product at basic price, by industry

improvements, the campaign helped the company reduce energy consumption by 30 percent over three years – equivalent to about \$300,000 per year.

Controlling costs and reducing overhead helped KI stay competitive in the marketplace and bring jobs back to Canada. And these efforts were noticed by the industry. The Energy Council of Canada recognized the company's achievements with the Employee Awareness and Training award at their 2014 Canadian Energy Summit.

Kuntz Electroplating Inc. wins the Energy Conservation Certificate of Recognition

A CIPEC Leader since 2009, KEI has worked to improve energy use through various initiatives. In 2014, KEI installed new energy-efficient rated HVAC equipment as part of an initiative to replace older systems at the end of their life. The company made additional energy improvements by installing VFDs on production and auxiliary equipment. These upgrades are guided by the company's embedded energy management team (EnMT), which monitors the procurement and use of commodities throughout the facility. An integral part of KEI's sustainability team, the EnMT was recently awarded an Energy Conservation Certificate of Recognition for its participation in the Ontario saveONenergy program.

Velcro Canada Inc. wins big at the People Power Challenge

Velcro Canada Inc. not only won two of three 2013 People Power Challenge (PPC) subchallenges, it also took home the title of Grand Champion in the small to medium-sized category. For that achievement, the company was awarded a plaque and \$2,500.

The PPC challenges businesses to get employees involved in identifying green-procurement, building and transportation opportunities. Velcro Canada engaged employees with numerous activities, including breakfast workshops, Smart Commute seminars and Earth Day celebrations. Employees made personal pledges to conserve energy and submitted suggestions for improvements. Some of these ideas are currently being scrutinized as future projects, including an HVAC retrofit and participation in the Ontario Power Authority's Demand Response 3 program.

Teknion realizes impressive savings with a new dust collection system

"The energy savings are too good to be true," says Olaf Boehm, Manufacturing Engineer at Teknion, about the recent installation of an Ecogate® dust collection system. Yet the 60 percent energy savings are real. The old dust collection system was the biggest energy consumer at the company's furniture manufacturing plant. By replacing it with the Ecogate, Teknion achieved its projected results in less than one year.

In the new system, sensors automatically open the appropriate collection gates when one of the plant's machine centres is turned on. The system also adjusts the velocity of the ducting to match the specific demand. When the machine centre shuts down, the gate closes, and the dust collector fans decelerate. The average fan electrical load has dropped from 280 to 114 kW, contributing to savings of \$90,000 since the new system went operational in January 2014.

For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5265.

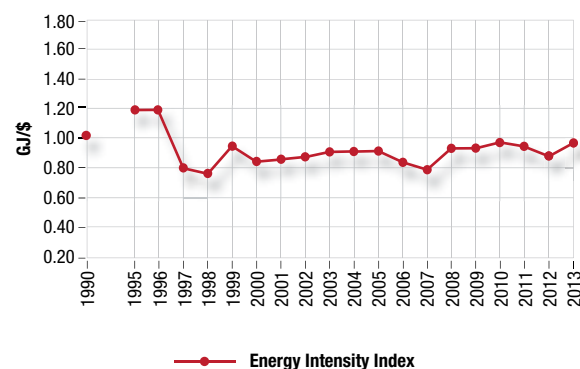


HIGHLIGHTS

General Manufacturing NAICS

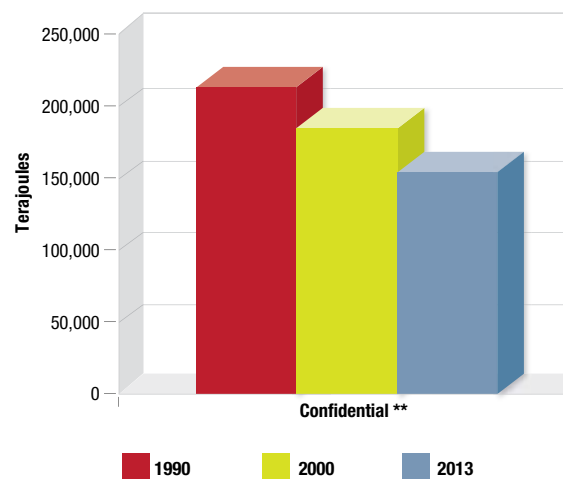
NAICS Name	Category
Textiles	313 and 314
Clothing and Manufacturing	315
Leather and Allied Product	316
Rubber Products	3262
Printed and Related Support Activities	323
Fabricated Metal Product	332
Machinery	333
Furniture and Related Product	337
Miscellaneous Manufacturing	339
Tobacco Product Manufacturing	3122
Converted Paper Product Manufacturing	3222
Non-metallic Mineral Product not Elsewhere Classified	3271, 3272, 32732, 32733, 32739, 32742 and 3279
Chemical Manufacturing not Elsewhere Classified	32522, 325314, 32532, 3254, 3255, 3256 and 3259

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00

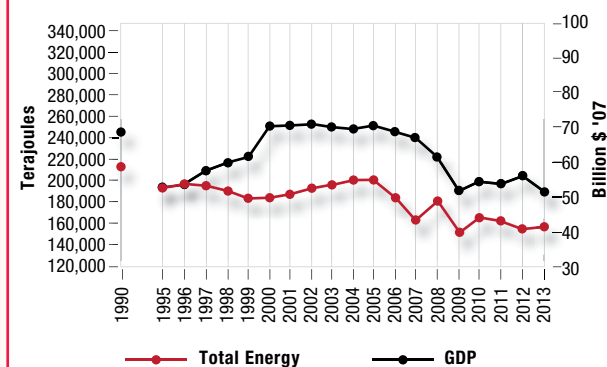


Between 2012 and 2013, energy intensity increased by 9.0 percent.

Energy Sources



Energy Intensity and Economic Output (1990–2013)



Production decreased by 7.5 percent while energy consumption increased by 0.8 percent between 2012 and 2013.

**** Confidential** includes coal, coke, petroleum coke, heavy fuel oil, middle distillates, propane, wood, waste, steam, natural gas and electricity.



Lime

PROFILE

The [Canadian Lime Institute](#) represents all merchant lime producers operating in Canada. The lime sector produces an essential raw material for the production of chemicals, alumina, uranium, paper, steel, gold and other vital materials. Lime products are used in a variety of other applications including:

- flue gas desulphurization
- agriculture
- manure treatment
- soil stabilization and remediation
- asphalt
- oil and gas
- power generation
- building construction

More than 150 cities, towns, rural communities and Indigenous communities across Canada depend on lime for use in water, wastewater and sewage treatment systems. Many rural regions also benefit from the steady, long-term, well-paying employment supplied by Canada's lime production operations.

ACHIEVEMENTS

Graymont installs new continuous emission monitoring systems

In 2014, Graymont consumed 27.1 PJ of energy, a 2 percent decrease compared to 2013 and 24 percent above 2004 baseline levels. The company's total GHG emissions of 5.7 million t CO₂e constitute a reduction of 12.4 percent under 2004 levels of fuel-related emission intensity, which equates to 318,000 t of avoided GHG emissions.

Although Graymont has significantly improved its environmental performance overall in recent years, the company reviewed how it manages environmental matters in 2014 to bring its performance to world-class levels. This comprehensive review, which continued in 2015, aims to identify additional crucial minimal standards and performance requirements for all Graymont facilities while fostering continuous improvement.

An integrated approach to process control

The review's focus has included the energy-intensive calcination process of producing quicklime from limestone. The company

takes an integrated and multidisciplinary approach to process control so that it can meet its customers' quality requirements while respecting environmental and emissions standards. Monitoring is central to this approach. For example, air emissions from the kilns are tracked either by continuous emission-monitoring devices or by periodic testing to ensure that limits are respected.

During 2014, Graymont completed the first phase of a program to establish the efficacy and cost benefit of deploying continuous emission-monitoring devices at all of its lime kilns. These devices were installed on all kilns at the Bedford and Marbleton sites in Quebec. More training and process-control initiatives continued in 2015 to ensure that the new equipment is being used optimally. Graymont expects its efforts will continue to improve energy efficiency and reduce emissions of GHGs, sulphur oxides and nitrogen oxides, which are byproducts of combustion.

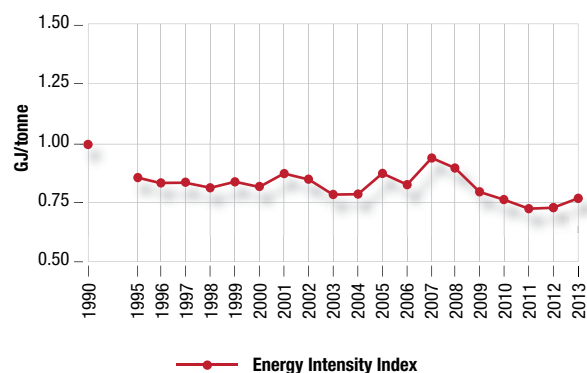
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5283.



HIGHLIGHTS

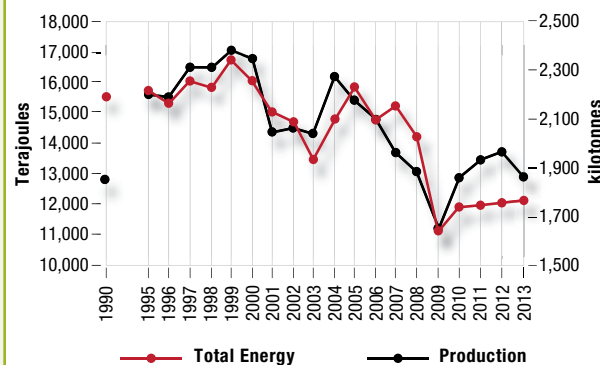
Lime Sector – NAICS 327410

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



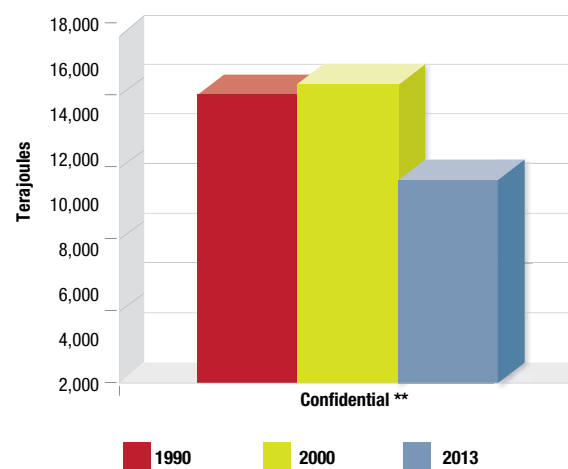
Between 2012 and 2013, energy intensity increased by 5.9 percent.

Total Energy and Physical Output (1990–2013)



Total energy consumption increased by 0.2 percent while total production decreased by 5.5 percent between 2012 and 2013.

Energy Sources



** Confidential includes heavy fuel oil, middle distillates, propane, wood, petroleum coke, coal, electricity and natural gas.



Mining

PROFILE

Mining is one of Canada's most important economic sectors and is a major contributor to our country's prosperity. In 2013, the industry contributed \$54 billion to our GDP and employed 383,000 workers in the mineral extraction, processing and manufacturing sectors. This industry stimulates and supports economic growth, both in large urban centres and in remote rural communities, including numerous First Nations communities; mining is a major employer of Indigenous Canadians.

Mining accounts for 19.6 percent of Canadian goods exports. The industry also generates considerable economic spin-off activity. There are about 3,400 companies that provide services to the industry that range from engineering consulting to drilling equipment.⁹

The [Mining Association of Canada](#) is the national organization of the Canadian mining industry and represents companies involved in mineral exploration, mining, smelting, refining and semi-fabrication.

ACHIEVEMENTS

Off-grid mine makes upgrades to save diesel

Agnico Eagle's Meadowbank mine is a gold mine in the Kivalliq region of Nunavut.

Off the electrical grid because of its rural location, the mine generates all its power by burning diesel fuel. Over the past decade Meadowbank has managed to reduce its fuel consumption by 5.5 million L a year. It has accomplished this by analyzing generators for optimization potential and best power factor, retrofitting generators with heat exchangers, and installing a glycol network. Meadowbank also installed an energy dashboard to help track and manage energy production and consumption.

Vale Thompson partners with Manitoba Hydro to pay for costly upgrades

Vale operates the Thompson and Birchtree mines in northern Manitoba. The facility, which encompasses an underground nickel mine, a smelter and a refinery, has realized substantial savings through its involvement with Manitoba Hydro's Power Smart cost-sharing program. Through the program, Vale Thompson has replaced three large and inefficient trim compressors with six smaller, more efficient models, which has yielded substantial energy savings estimated at 1.5 million kWh a year.

Vale Thompson has also audited its steam traps and is upgrading T-8 lights to T-12. The mine is now using thicker tailings to save water and will soon upgrade water

pumps with VFDs and more accurate meters to gather baseline data.

Open-pit mine reduces its long-term environmental impact

The Canadian Malartic mine in Malartic, Quebec has a long-term vision to do right by its community. Canadian Malartic employs nearly 700 people from the surrounding area and has a business plan that includes extracting ore until 2028. These two points are motivation to remain a responsible corporate citizen.

As one example, Canadian Malartic contributes to a fund called Fonds Essor Canadian Malartic, which is aimed at improving the quality of life for the citizens of Malartic. On the environmental front, the company has taken significant steps as well. Canadian Malartic is an open-pit mine with the potential to have long-term effects on the local landscape and environment. It employs thickened tailing technology to help fill old mining sites so that they can be useful and enjoyable for the community. Canadian Malartic hopes its approach will lead to the revegetation of 860 hectares of mining sites. The company also collaborates with the municipality of Malartic to mitigate dust and noise pollution.

⁹ *Facts & Figures of the Canadian Mining Industry*. 2014. The Mining Association of Canada

Coalition promotes collaboration and technology sharing

The Coalition for Eco-Efficient Comminution (CEEC) is a global initiative with the aim of increasing energy efficiency by promoting higher levels of collaboration among mining companies. More specifically, CEEC provides mining companies with access to current technical scientific papers and field studies.

The organization hosted a two-day workshop in Vancouver where Teck Highland Valley Copper learned it was not alone in developing more comprehensive metrics for benchmarking energy performance in comminution. BC Hydro, which also attended the workshop, said it would look for opportunities to collaborate on activities that align with its industrial energy management goals.

Éléonore Mine shows commitment to safety and efficiency

Goldcorp's Éléonore Mine, an underground mine in Quebec, is the first of its kind to use the SmartEXEC on-demand ventilation system from Simsmart Technologies. SmartEXEC not only helps conserve energy, it also vastly improves safety and working conditions for underground workers. SmartEXEC responds to signals from AeroScout Wi-Fi radio-frequency identification tags worn by employees and installed on machinery. The system monitors their location in real time while monitoring air quality, responding with appropriate ventilation at the appropriate times. The company estimates savings of \$1.5 million to \$2.5 million annually and a significant reduction in GHG emissions.

Éléonore Mine has made many other energy efficiency upgrades, including implementing an energy management information system, and installing VFDs and high-efficiency motors and pumps.

Sowing energy initiatives reaps savings

In 2014, New Gold's New Afton Mine realized an 11.4 percent improvement in the energy used per tonne of ore processed, compared to 2013, partly due to 17 GWh of energy savings initiatives. These efforts were recognized when New Afton received the Association of Energy Engineers' Corporate Energy Management Award for the Canadian region.

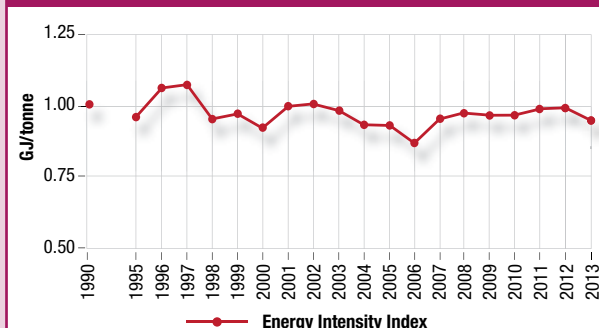
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5257.



HIGHLIGHTS

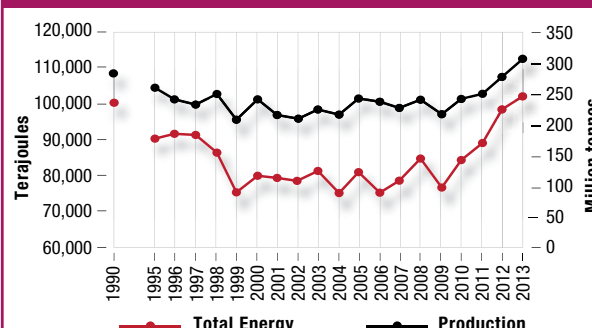
Metal Mining Sector – NAICS 2122

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



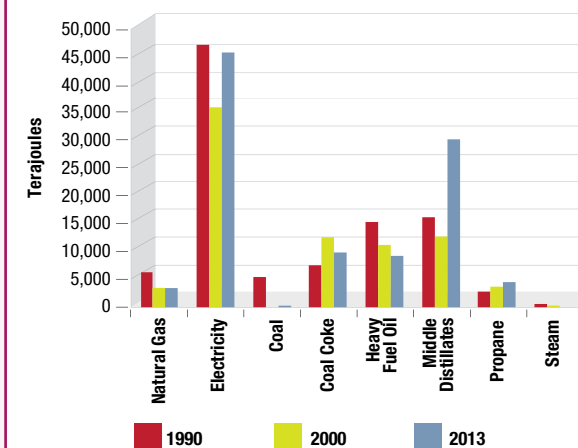
Between 2012 and 2013, energy intensity decreased by 7.8 percent.

Total Energy and Production Output (1990–2013)



Between 2012 and 2013, production increased by 12.6 percent, and energy consumption increased by 3.8 percent.

Energy Sources



Electricity consumption increased by 6.8 percent, and middle distillates consumption increased by 24.4 percent.



Oil Sands

PROFILE

Alberta's oil sands are the third-largest proven crude oil reserve in the world, next to Saudi Arabia and Venezuela.

The Government of Alberta is working with industry to cement Alberta's reputation as a world-leading energy supplier. It is doing this by advancing technology in this sector, making significant investments and ensuring responsible development of the oil sands.

ACHIEVEMENTS

Suncor sets energy efficiency target at 10 percent

Suncor recently set an energy efficiency target that will require each business unit to reduce energy intensity by about 10 percent compared to 2007. To help achieve the reduction, the company established a corporate EnMS that was fully implemented at all major sites by the end of 2014.

Preliminary results from the EnMS implementation show marked progress toward the target. The company reports typical improvements in energy intensity of between 2 percent and 3 percent, achieved shortly after implementation. Suncor sites have also identified and commenced implementation of cost-effective energy

efficiency projects that have the potential to deliver additional energy savings in the range of 3 percent to 5 percent.

Syncrude expands cogeneration and heat recovery capability

Syncrude has a long history of energy conservation. For example, the company's operations include extensive cogeneration processes to recover waste heat for reuse. Excess electricity – 210,000 MWh in 2014 – is exported to the Alberta electricity grid.

The company is confident that greater energy efficiency will correlate to fewer GHG emissions, and also improves financial outcomes. That is why energy efficiency remains key when evaluating capital and maintenance projects related to the next generation of oil sands technologies and reliability improvements.

Even as Syncrude focuses on energy efficiency, major projects coming online increase electricity demand. These projects include the company's centrifuge plant and replacing two mine trains. Another project is the composite tails plant at Aurora near Fort McMurray (a composite tails plant mixes fluid fine tailings with gypsum and coarse tailings sand to transform the fluid fine tailings into solid material suitable for reclamation). The company plans to expand its cogeneration and heat

recovery capability to help meet its energy efficiency targets.

Syncrude consumed about 130 billion British thermal units (BTU) of energy or 1.31 million BTU per barrel produced in 2013. This performance was above the target of 1.29 million BTU. The company's 2014 target is 1.30 million BTU per barrel.

ConocoPhillips Canada enhances extraction to reduce GHG emissions

At ConocoPhillips Canada, developing and applying innovative technology for oil sands projects are key to economic and environmental success. Currently, in situ extraction is carried out using steam-assisted gravity drainage (SAGD). Steam injected into an oil reservoir melts the subsurface bitumen, which is pumped to a nearby facility for processing. A new process called enhanced steam-assisted gravity drainage (e-SAGD) adds a hydrocarbon mixture to the injected steam, which enables the extraction of more oil using less steam. The process uses less water, burns less natural gas, and may reduce GHG emissions per barrel of bitumen produced by as much as 35 percent.

An e-SAGD pilot is underway at the company's Surmont facility, a joint venture with Total Exploration and Production Canada. If the test results look promising, ConocoPhillips Canada will evaluate broader application of the process.

Canada's Oil Sands Innovation Alliance

In 2012, representatives of 12 oil sands producers met in Calgary to sign the COSIA charter. COSIA's vision is to enable responsible and sustainable growth of Canada's oil sands while delivering accelerated improvement in environmental performance through collaborative action and innovation.

Members of COSIA's GHG Environmental Priority Area are exploring various ways to reduce the GHG intensity of in situ oil production, including the use of vacuum-insulated tubing and molten carbonate fuel cells.

Vacuum insulated tubing project

This innovation is tied to the Surmont e-SAGD project piloted by ConocoPhillips Canada and Total Exploration and Production Canada. The project uses vacuum insulated tubing (VIT) to reduce the amount of steam required in the extraction process.

VIT technology carries steam through two concentric tubes. The air between the tubes is removed, creating a vacuum that helps minimize heat loss as the steam travels to the well's bitumen-bearing zone. Tests suggest that wells equipped with VITs may need as little as 75 days of pre-heating compared to the three or four months needed when using traditional methods. The new approach could deliver significant savings in water and natural gas, as well as reductions in related GHG emissions.

Molten carbonate fuel cell technology

COSIA member Cenovus Energy Inc. is leading a joint industry project (JIP) to study the potential of MCFC technology. Since MCFCs can use carbon oxides as fuel, the JIP pilot would use the technology to capture CO₂ created by natural gas-fired steam boilers in

SAGD and e-SAGD extraction. The excess electricity generated by the fuel cells would be sold back to Alberta's electrical grid.

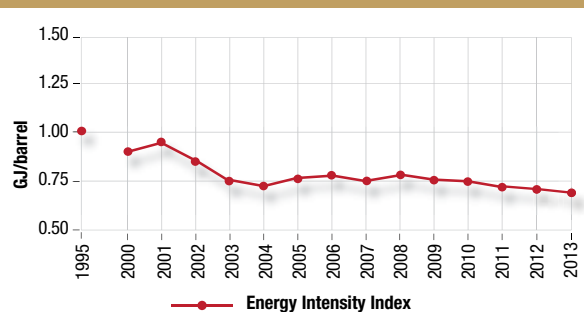
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5259.



HIGHLIGHTS

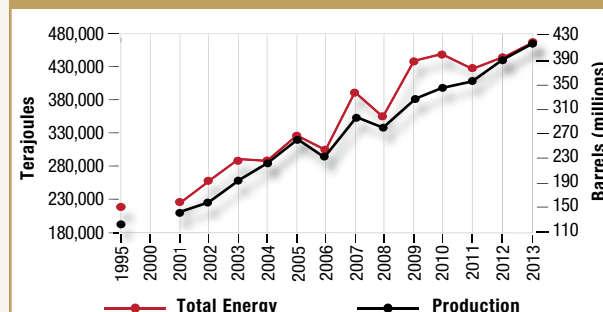
Oil Sands Sector – NAICS 211114

Energy Intensity Index (1995–2013)
Base Year 1995 = 1.00



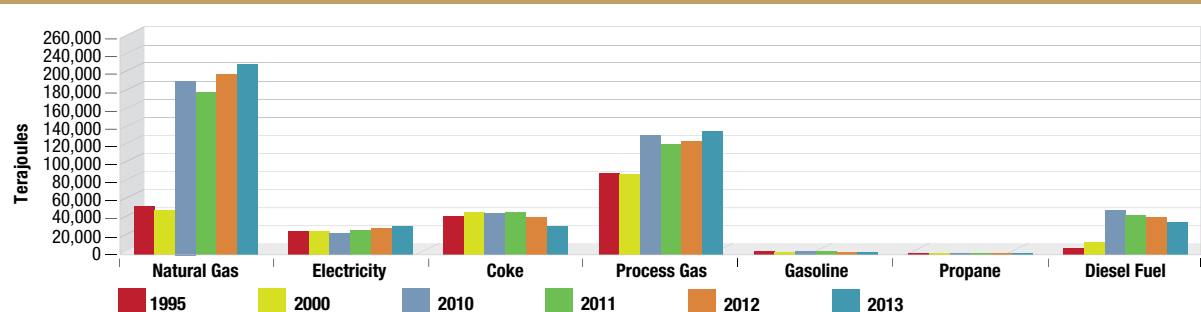
Energy intensity decreased by 2.60 percent between 2012 and 2013.

Total Energy and Physical Output (1995–2013)



Between 2012 and 2013, total energy consumption increased by 5.05 percent, and total production increased by 7.85 percent.

Energy Sources



Natural gas consumption increased by 11.69 percent, and process gas increased by 7.9 percent between 2012 and 2013.



Petroleum Products

PROFILE

Canada's petroleum products sector manufactures and markets the fuels that drive the Canadian economy. From transportation fuels to heating oil, chemicals and asphalt, its products are present in many aspects of Canadian daily activities. The refining sector contributed \$5.6 billion to Canada's GDP in 2014 and, in 2013, employed 18,000 Canadians at 18 refineries and about 12,000 wholesale and retail service stations throughout Canada.¹⁰

ACHIEVEMENTS

Responding to the challenge of climate change

The Canadian Fuels Association (CFA) represents the industry that produces, distributes and markets petroleum products in Canada. Effective environmental stewardship is a core value of CFA members, integrated into business planning, facilities, product development, operating practices and training programs. By making better use of energy and improving the efficiency of the refining process, refiners have met increasing demand for their products while reducing GHG emissions.

CFA members have invested more than \$7.2 billion over the past 10 years to improve the environmental performance of their refineries and fuels. As a result, the refining sector's CO₂ emissions have been reduced by 16 percent, even while refining has become more intensive to comply with new, more stringent fuel quality standards.

CFA members are also committed to using less water and returning it to the environment in a cleaner state. Since 2005, the sector's water intake is down 22 percent while effluent deposits continue to be well below maximum allowable limits.

For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5277.

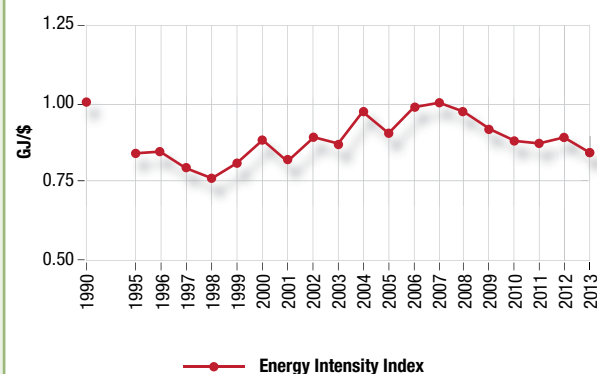
¹⁰ Canadian Fuels Association – Fuel 2014 Annual Review. *Petroleum, Canada's Fuel*



HIGHLIGHTS

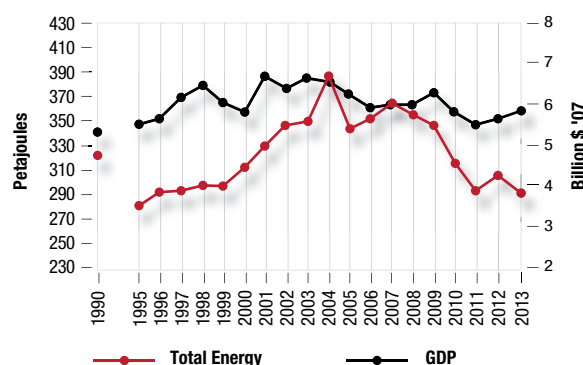
Petroleum Products Sector – NAICS 324110

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



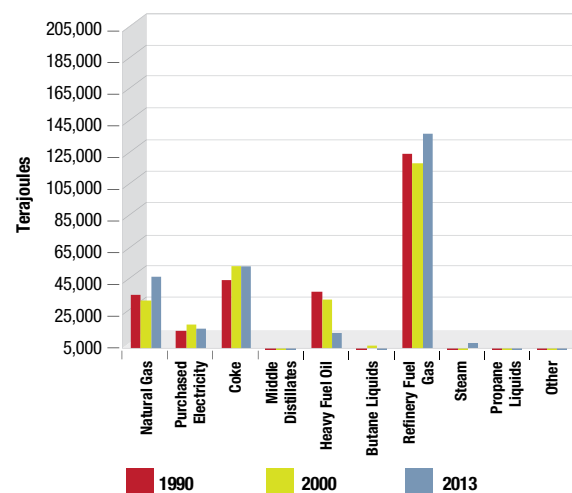
Between 2012 and 2013, energy intensity decreased by 6.63 percent.

Total Energy and Economic Output (1990–2013)



GDP increased by 1.86 percent, while energy consumption decreased by 4.89 percent between 2012 and 2013.

Energy Sources



Between 2012 and 2013, natural gas consumption decreased by 2.53 percent, heavy fuel oil consumption decreased by 12.31 percent, and refined fuel gas consumption decreased by 6.70 percent.



Plastics

PROFILE

Canada's plastics industry is sophisticated and multi-faceted and encompasses manufacturing, machinery, moulds and resins. Represented by the [Canadian Plastics Industry Association \(CPIA\)](#), the sector comprises 3,170 companies that employ more than 95,400 workers.¹¹

The CPIA focuses on three priorities. It prides itself on communicating the facts behind plastics' manufacturing and use – from the material's economic, social and environmental contributions to the size and strength of the Canadian manufacturing sector. It is committed to increasing the amount of plastic and the various types of plastic waste being diverted from landfill by using various waste management options, such as reuse, recycle and energy recovery. The CPIA remains committed to building on the industry's long history of innovation and achievement by taking advantage of new opportunities and meeting industry challenges as they arise.

ACHIEVEMENTS

Valley Acrylic makes major investments in energy efficiency

Valley Acrylic, a bathroom products manufacturer based in Mission, British Columbia, became a zero-waste facility this year by investing heavily in energy efficiency upgrades. The company recycles, using a high-efficiency paper shredder to produce the plant's packaging. Valley Acrylic has also made a \$3 million investment in machinery that processes all acrylic waste into a usable material.

The company has partnered with BC Hydro over three years to meet its energy efficiency goals. In that time, it has upgraded its lighting from T-5 fluorescent lights to LED lights and tested for and repaired leaks in the compressed air system. They also upgraded compressors and acrylic sheet heating ovens and replaced the plant's boiler with a high efficiency model. Valley Acrylic will continue research and development into green technology and implement several additional energy efficiency upgrades, including a retrofit of equipment motors with VFDs.

Valley Acrylic's head of marketing and business development notes that with rising electricity rates, "energy efficiency is a smart business decision. Like other CIPEC members, we want to be part of the solution."

Vision Extrusions Group demonstrates impressive commitment to sustainability

Vision Extrusions Group, which manufactures vinyl products at a large facility in Woodbridge, Ontario, has invested more than \$1 million in energy efficiency projects over two years. Vision's collaboration with Ontario's saveONenergy Retrofit Program has been an important part of the solution, creating a payback period of 1.5 years for most of the retrofit projects. The company has upgraded to facility-wide high efficiency LED lighting, retrofitted pumps with VFDs, and replaced all chillers, extruders and other production equipment with high efficiency models.

¹¹ [Canadian Plastics Industry Association](#)

Vision has taken other measures as well. It has outfitted its facility with an internal water recycling system and also recycles 100 percent of its plastic waste. In 2012, Vision started the Green Elephant Initiative, a project that aims to get operators and employees on board to help save energy.

Over the next year the facility will undergo additional retrofits to help increase energy efficiency while leaving production unaffected. Vision is considering collaborating with the Independent Electricity System Operator to install a cogeneration system at its facility.

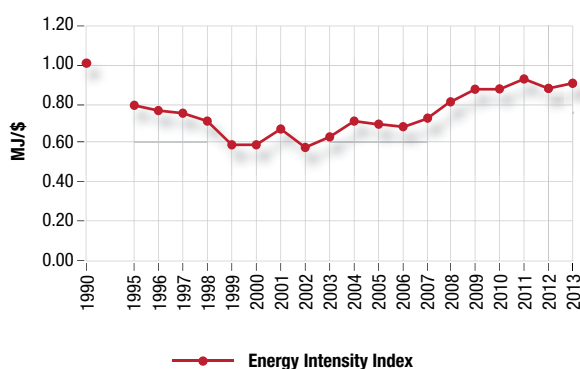
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5269.



HIGHLIGHTS

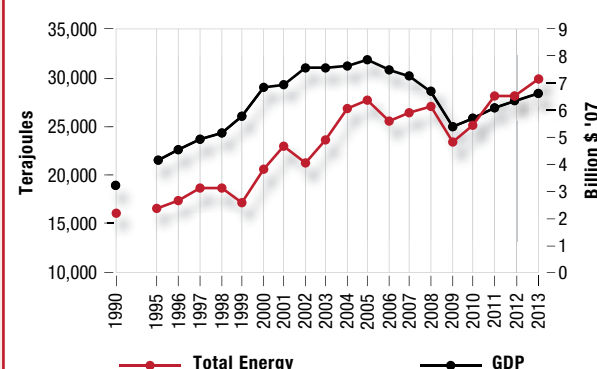
Plastics Sector – NAICS 3261

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



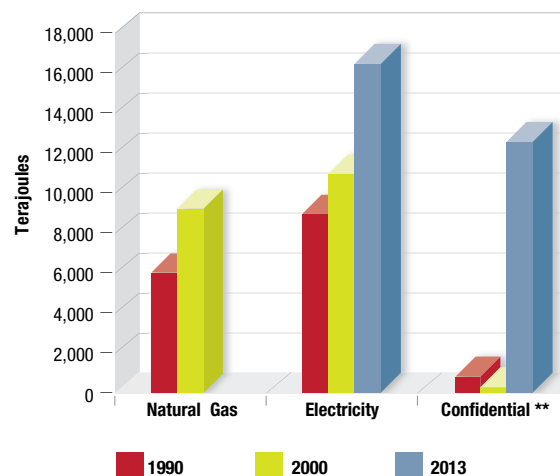
Between 2012 and 2013, energy intensity increased by 0.7 percent.

Total Energy and Economic Output (1990–2013)



GDP increased by 4.4 percent, and energy consumption increased by 5.2 percent between 2012 and 2013.

Energy Sources



** Confidential includes natural gas, heavy fuel oil, middle distillates, wood and propane.

Electricity consumption increased by 6.5 percent between 2012 and 2013.



Steel

PROFILE

With close to \$14 billion in annual sales, Canada's steel industry is at the root of the Canadian industrial tree, providing the key material for many industries, including automotive, construction, energy, packaging and advanced manufacturing. Steel is also an important customer for many other industries, including raw materials and transportation.¹²

There are two major ways to produce steel in Canada: the basic oxygen furnace (BOF) process and the electric arc furnace (EAF) process. These two processes have different energy profiles. The BOF process uses raw materials (notably iron ore and coal), combined with 25 to 35 percent recycled steel to make new steel. The EAF process uses almost 100 percent recycled steel to make new steel.

Both processes produce different products for a wide spectrum of applications. While the steel industry maximizes its consumption of available recycled steel to make new steel, additional demand for steel products cannot be fully met through finite scrap steel supplies.

ACHIEVEMENTS

ArcelorMittal Dofasco Hamilton launches new energy management plan

In recent years, ArcelorMittal Dofasco (AMD) has invested heavily to improve energy efficiency, reduce its carbon footprint, and engage employees in a culture of continuous improvement. Prior to 2011 the company conducted several ongoing independent energy efficiency activities. AMD set out to merge these activities into one comprehensive energy management plan (EMP) that would align with the company's energy policy and provide a strategic path forward.

One objective of the EMP was to ensure sufficient projects to achieve energy cost savings of \$50 million by the end of 2014. AMD remained on target to achieve that goal, with additional projects to be brought online in 2015 that would add another \$3 million to \$5 million in savings. The completion of various major projects resulted in a net annual reduction in electrical use of 61,900 MWh.

ArcelorMittal Montréal installs a new energy-efficient furnace

The replacement of a rolling mill reheat furnace is a mammoth undertaking even for ArcelorMittal – Quebec's largest steel company. Pre-assembled by the manufacturer in Italy, the company's new furnace required nearly 95,000 man-hours to install at its plant in Longueuil at a cost of \$23 million. Yet the company is already seeing positive economic and environmental returns from the equipment. In its first year of operation, the new furnace reduced the plant's natural gas consumption by more than 20 percent while helping to increase production by 14 percent. Once optimization is complete, the company expects energy savings of 31 percent and reductions to GHG emissions of 9,800 t.

U.S. Steel Canada applies a new gas injection design to iron-making blast furnaces

Blast furnaces represent the most energy and CO₂ emission-intensive parts of the iron-making process. Reducing this intensity has been an area of interest for both the steel industry and researchers at the CanmetENERGY laboratory in Ottawa.

¹² Canadian Steel Producers Association – *Steel Facts*



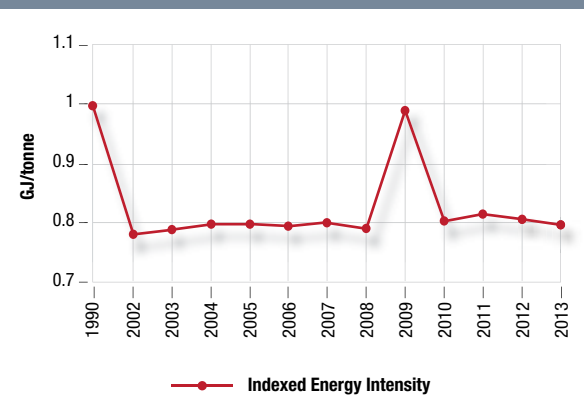
HIGHLIGHTS

Steel Sector – NAICS 331100

Scientists at the lab recently used CFD to compare and evaluate individual or combined coal/natural gas injection systems for blast furnaces. The study showed the feasibility of increasing natural gas injection by 10 percent in iron-making blast furnaces. The study also contributed to the successful implementation of a new natural gas injection design at one of U.S. Steel Canada's sites. In times when metallurgical coke is expensive and natural gas prices are comparatively low, the 10 percent increase could reduce coke use by 35,000 t annually and also reduce CO₂ emissions by 29,300 t a year for each furnace.

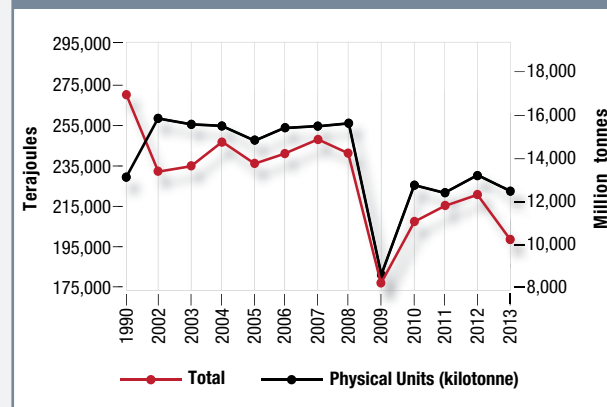
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5245.

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



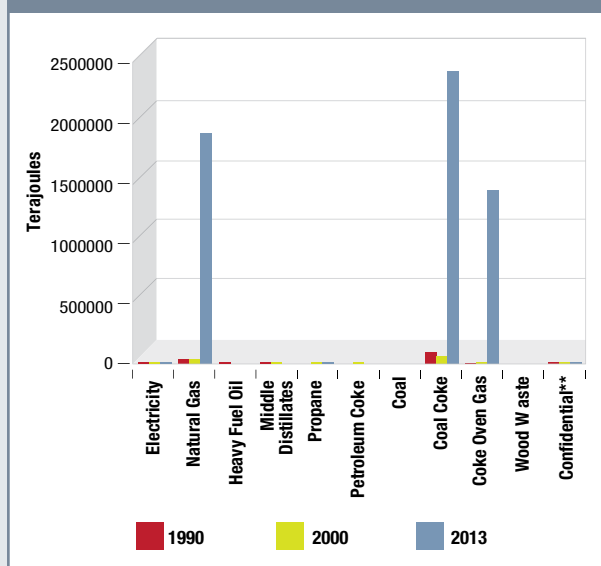
Between 2012 and 2013, energy intensity increased by 4.8 percent.

Total Energy Consumption and Physical Output (1990–2013)



Energy consumption decreased by 9.2 percent, and production decreased by 4.6 percent.

Energy Sources



** Confidential includes electricity, middle distillates, heavy fuel oil, petroleum coke, and coal.



Transportation Equipment Manufacturing

PROFILE

Canada's transportation equipment manufacturing sector comprises two primary industries: automotive and aerospace manufacturing.

Canada is the ninth largest vehicle producer in the world, and the industry employs more Canadians than any other manufacturing industry.

The industry directly supports more than 550,000 jobs across the country in 11 light-duty and 3 heavy-duty assembly plants, more than 540 original equipment parts manufacturers, about 4,000 dealerships, and many other directly related industries.

Canadian vehicle assemblers are highly competitive, accounting for close to 4 percent of total world production of 68.6 million units and a global trade surplus in finished vehicles of more than \$13.8 billion.

The Canadian automotive industry is a leader in developing a highly skilled workforce and in its efforts to improve environmental quality. It is a major contributor to the health of Canada's economy.¹³

Aerospace manufacturing

Canada ranks third in global civil aircraft production thanks to an aerospace manufacturing industry that includes civil and defence activities as well as space systems manufacturing. Employing more than 180,000 Canadians, the industry is a market leader in the production of aircraft, rotorcraft, avionics, engines, simulation systems and other aerospace components.

The industry comprises more than 700 companies that generated \$27.7 billion in direct revenues in 2014. About 80 percent of industry products are exported each year to highly diversified markets around the world. More than 20 percent of industry activity is dedicated to R&D – five times the Canadian average for total manufacturing intensity and representing a \$1.8 billion investment in 2014.¹⁴

ACHIEVEMENTS

The Government of Canada established the Automotive Innovation Fund (AIF) in 2008 and renewed it in 2013 for another five years. The fund provides automotive companies with repayable contributions when they undertake

large research and development projects focused on innovative, greener and more fuel-efficient vehicles.

To date, the AIF has supported a wide range of projects. With an \$80 million contribution, it helped Ford Canada establish a new flexible engine assembly plant in Windsor and undertake research on engine efficiency and new fuel technologies. It provided Linamar Corporation with \$55 million to develop green and fuel-efficient automotive powertrains. Magna International received \$22 million to develop clean vehicle technologies. And Toyota Motor Manufacturing Canada received support for two projects. The first project is Project Green Light, which received \$70 million and includes the production of the RAV4 electric vehicle at Toyota's West Plant in Woodstock. Another \$17 million contribution was made to the company's construction of a new blended assembly line that will enable the production of both the current Lexus model and the hybrid model.

Toyota cogeneration plant takes a load off in Southern Ontario

Toyota Motor Manufacturing Canada in Cambridge, Ontario, undertook a \$27 million

¹³ Canadian Vehicles Manufacturing Association (CVMA) ¹⁴ *The State of the Canadian Aerospace Industry*. Aerospace Industries Association of Canada. 2015.

natural gas cogeneration project this year that is expected to bring several significant benefits. The cogeneration plant will have an output of 10 MW, which should bring roughly one third of Toyota's energy use off the grid. Meanwhile, Cambridge is underserved in electrical capacity, and the project will noticeably reduce demand on the local and provincial grids. In addition, natural gas cogeneration is relatively clean-burning, which means that nitrous oxides will decrease as a result of the project. As a final bonus, there are plans for the cogeneration plant to heat a vegetable greenhouse for non-profit organizations, which means the community will benefit.

The project represents one of the largest energy-saving initiatives in Ontario. For Toyota, the energy savings will decrease production costs and help them stay competitive in global manufacturing.

Stackpole International appoints an embedded energy manager

Stackpole International, a powertrain manufacturer with five plants in Ontario (and several overseas), has taken advantage of a Hydro One cost-sharing program. With this program, the company appoints an embedded energy manager while paying just a fraction of the manager's salary.

The cost-sharing arrangement is one element of Hydro One's series of "process and systems upgrade" incentives. When a company hires an onsite energy manager, the utility pays up to 80 percent of the new employee's salary, to a maximum of \$100,000. The manager is responsible for spearheading large energy efficiency projects. With annual electricity costs at roughly \$4 million at one Stackpole plant alone, the potential benefits of careful energy management are significant.

Stackpole's new energy manager is currently focused on the company's two Ancaster plants, which comprise a 12,539-m² powder metal plant and a 10,904-m² engineering products manufacturing plant. Improvements since the energy manager was appointed include a new 200-hp compressor along with a control sequencer with efficiency-based algorithms that will help a VFD compressor use up to 40 kW less power. Another improvement is a more energy-efficient cooling tower, which consumes 5 kW less than the old one. Future projects will include a heat recovery system and replacements for the plants' aging motors.

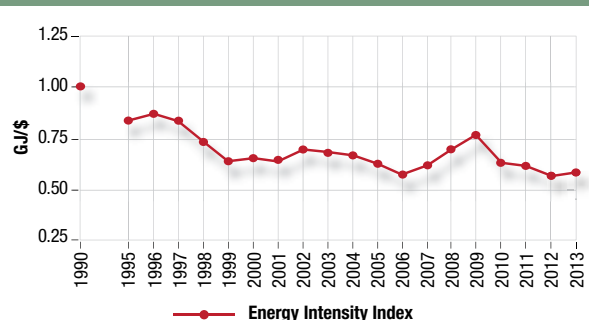
For more information on the sector, visit: nrcan.gc.ca/energy/efficiency/industry/opportunities/5273.



HIGHLIGHTS

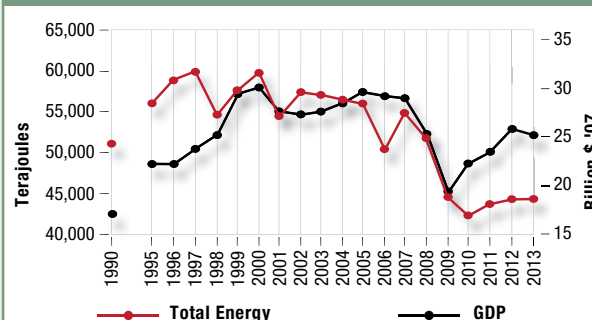
Transportation Equipment Manufacturing – NAICS 336

Energy Intensity Index (1990–2013)
Base Year 1990 = 1.00



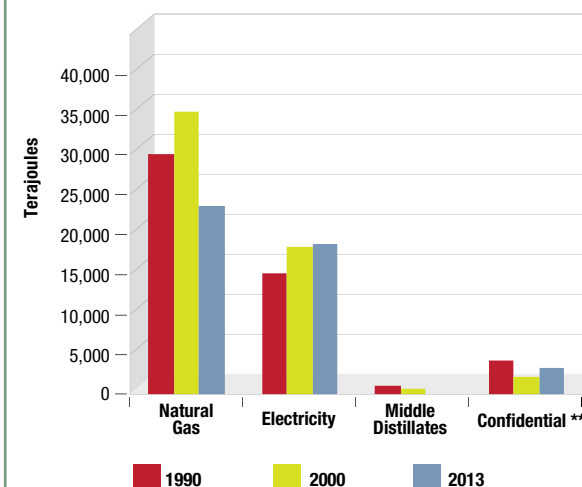
Between 2012 and 2013, energy intensity increased by 3.3 percent.

Total Energy and Economic Output (1990–2013)



GDP decreased by 3.3 percent and energy consumption decreased by 0.1 percent between 2012 and 2013.

Energy Sources



** Confidential includes coal, steam, propane, middle distillate, heavy fuel oil, and wood.

Between 2012 and 2013, natural gas consumption increased by 5.6 percent, while electricity consumption decreased by 5.3 percent.



Upstream Oil and Gas

PROFILE

The upstream oil and gas sector includes companies that find and develop Canada's vast oil and gas resources. The sector is broadly divided between conventional oil and gas production and oil sands production and upgrading. This section discusses the conventional oil and gas sector. The [oil sands sector](#) is covered separately in this annual report.

Products and services derived by downstream sectors from the output of this industry include heating and transportation fuels, building supplies and materials, clothing and medicines. The national industry has revenues of about \$120 billion per year.

The exploration and production industry is represented by the [Canadian Association of Petroleum Producers \(CAPP\)](#) and the [Explorers and Producers Association of Canada](#). CAPP speaks for large and small companies in this industrial sector that explore, develop and produce natural gas and crude oil. CAPP has two types of membership: full members, which produce 90 percent of Canada's natural gas and crude oil, and associate members, which provide services that support this industrial sector.

ACHIEVEMENTS

Encana completes a multi-year, \$5.3 million methane capture project

Encana recently completed its field-wide rollout of SlipStream® vent gas capture technology at 59 natural gas compressor stations in southern Alberta. The project was supported in part by funding from Alberta's Climate Change and Emissions Management Corporation (CCEMC).

The technology was developed by Calgary-based REM Technology Inc., a division of Spartan Controls. Each SlipStream unit captures fuel gas (primarily methane) that is vented as part of normal operations. The unit then redirects this gas into the compressor engine's air intake to help fuel the engine.

The compressor retrofits are expected to reduce GHG emissions by more than 67,000 t CO₂e a year. Encana has already verified and registered over 85,000 t CO₂e worth of offset credits from the project up to January 2015. Over the estimated 10-year life of the compressor stations, this will lead to a permanent reduction of over 750,000 t CO₂e. Over the life of the project, the total natural gas savings are estimated to be 1.7 billion cubic feet of natural gas.

Cenovus is innovating to reduce GHG emissions

Cenovus undertook a variety of projects in 2014 to improve energy efficiency and reduce GHG emissions. The company launched a project to improve pump-jack motor efficiency by installing VFDs, which help reduce energy consumption while capturing regeneration energy that is wasted in traditional pump-jacks. If the project is successful, Cenovus may deploy the technology on the majority of pump-jack motors in its Saskatchewan operations. The company expects the VFDs to reduce pump-jack energy consumption by about 10 percent.

Cenovus also completed 28 retrofits at natural gas compression facilities to install vent gas capture systems and air and fuel ratio controllers. The retrofits will increase the fuel efficiency of gas compressors and conserve gas that is normally vented to the atmosphere. Alberta's CCEMC provided \$2.68 million of the \$7.70 million required to fund the project, which was successfully completed in 2014. Cenovus reports the project will reduce CO₂e emissions by about 19,500 t per year.

In another project, Cenovus installed a continuously variable transmission (CVT) in a compressor station fan located in one of

its conventional operations. CVTs help reduce energy consumption by continuously adjusting fan speed to match the load. The new installation is expected to reduce electricity loss by up to 90 percent.

BP reduces energy use to minimize environmental impacts

BP manages its GHG emissions through operational energy efficiency, reducing flaring and venting, and by factoring a carbon cost into its investment appraisals and the engineering design of new projects. Reducing energy use helps the company minimize

environmental impacts, including reducing GHG emissions and other air emissions and can also provide economic incentives.

BP requires its operations to incorporate energy use considerations into business plans and to assess, prioritize and implement technologies and systems that could improve efficiency. For example, the company measures the energy performance of its refining business by using the Solomon Energy Intensity Index (EII), an industry measure that benchmarks energy efficiencies. All BP refineries set and track progress against an EII target.

The company is also implementing new proprietary manufacturing processes that substantially reduce the energy consumption required to make purified terephthalic acid at its petrochemicals facilities.

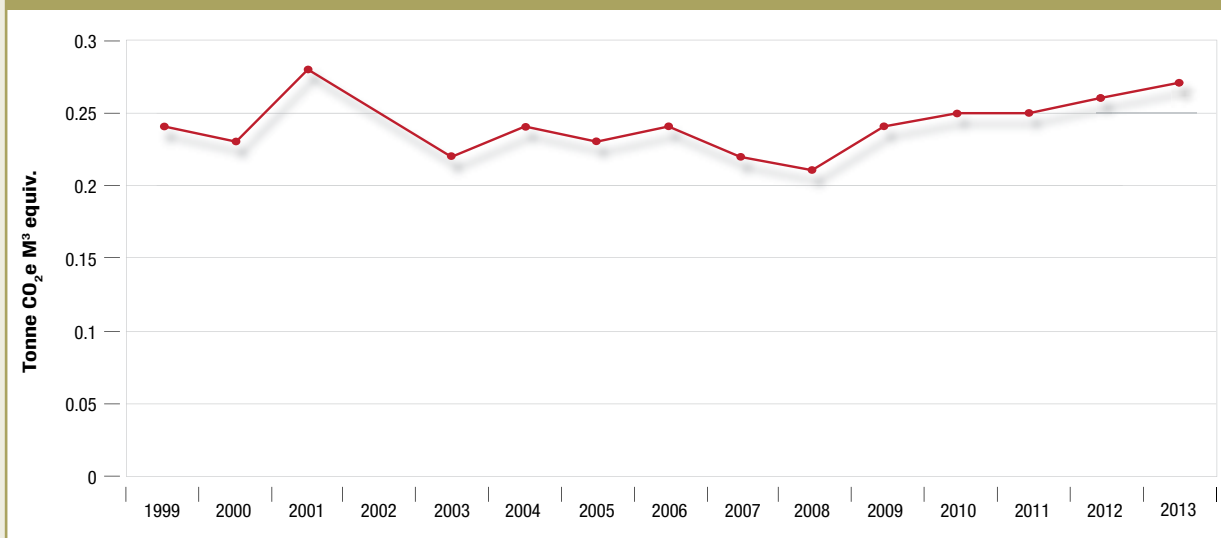
For more information on the sector, visit nrcan.gc.ca/energy/efficiency/industry/opportunities/5263.



HIGHLIGHTS

Upstream Oil and Gas Sector – NAICS 211113

GHG Emission Intensity – Conventional Oil and Gas



CIPEC Who's Who

CIPEC EXECUTIVE BOARD MEMBERS

The executive board provides leadership for CIPEC's task forces, associations and companies. The board's 10 members are all volunteers with senior management responsibilities and expertise in energy efficiency. They are drawn from across the 21 CIPEC sectors. The executive board has regular teleconferences and meetings throughout the year.

CIPEC TASK FORCE COUNCIL MEMBERS

The 20-member CIPEC Task Force Council includes volunteer representatives from CIPEC's 21 sectors. Members of the Task Force Council benefit from the energy efficiency expertise offered by their council peers. They meet regularly to exchange ideas and recommend ways to address the challenges associated with improving energy efficiency and sustainability as well as reducing greenhouse gas emissions.

CIPEC LEADERS

CIPEC Leaders are drawn from CIPEC member companies and trade associations. Every member has access to tools and services offered by Natural Resources Canada's Office of Energy Efficiency. CIPEC Leaders support voluntary initiatives that lead to energy cost savings and assist the Government of Canada in meeting its objectives to save energy and reduce greenhouse gas emissions and air pollution. Every two years, member companies are invited to compete in the CIPEC Leadership Awards showcasing their energy efficiency achievements. The awards are presented during CIPEC's biennial conference.

OFFICE OF ENERGY EFFICIENCY INDUSTRY DIVISION CONTACTS

Contact information for the Program's director, chiefs, and general enquiries, is available on page 84.

CIPEC Executive Board Members

Andy Mahut (Chair)

Manager Energy Practices
U.S. Steel Canada Inc.

Martin Vroegh

Ex-officio member – Chair, CIPEC Task Force Council
Director, Environmental Affairs, Cement
St. Marys Cement Inc.

Helen Bennett

Emerging Regulatory Policy Issue Advisor
Shell Canada Downstream

Wayne Kenefick

Vice-President
Sustainable Development
Graymont Western Canada Inc.

Peter Kinley

President and CEO
Lunenburg Industrial Foundry & Engineering

Walter Kraus

Vice-President
Environmental Sustainability
Weston Food Canada Inc. – Etobicoke

Yves Leroux

Vice-President
Regulatory and Government Affairs
Parmalat Dairy & Bakery Inc.

Ronald C. Morrison

Treasurer of the Board
Canadian Manufacturers & Exporters (CME)

George T. Partyka

Vice-President
Partner Technologies Incorporated

Bradley Robertson

Senior Continuous Improvement Leader
Environment, Health and Safety Manager
ESCO Limited

CIPEC Task Force Council Members

CIPEC TASK FORCE COUNCIL CHAIR

Martin Vroegh

Director

Environmental Affairs, Cement
St. Marys Cement Inc.

ALUMINUM SECTOR TASK FORCE

Anik Dubuc

Vice-President

Sustainable Development
Aluminium Association of Canada (AAC)

BREWERY SECTOR TASK FORCE

Edwin Gregory

Director

Policy and Research
Beer Canada

CEMENT SECTOR TASK FORCE

Adam J. Auer

Director

Sustainability Business Development and
Stakeholder Relations
Cement Association of Canada (CAC)

CONSTRUCTION SECTOR TASK FORCE

Pierre Boucher

President

Canadian Construction Innovations

DAIRY SECTOR TASK FORCE

Tim Whitson

Energy Project Engineer

Natrel Division
Agropur Cooperative

ELECTRICAL AND ELECTRONICS SECTOR TASK FORCE

Jim Taggart

President & Chief Executive Officer

Electro-Federation Canada

ELECTRICITY GENERATION SECTOR TASK FORCE

Channa S. Perera

Manager

Sustainable Electricity Program
Canadian Electricity Association (CEA)

FERTILIZER SECTOR TASK FORCE

Giulia Brutesco

Director

Scientific and Regulatory Affairs
Canadian Fertilizer Institute (CFI)

FOOD AND BEVERAGES SECTOR TASK FORCE

Doug Dittburner

Managing Chief Engineer

Campbell Company of Canada

FOREST PRODUCTS SECTOR TASK FORCE

Robert (Bob) Larocque

Director

Environment, Energy, Economics and Climate
Change

Forest Products Association of Canada

FOUNDRY SECTOR TASK FORCE

Judith Arbour

Executive Director

Canadian Foundry Association (CFA)

GENERAL MANUFACTURING SECTOR TASK FORCE – CENTRAL ONTARIO

Jim Armstrong

Environment, Health and Safety Specialist

Crown Metal Packaging Canada LP

GENERAL MANUFACTURING SECTOR TASK FORCE – EASTERN ONTARIO

Michael Kelly

Process Engineer/Energy Manager

KI Canada Corporation

LIME SECTOR TASK FORCE

Christopher Martin

Regional Environmental Manager

Carmeuse Lime (Canada) – Beachville Operation

MINING SECTOR TASK FORCE

Brendan Marshall

Director

Economic Affairs

The Mining Association of Canada (MAC)

MINING SECTOR TASK FORCE – CO-CHAIR

Andrew Cooper

Energy Specialist

New Gold Inc.

PETROLEUM PRODUCTS SECTOR TASK FORCE

Gilles Morel

Director

Eastern Canada and National

Canadian Fuels Association

TRANSPORTATION EQUIPMENT MANUFACTURING SECTOR TASK FORCE

Michael O'Meara, P. Eng., C.E.M.

Senior Specialist

Environmental Compliance and Energy

Magna International Inc.

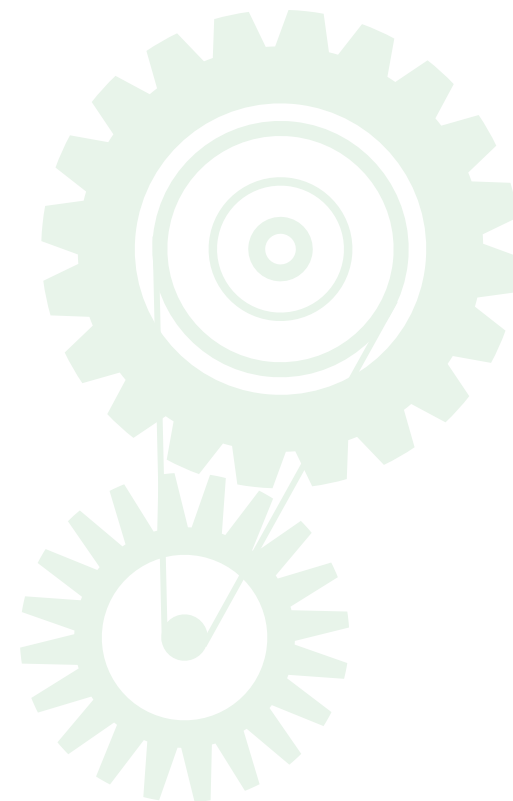
EMC REPRESENTATIVE

Scott McNeil-Smith

Director

Marketing and Development

EMC Canada



CIPEC Leader Companies by Sector

ALUMINUM

Alcan inc. – *Montréal*
Alcan Specialty Aluminas – *Brockville*
Alcoa Canada Première fusion – *Montréal*
Alcoa Ltée – Aluminerie de Baie-Comeau
– *Baie-Comeau*
Alcoa – Aluminerie de Deschambault S.E.N.C.
– *Deschambault*
Alcoa Ltée – Alcoa-Usine de Tige – *Bécancour*
Aluminerie de Bécancour inc. – *Bécancour*
Almag Aluminum Inc. – *Brampton*
Alumicor Limited – *Toronto*
Aluminerie Alouette inc. – *Sept-îles*
Novelis Inc. – *Toronto*
Recyclage d'aluminium Québec inc. – *Bécancour*
Universal Stainless & Alloys Inc. – *Mississauga*

BREWERY

Big Rock Brewery Ltd. – *Calgary*
Brasseurs du Nord inc. (Les) – *Blainville*
Columbia Brewery – *Creston*
John Allen Brewing Company (The) – *Halifax*
Kichesippi Beer – *Ottawa*
Labatt Breweries of Canada – *Edmonton, London, St. John's, Toronto*
La Brasserie Labatt – *LaSalle*
Molson Coors Canada – *Moncton, Montréal, Ontario, Vancouver*
Moosehead Breweries Limited – *Saint John*
Pacific Western Brewing Company – *Prince George*

Rahr Malting Canada Ltd. – *Alix*
Sleeman Brewing and Malting Co. Ltd. – *Guelph*
Okanagan Spring Brewery – *Vernon (Sleeman)*
Sleeman Maritimes – *Dartmouth*
Sleeman Unibroue Quebec – *Chambly*

CEMENT

Advanced Precast Inc. – *Bolton*
Arriscraft International – *Cambridge*
ESSROC Canada Inc. – *Picton*
Gordon Shaw Concrete Products Ltd. – *Windsor*
Groupe Permacon – *Ville d'Anjou*
Decor Precast – Div. of Oldcastle Building Products
Canada – *Stoney Creek*
Groupe Permacon Div. des Matériaux de Construction
Oldcastle Canada Inc. – *Ville d'Anjou*
Groupe Permacon inc. – Division Trois-Rivières
– *Trois-Rivières*
Groupe Permacon (Sherbrooke) – Div. des Matériaux
de Construction Oldcastle Canada inc. – *Sherbrooke*
Permacon Group Inc. – *Bolton, Oshawa*
Permacon Group – *Milton*
Permacon Ottawa – *Stittsville*
Holcim (Canada) Inc. – *Joliette, Mississauga*
International Erosion Control Systems – *Rodney, West Lorne*
Lafarge Canada inc. – *Montréal, Winnipeg*
Lehigh Inland Cement Limited – *Edmonton*
Lehigh Northwest Cement Limited – *Richmond*
Pre-Con Inc. – *Brampton*
St. Marys Cement Inc. (Canada) – *Bowmanville*
– *St. Marys*

CHEMICALS

Abrex Paint & Chemical Ltd. – *Oakville*
APCO Industries Co. Limited – *Toronto*
Apotex Pharmachem Inc. – *Brantford*
Arclin Canada Ltd. – *North Bay*
Avmor Ltée – *Laval*
Banner Pharmacaps (Canada) Ltd. – *Olds*
Bartek Ingredients Inc. – *Stoney Creek*
BASF The Chemical Company – *Georgetown*
Becker Underwood – *Saskatoon*
Benjamin Moore & Cie Limitée – *Montréal*
Big Quill Resources Inc. – *Wynyard*
BioVectra Inc. – *Charlottetown*
BOC Gaz – *Magog*
Celanese Canada inc. – *Boucherville*
Charlotte Products Ltd. – *Peterborough*
Church & Dwight Canada – *Mount Royal*
Colgate-Palmolive Canada Inc. – *Mississauga*
Collingwood Ethanol L.P. – *Collingwood, Toronto*
Commercial Alcohol Inc. – *Chatham, Tiverton, Varennes*
Diversey Canada, Inc. – *Edmonton*
Dominion Colour Corporation – *Ajax, Toronto*
Eka Chimie Canada inc. – *Magog, Salaberry-de-Valleyfield*
Eli Lilly Canada Inc. – *Scarborough*
Emballages Knowlton inc. (Les) – *Knowlton*
Emery Oleochemicals Canada Ltd. – *Toronto*
Estée Lauder Cosmetics Ltd. – *Scarborough*
Evonik Degussa Canada Inc. – *Brampton, Burlington, Gibbons*
Fibrex Insulations Inc. – *Sarnia*

Fielding Chemical Technologies Inc. – *Mississauga*
 Galderma Production Canada inc. – *Baie d'Urfé*
 Germiphene Corporation – *Brantford*
 Grace Canada inc. – *Valleyfield*
 GreenField Ethanol Inc. – *Tiverton*
 Honeywell – *Amherstburg*
 Hostmann-Steinberg Limited – *Brampton*
 HP Polymers Ltd. – *Puslinch*
 ICI Canada Inc. – *Concord*
 International Group Inc. (The) – *Toronto*
 Jamieson Laboratories Ltd. – *Windsor*
 Kronos Canada Inc. – *Varenes*
 Lanxess Inc. – *Sarnia*
 L'Oréal Canada inc. – *Montréal*
 Mancuso Chemicals Limited – *Niagara Falls*
 Nalco Canada Co. – *Burlington*
 Nordion Inc. – *Ottawa*
 NOVA Chemicals Corporation – *Corruna, Joffre,*
Moore Township, St. Clair River
 Oakside Chemicals Limited – *London*
 OmegaChem inc. – *Lévis, Saint-Romuald*
 Orica Canada Inc. – *Brownsburg*
 Osmose-Pentox Inc. – *Montréal*
 Oxy Vinyls Canada Inc. – *Niagara Falls*
 Pharmascience inc. – *Montréal*
 PolyOne Canada Inc. – *Orangeville*
 Powder Tech Ltd. – *Brampton*
 PPG Canada Inc. – *Beauharnois*
 Procter & Gamble Inc. – *Brockville*
 Prolab Technologies Inc. – *Thetford Mines*
 Purdue Pharma – *Pickering*
 Rhema Health Products Limited – *Coquitlam*
 Rohm and Haas Canada Inc. – *Scarborough*
 Sanofi Pasteur Limited – *North York*
 Saskatchewan Minerals Inc. – *Chaplin*
 Sifto Canada Corp. – *Goderich, Unity*
 Solucor Ltd. – *Bradford*
 Soucy Techno inc. – *Sherbrooke*

Tech Blend s.e.c. – *Saint-Jean-sur-Richelieu*
 Technical Adhesives Ltd. – *Mississauga*
 Tri-Tex Co. Inc. – *Saint-Eustache*
 Trillium Health Care Products Inc. – *Brockville, Newmarket,*
Perth, Prescott
 Westbrook Technologies Inc. – *Scarborough*
 Wyeth-Ayerst Canada Inc. – *Saint-Laurent*

CONSTRUCTION

AnMar Mechanical & Electrical Contractors Ltd. – *Lively*
 ATCO Structures Inc. – *Calgary, Spruce Grove*
 Basin Contracting Limited – *Enfield*
 Battle River Asphalt Equipment Ltd. – *Cut Knife*
 Construction DJL Inc. – *Saint-Philippe-de-Laprairie*
 Denko Mechanical Ltd. – *Springfield*
 Lockerbie & Hole Industrial Inc. – *Edmonton*
 M J Roofing & Supply Ltd. – *Winnipeg*
 Mira Timber Frame Ltd. – *Stony Plain*
 Moran Mining & Tunnelling Ltd. – *Lively*
 Northland Building Supplies Ltd. – *Edmonton*
 Pavages Beau-Bassin, division de Construction DJL Inc.
 – *Gaspé*
 Production Paint Stripping Ltd. – *Toronto*
 Taggart Construction Ltd. – *Ottawa*
 Whitemud Ironworks Group Ltd. – *Edmonton*

DAIRY

Agrilait Coopérative agricole – *Saint-Guillaume*
 Agropur Coopérative – *Beauceville*
 Agropur Coopérative, division Natrel – *Burnaby,*
Don Mills, Victoria
 Amalgamated Dairies Limited – *Summerside*
 ADL O'Leary – *Summerville*
 ADL St. Eleanors – *Summerside*
 ADL West Royalty – *Charlottetown*
 O'Leary and Perfection Foods – *Summerside*

Arla Foods Inc. – *Concord*
 Atwood Cheese Company – *Atwood*
 Baskin-Robbins Ice Cream – *Peterborough*
 Entreprise Le Mouton Blanc – *La Pocatière*
 Farmers Co-Operative Dairy Limited – *Halifax*
 Foothills Creamery Ltd. – *Calgary, Didsbury, Edmonton*
 Fromagerie Polyethnique inc. (La) – *Saint-Robert*
 Hewitt's Dairy Limited – *Hagersville*
 Kerry Québec Inc. – *Sainte-Claire*
 Laiterie Chagnon Ltée – *Waterloo*
 Laiterie Charlevoix inc. – *Baie-Saint-Paul*
 Neilson Dairy Ltd. – *Halton Hills, Ottawa*
 Nutrinor (Laiterie Alma) – *Alma*
 Parmalat Dairy & Bakery Inc. – *Etobicoke*
 Parmalat Canada Inc. – *Brampton*
 Pine River Cheese & Butter Co-operative – *Ripley*
 Roman Cheese Products Limited – *Niagara Falls*
 Salerno Dairy Products Ltd. – *Hamilton*
 Saputo inc. – *Montréal*
 Saputo Cheese, G.P. – *Saint-Léon*
 Saputo Foods Limited – *Tavistock*
 S.C.A. de L'île-aux-Grues – *L'île-aux-Grues*
 Silani Sweet Cheese Ltd. – *Schomberg*

ELECTRICAL and ELECTRONICS

ABB Inc. – *Lachine, Québec, Saint-Laurent, Varennes*
 ABB Bomem Inc. – *Québec*
 Alstom Hydro Canada Inc. – *Sorel-Tracy*
 Apollo Microwaves – *Pointe-Claire*
 ASCO Valve Canada – *Brantford*
 Best Theratronics Ltd. – *Ottawa*
 C-Vision Limited – *Amherst*
 Candor Industries Inc. – *Toronto*
 Chamber Électrique – *Yamaska*
 Circuits GRM Enr. – *Ville Saint-Laurent*
 Crest Circuit Inc. – *Markham*
 Cogent Power Inc. – *Burlington*

DALSA Semiconducteur Inc. – *Bromont*
 DRS Technologies Canada Ltd. – *Carleton Place*
 Duke Electric Ltd. – *Hamilton*
 Duplium Corporation – *Thornhill*
 Eaton Yale Company – *Milton*
 Éclairages PA-CO inc. (Les) – *Laval*
 Ecopower Inc. – *London*
 Electrolux Canada Corp. – *L'Assomption*
 Energizer Canada Inc. – *Walkerton*
 EPM Global Services Inc. – *Markham*
 Firan Technology Group – *Scarborough*
 General Electric Canada – *Peterborough*
 General Dynamics Canada – *Calgary, Ottawa*
 GGI International – *Lachine*
 Hammond Manufacturing Company
 Limited – *Guelph*
 Honeywell – *Mississauga*
 IBM Canada Ltd. – *Bromont, Markham*
 Ideal Industries (Canada) Corp. – *Ajax*
 ISAAC Instruments Inc. – *Chambly*
 Master Flo Technology Inc. – *Hawkesbury,*
North Vancouver
 MDS Nordion Inc. – *Kanata*
 Mersen Canada Toronto, Inc. – *Toronto*
 Milplex Circuit (Canada) Inc. – *Scarborough*
 Moloney Electric Inc. – *Sackville, Spruce Grove, Toronto*
 Nexans Canada Inc. – *Fergus*
 Osram Sylvania Ltd. – *Mississauga*
 Osram Sylvania Itée – *Drummondville*
 Partner Technologies Incorporated – *Regina*
 Pivotal Power Inc. – *Bedford*
 Powersmiths International Corp. – *Brampton*
 Proto Manufacturing Ltd. – *Oldcastle*
 Purifics ES Inc. – *London*
 Ralston Metal Products Ltd. – *Guelph*
 Real Time Systems Inc. – *Toronto*
 Remco Solid State Lighting – *Toronto*
 Rheinmetall Canada inc. – *Saint-Jean-sur-Richelieu*
 Rockwell Automation Canada Inc. – *Cambridge*
 S&C Electric Canada Limited – *Toronto*

Schneider Electric Canada Inc. – *Saanichton*
 Surrette Battery Company Limited – *Springhill*
 Systèmes Électroniques Matrox Ltée – *Dorval*
 Tyco Electronics Canada Ltd. – *Markham*
 Tyco Safety Products – *Toronto*
 Tyco Thermal Controls Canada Limited – *Trenton*
 Ultra Electronics Maritime Systems – Division of Canada
 Defence Inc. – *Dartmouth*
 Vansco Electronics Ltd. – *Winnipeg*
 Wipro Technologies – *Mississauga*

ELECTRICITY GENERATION

Enwave energy Corporation
 Pearl Street Plant – *Toronto*
 Simcoe Street Plant – *Toronto*
 Walton Street Plant – *Toronto*
 Ontario Power Generation – *Toronto*
 Qulliq Energy Corporation – *Iqaluit*

FERTILIZER

Agrium Inc. – *Redwater*
 Canadian Fertilizers Limited – *Medicine Hat*
 Fafard et Frères Itée – *Saint-Bonaventure*
 Mosaic Potash Belle Plaine – *Belle Plaine*
 Mosaic Potash Colonsay – *Colonsay*
 Mosaic Potash Esterhazy – *Esterhazy*
 Profid'Or Coopérative Agricole – *Joliette*
 Sherritt International Corporation – *Fort Saskatchewan*
 Tourbières Berger Itée (Les) – *Baie-du-Vin,*
Baie Sainte-Anne, Saint-Modeste

FOOD and BEVERAGES

A. Harvey & Company Limited – *St. John's*
 Argentia Freezers – *Dunville*
 Browning Harvey Limited – *Corner Brook,*
Grand Falls-Windsor, St. John's

Abattoir Saint-Germain inc. – *Saint-Germain-de-Grantham*
 AgEnergy Co-operative Inc. – *Guelph*
 Agri-Marché Inc. – *Saint-Isidore*
 Alberta Processing Co. – *Calgary*
 Alex Coulombe Ltée – *Québec*
 Aliments Dare limitée (Les) – *Sainte-Martine*
 Aliments Lucyporc – *Yamachiche*
 Aliments Ouimet-Cordon Bleu inc. – *Anjou*
 Aliments Ultima Foods inc. – *Granby*
 Aliments ED Foods inc. – *Pointe-Claire*
 Aliments Multibar inc. (Les) – *Montréal*
 Aljane Greenhouses Ltd. – *Pitt Meadows*
 Alkema Greenhouses Ltd. – *Grimsby*
 Allen's Fisheries Limited – *Benoit's Cove*
 Amco Farms Inc. – *Leamington*
 Andrés Wines Ltd. – *Grimsby*
 Andrew Hendriks and Sons Greenhouses – *Beamsville*
 Freeman Herbs – *Beamsville*
 Andrew's Greenhouses Inc. – *Ruthven*
 Antigonish Abattoir Ltd. – *Antigonish*
 Antonio Bajar Greenhouses Limited – *Newmarket*
 Atrahan Transformation Inc. – *Yamachiche*
 Balfour Greenhouses Ltd. – *Fenwick*
 Bayview Greenhouses Inc. – *Brantford, Jordan Station,*
Simcoe
 Belgian Nursery Limited – *Breslau*
 Beothic Fish Processors Limited – *Badgers Quay*
 Bevo Farms Ltd. – *Milner*
 Biscuits Leclerc inc. – *Saint-Augustin-de-Desmaures*
 Black Velvet Distilling Company – *Lethbridge*
 Boekestyn Greenhouses – *Jordan Station*
 Bonduelle Canada Inc. – *Bedford, Sainte-Cécile-de-*
Granby, Saint-Césaire, Saint-Denis-sur-Richelieu,
Sainte-Martine
 Bonduelle Ontario Inc. – *Ingersoll, Stratroy, Tecumseh*
 Border Line Feeders Inc. – *Ceylon*
 Boulangerie St.-Méthode inc.– *Adstock*
 Boulart inc. – *Lachine*
 Breakwater Fisheries Limited – *Cottlesville*
 Bridgeview Greenhouses – *Niagara-on-the-Lake*

Brookdale Treeland Nurseries –
Niagara-on-the-Lake
 Brookside Cold Storage Ltd. – *Chilliwack*
 Brookside Poultry Limited – *Bridgetown*
 Browning Harvey Limited – *Corner Brook, Grand Falls, St. John's, Windsor*
 Brunato Farms Limited – *Leamington*
 Burnbrae Farms Limited – *Brockville, Calgary, Lyn, Mississauga, Pandora, Winnipeg*
 Island Egg – *Westholme*
 Maple Lyn Foods Ltd. – *Strathroy*
 Oeufs Bec-O inc. (Les) – *Upton*
 C & M Seeds – *Palmerston*
 Café Vittoria inc. – *Sherbrooke*
 Campbell Company of Canada – *Toronto*
 Canada Bread Company Ltd. – *Beauport, Calgary, Chicoutimi, Concord, Delta, Edmonton, Etobicoke, Grand Falls, Hamilton, Langley, Laval, Levis, London, Moncton, Mont-Laurier, Montréal, North Bay, Québec, Scarborough, Saint-Côme-Linière, St. John's, Toronto, Woodstock*
 Canada Malting Co. Ltd. – *Montréal*
 Canadian Organic Maple Co. Ltd. – *Bath*
 Cantor Bakery – *Montréal*
 Canyon Creek Soup Company Ltd. – *Edmonton*
 Cargill Animal Nutrition – *Camrose, Lethbridge*
 Cargill Foods – *High River, Toronto*
 Cargill Limited – *Sarnia, Winnipeg*
 Cargill Aghorizons – *Albright, Brandon, Canora, Dauphin, Edmonton, Elm Creek, Lethbridge, Melbourne, Nicklen Siding, North Battleford, Princeton, Rosetown, Rycroft, Shetland, Staples, Strathroy, Talbotville, Vegreville, Winnipeg, Yorkton*
 Cargill Meats Canada – *London*
 Cargill Meat Solutions – *Guelph*
 Casa Italia Ltd. – *Brampton, Port Colborne*
 Cavendish Farms – *New Annan*
 Cedar Beach Acres Ltd. – *Kingsville*
 Cedar Field Greenhouses Ltd. – *Freelton*
 Cedarline Greenhouses – *Dresden*
 Central Alberta Greenhouses Ltd. – *Blackfalds*

Cericola Farms Inc. – *Bradford*
 Cermaq Canada Ltd. – *Campbell River*
 Champion Feed Services Ltd. – *Barrhead*
 Champion Petfoods Ltd. – *Morinville*
 Charles A. Heckel Holdings Ltd. o/a Johnston
 Greenhouses & Garden Centre – *Peterborough*
 Clearwater Seafoods Limited Partnership – *Bedford*
 Clearwater Lobsters Ltd. – *Arichat, Clark's Harbour*
 Continental Seafoods – *Shelburne*
 Grand Bank Seafoods – *Grand Bank*
 Highland Fisheries – *Glance Bay*
 Pierce Fisheries – *Lockeport*
 St. Anthony Seafoods Limited – Partnership –
 St. Anthony
 Coca-Cola Refreshments Canada – *Calgary, Toronto*
 Cold Springs Farm Limited – *Thamesford*
 Colonial Florists Ltd. – *St. Catharines*
 Commercial Alcohols Inc. – *Brampton, Toronto*
 Compagnie Allan Candy (La) – *Granby*
 Conestoga Meat Packers Ltd. – *Breslau*
 Connors Bros. – *Blacks Harbour*
 Constellation Brands – *Niagara Falls*
 Continental Mushroom Corporation (1989) Ltd. – *Metcalfe*
 Coop Fédérée (La) – *Montréal, Joliette, Saint-Romuald*
 Comax Coopérative Agricole – *Saint-Hyacinthe*
 Société Coopérative Agricole des Bois-Francs
 – *Victoriaville*
 Cornies Farms Limited – *Kingsville*
 Corporation d'aliments Ronzoni du Canada (La) – *Montréal*
 CosMic Plants Inc. – *Beamsville*
 County Grower Greenhouse – *Medicine Hat*
 Cristofari Farms Inc. – *Leamington*
 Crowley Farms Norwood Ltd. – *Norwood*
 Crust Craft Inc. – *Edmonton*
 Cuisines Gaspésiennes Itée (Les) – *Matane*
 Dallaire Spécialités inc. – *Rouyn-Noranda*
 Dare Foods Limited – *Toronto*
 Dainty Foods – Division of MRRM (Canada) Inc. – *Windsor*
 Dairytown Products Ltd. – *Sussex*
 Debono Greenhouses Limited – *Waterford*

Del Sol Greenhouses Inc. – *Kingsville*
 Devan Greenhouses Ltd. – *Abbotsford*
 Diageo Canada Inc. – *Gimli*
 Distilleries Schenley inc. (Les) – *Salaberry-de-Valleyfield*
 Domric International Ltd. – *Ruthven*
 Don Chapman Farms Ltd./Lakeview Vegetable Processing Inc. – *Queensville*
 Dr. Oetker Canada Ltd. – *Mississauga*
 Dykstra Greenhouses – *St. Catharines*
 E.D. Smith and Sons LP – *Winoma*
 East Side Acres – *Leamington*
 Ed Sobkowich Greenhouses – *Grimsby*
 Elmira Poultry Inc. – *Waterloo*
 Enniskillen Pepper Co. Ltd. – *Petrolia*
 Erieview Acres Inc. – *Kingsville, Leamington*
 Exceldor Coopérative Avicole – *Saint-Anselme*
 Fancy Pokket Corporation – *Moncton*
 Fairfield Propagators – *Chilliwack*
 Federated Co-operatives Limited – *Saskatoon*
 Ferme Daichemin s.e.n.c. – *Saint-Damase, Saint-Pie*
 Ferme La Rouquine inc. – *Chicoutimi*
 Fermes Lufa inc. (Les) – *Montréal*
 Fernlea Flowers Limited – *Delhi*
 Ferrero Canada Ltd. – *Brantford*
 Five Star Farms – *Ruthven*
 Fleischmann's Yeast – *Calgary*
 Flower Ranch (The) – *London, Strathroy*
 Fresh Sprout International Ltd. – *Mississauga*
 Freshwater Fisheries Society of BC – *Victoria*
 Clearwater Trout Hatchery – *Clearwater*
 Fraser Valley Trout Hatchery – *Abbotsford*
 Kootenay Trout Hatchery – *Fort Steele*
 Summerland Trout Hatchery – *Summerland*
 Vancouver Island Trout Hatchery – *Duncan*
 Freybe Gourmet Foods Ltd. – *Langley*
 Frisia Flora Greenhouses – *Beamsville*
 Frito Lay Canada – *Ancaster, Cambridge, Lethbridge, Lévis, Mississauga, New Minas, Pointe-Claire, Taber*
 Froese Vegetables Inc. – *Vienna*
 Furlani's Food Corporation – *Mississauga*

G.E. Barbour Inc. – *Sussex*
 Ganong Bros. Limited – *St. Stephen*
 General Mills Canada Corporation – *Midland, Saint-Hubert, Winnipeg*
 George Sant & Sons Greenhouses – *Kleinburg*
 Glenwood Valley Farms Ltd. – *Langley*
 Good Taste Food Products Inc. – *Scarborough*
 Green Mountain Gardens – *Stoney Creek*
 Greenfield Gardens (Niagara) Inc. – *Fenwick*
 Greenwood Mushroom Farm – *Ashburn, Greenwood*
 Gregory Greenhouses Inc. – *St. Catharines*
 Griffith Laboratories – *Toronto*
 Gull Valley Greenhouses – *Blackfalds*
 H.J. Heinz Company of Canada Ltd. – *Leamington*
 Handi Foods Ltd. – *Weston*
 Hanemaayer Greenhouses – *Vineland Station*
 Hans Dairy Inc. – *Toronto*
 Harster Greenhouses Inc. – *Dundas*
 Heritage Frozen Foods Ltd. – *Edmonton*
 Hillside Hothouse Ltd. – *Ruthven*
 Hiram Walker & Sons Limited – *Windsor*
 Homeland Grain Inc. – *Burgessville*
 Houweling Nurseries Ltd. – *Delta*
 HQ Fine Foods – *Edmonton*
 HSF Foods Ltd. – *Centreville*
 Hubberts Industries – *Brampton*
 Ice River Springs Water Co. Inc. – *Feversham*
 Icewater Seafoods Inc. – *Arnold's Cove*
 Imperial Tobacco Canada Ltd. – *Montréal*
 Ingredion Canada Inc. – *Cardinal, Etobicoke, London, Port Colborne*
 Inovata Foods Corp. – *Edmonton*
 Jadee Meat Products Ltd. – *Beamsville*
 Jayden Floral – *Dunnville*
 Jardiniers du chef (Les) – *Blainville*
 Jeffery's Greenhouses Plant II Limited – *Jordan Station*
 Jeffery's Greenhouses Inc. – *St. Catharines*
 Jem Farms – *Ruthven*
 John Kouwenberg Floral Inc. o/a Foliera – *Beamsville*
 Jolly Farmer Products Inc. – *Northampton*

JTI-Macdonald Corp. – *Montréal*
 Kapital Produce Limited – *Leamington, Ruthven*
 Katatheon Farms Inc. – *Langley*
 Kejay Farms Inc. – *Chatham*
 Kern Water Systems Inc. – *Sarnia*
 Kraft Canada Inc. – *Vancouver, Ville Mont-Royal*
 Kuyvenhoven Greenhouses Inc. – *Brampton, Halton Hills*
 Landmark Feeds Inc. – *Abbotsford, Brossard, Claresholm, Landmark, Medicine Hat, Otterburne, Rosenort, Strathmore, Winnipeg*
 Laprise Farms Ltd. – *Pain Court*
 La Rocca Creative Cakes – *Thornhill*
 Lassonde Beverages Canada – *Toronto*
 Leahy Orchards Inc. – *Franklin, Saint-Antoine Abbé*
 Leclerc Foods Ltd. – *Hawkesbury*
 Legal Alfalfa Products Ltd. – *Legal*
 Lilydale Cooperative Ltd. – *Edmonton*
 Lindy's Flowers – *Dunnville*
 Link Greenhouses – *Bowmanville*
 Linwell Gardens Ltd. – *Beamsville*
 Lucerne Foods – *Calgary*
 Lyalta Gardens – *Lyalta*
 Lyo-San inc. – *Lachute*
 Madelimer inc. – *Grande-Entrée*
 Maidstone Bakeries Co. – *Brantford*
 Maison des Futailles – *Saint-Hyacinthe*
 Malteurop Canada Ltd. – *Winnipeg*
 Maple Leaf Consumer Foods Inc. – *Hamilton, Laval, Lethbridge, Mississauga, North Battleford, Weston, Winnipeg*
 Maple Leaf Foods Inc. – *Burlington, Kitchener*
 Maple Leaf Fresh Foods – *Brandon, Burlington, Charlottetown, Lethbridge, Stoney Creek, New Hamburg, Toronto, Wataskiwin*
 Maple Lodge Farms Ltd. – *Norval*
 Marcel Depratto inc. – *Saint-Louis-de-Richelieu*
 Marish Greenhouses – *Dunnville*
 Mars Canada Inc. – *Bolton, Newmarket*
 Marsan Foods Limited – *Toronto*
 Mastron Enterprises Ltd. – *Kingsville*

Mastronardi Estate Winery – *Grand Falls, Kingsville*
 McCain Foods (Canada) – *Borden-Carleton, Carberry, Florenceville, Grand Falls, Mississauga, Portage la Prairie, Toronto*
 Charcuterie la Tour Eiffel – Division of McCain Foods Limited – *Blainville, Québec*
 Wong Wing – Division of McCain Foods Limited – *Montréal*
 Meyers Fruit Farms and Greenhouses – *Niagara-on-the-Lake*
 Minor Bros. Farm Supply Ltd. – *Dunnville*
 Mitchell's Gourmet Foods Inc. – *Saskatoon*
 Mondelez Canada Inc. – *Chambly, Hamilton*
 Biscuiterie Montréal – *Montréal*
 Cadbury Plant – *Toronto*
 Lakeshore Bakery – *Toronto*
 Peek Frean Bakery – *East York*
 Montréal Pita inc. – *Montréal*
 Mother Parkers Tea & Coffee Inc. – *Ajax, Mississauga*
 Mt. Lehman Greenhouses (1999) Ltd. – *Mt. Lehman*
 Mucci Farms Ltd. – *Kingsville*
 Nadeau Poultry Farm Ltd. – *Saint-François-de-Madawaska*
 Nanticoke Greenhouses Limited – *Simcoe*
 Nature Fresh Farms – *Leamington*
 Nature's Finest Produce Ltd. – *Pain Court*
 Nestlé Canada Inc. – *Chesterville, Edmonton, North York, Rexdale, Scarborough, Sherbrooke, Toronto, Trenton*
 Nestlé Professional – *Trenton*
 Nestlé Purina PetCare – *Mississauga*
 Nestlé Waters Canada – *Guelph*
 New West Milling – *Bassano*
 Nicol Florist Ltd. – *Brantford*
 Noël Wilson & Fils S.N.C. – *Saint-Rémi*
 Norfolk Fruit Growers' Association (The) – *Simcoe*
 Norfolk Greenhouses Inc. – *Courtland*
 Northern Alberta Processing Co. – *Edmonton*
 Northumberland Co-operative Limited – *Miramichi*

Nunavut Development Corporation – *Rankin Inlet*
 Kitikmeot Foods Ltd. – *Cambridge Bay*
 Kivalliq Arctic Foods Ltd. – *Rankin Inlet*
 Pangnirtung Fisheries Ltd. – *Pangnirtung*
 Oakrun Farm Bakery Ltd. – *Ancaster*
 Ocean Nutrition Canada Ltd. – *Dartmouth*
 Oeufs d’Or (Les) – *Val d’Or*
 Okanagan North Growers Cooperative – *Winfield*
 Old Dutch Foods Inc. – *Summerside, Winnipeg*
 Olymel S.E.C. / LP – *Red Deer*
 Aliments Prince S.E.C – *Princeville, Cornwall*
 Machinerie Olymel (1998) inc. – *Saint-Valérien-de-Milton*
 Olymel S.E.C. – *Anjou, Berthierville, Brampton, Iberville, Saint-Damase, Saint-Hyacinthe, Saint-Jean-sur-Richelieu, Trois-Rivières,*
 Orangeline Farms Limited – *Leamington*
 Orchard Park Growers Ltd. – *St. Catharines*
 Origin Organic Farms Inc. – *Delta*
 Otter Valley Foods Inc. – *Tillsonburg*
 Oxford Frozen Foods Limited – *Oxford*
 Hillaton Foods – *Port Williams*
 P. Ravensbergen & Sons. Ltd. – *Smithville*
 Palmerston Grain – *Palmerston*
 Paradise Hill Farms Inc. – *Nanton*
 Paradise Island Foods Inc. – *Nanaimo*
 Parrish & Heimbecker Limited – *Glencoe*
 Parkway Gardens Ltd. – *London*
 Pelee Hydroponics – *Leamington*
 Pepe’s Mexican Foods Inc. – *Etobicoke*
 Peppertree Greenhouses Ltd. – *Tupperville*
 Pepsi-Cola Canada Beverages – *Mississauga*
 PepsiCo Foods Canada Inc. – *Peterborough, Trenton*
 Petite Bretonne inc. (La) – *Blainville*
 Planet Bean Coffee Inc. – *Guelph*
 Poinsettia Plantation (The) – *Bothwell*
 Prairie Mushrooms (1992) Ltd. – *Sherwood Park*
 Prism Farms Ltd. – *Leamington*
 Productions Horticoles Demers inc. (Les) – *Saint-Nicolas*
 Production Serres Yargeau inc. – *Sherbrooke*

Produits Alimentaires Viau inc. (Les) – *Montréal-Nord*
 Produits Zinda Canada inc. (Les) – *Candiac*
 Pyramid Farms Ltd. – *Leamington*
 Quark Farms Ltd. – *Mossbank*
 Redpath Sugar Ltd. – *Toronto*
 Regal Greenhouses Inc. – *Virgil*
 Reif Estate Winery Inc. – *Niagara-on-the-Lake*
 Reinhart Foods Limited – *Stayner*
 Rekker Gardens Ltd. – *Bowmanville*
 Rich Products of Canada Limited – *Fort Erie*
 Rol-land Farms Limited – *Campbellville*
 Rootham’s Gourmet Preserves Ltd. – *Guelph*
 Rosa Flora Limited – *Dunnville*
 Rothmans, Benson & Hedges Inc. – *North York*
 Rothsay – *Dundas, Moorefield, Québec, Saint-Boniface, Truro*
 Rothsay, A member of Maple Leaf Foods Inc. – *Winnipeg*
 Round Hill Poultry Limited – *Roundhill*
 Sakai Spice (Canada) Corporation – *Lethbridge*
 Salaisons Desco inc. (Les) – *Boisbriand*
 Sanimax ACI inc. – *Lévis*
 Sanimax Lom inc. – *Montréal*
 Scotia Garden Seafood Inc. – *Yarmouth*
 Scotian Halibut Limited – *Clarks Harbour, Lower Woods Harbour*
 Schenck Farms & Greenhouses Co. Limited – *St. Catharines*
 Schneider Foods – *Port Perry, St. Marys, Toronto*
 Schuurman Greenhouses Ltd. – *Branchton*
 Scotsburn Co-Operatives Services Ltd. – *Truro*
 Scott Street Greenhouses Ltd. – *St. Davids*
 Select Food Products Limited – *Toronto*
 Sepp’s Gourmet Foods Ltd. – *Delta, Richmond Hill*
 Serres Bergeron (Les) – *Notre-Dame-de-la-Salette, Notre-Dame-du-Laus*
 Serres Daniel Lemieux inc. (Les) – *Saint-Rémi*
 Serres Florinove (Les) – *Saint-Paulin*
 Serres Gilles et Francine Lahaie enr. (Les) – *Saint-Michel-de-Napierville*
 Serres Gola (Les) – *Mont Saint-Grégoire*

Serres Lefort inc. (Les) – *Sainte-Clotilde*
 Serres Maedler (1989) inc. (Les) – *Nyon*
 Serres du Marais, inc. (Les) – *Sainte-Martine*
 Serres R. Bergeron inc. (Les) – *Saint-Apollinaire*
 Serres Riel inc. (Les) – *Saint-Rémi*
 Serres Sagami (2000) inc. – *Chicoutimi, Sainte-Sophie*
 Serres Nouvelles Cultures inc. (Les) – *Sainte-Sophie*
 Serres Saint-Benoît-du-Lac inc. (Les) – *Austin*
 Serres Serge Dupuis (Les) – *Saint-Élie-de-Caxton*
 Serres Sylvain Cléroux (Québec) inc. (Les) – *Laval*
 Shah Trading Company Limited – *Port Williams, Saint-Félix-de-Valois, Saint-Hugues, Saint-Hyacinthe, St. Marys, Saint Romuald, Scarborough, Stevensville, Summerside, Sussex, Truro, Weston, Yamachiche*
 Sifto Canada Corporation – *Goderich Evaporator Plant – Goderich*
 Simplot Canada (II) Limited – *Portage La Prairie*
 Skjodt-Barrett Foods Inc. – *Brampton*
 Sofina Foods Inc. – *London*
 Sons Bakery – *Brampton, Calgary*
 Southshore Greenhouses Inc. – *Kingsville*
 Sovereign Farms – *Waterford*
 Smucker Food of Canada Co. – *Sherbrooke*
 Spring Valley Gardens Niagara Inc. – *St. Catharines*
 St. David’s Hydroponics Ltd. – *Beamsville, Niagara-on-the-Lake,*
 Stag’s Hollow Winery and Vineyard Ltd. – *Okanagan Falls*
 Stratus Vineyards Limited – *Niagara-on-the-Lake*
 Streef Produce Ltd. – *Princeton*
 Sucre Lantic Limitée – *Montréal*
 Sun Harvest Greenhouses – *Glenburnie*
 Suns Bakery – *Brampton*
 Sunshine Express Garden Centre Ltd. – *Niagara-on-the-Lake*
 Sunny Crunch Foods Ltd. – *Markham*
 Sunrise Bakery Ltd. – *Edmonton*
 Sunrise Farms Limited – *Kingsville, Leamington*
 Sunrise Greenhouses Ltd. – *Vineland Station*
 Sunrite Greenhouses Ltd. – *Kingsville, Wheatley*
 Sun-Rype Products Ltd. – *Kelowna*

SunSelect Produce (Delta) Inc. – *Aldergrove, Delta*
 Suntech Greenhouses Ltd. – *Manotick*
 Sunterra Meats Ltd. – *Trochu*
 Sunwold Farms Ltd. – *Acme*
 Largie Farm – *Dutton*
 Peterborough Farms – *Indian River*
 Sure Fresh Foods Inc. – *Bradford*
 Sysco Canada, Inc. – *Acheson, Calgary, Etobicoke, Kelowna, Kingston, Lakeside, Langford, Milton, Mississauga, Moncton, Montréal, Mount Pearl, Peterborough, Port Coquitlam, Regina, Thunder Bay, Toronto, Vancouver, Winnipeg*
 Target Marine Products Ltd. – *Sechelt*
 Thomson Meats Ltd. – *Melfort*
 Tidal Organics Inc. – *Pubnico*
 Transfeeder Inc. – *Olds*
 Trevisanutto's Greenhouses – *Thunder Bay*
 Trophy Foods Inc. – *Calgary*
 Unidindon inc. – *Saint-Jean-Baptiste*
 Unilever Canada – *Brampton, Rexdale*
 United Floral Greenhouse – *Fenwick*
 Valleyview Gardens – *Markham, Scarborough*
 Van Geest Bros. Limited – *Grimsby, St. Catharines*
 Van Houtte S.E.C. – *Montréal*
 Van Noort Florists – *Niagara-on-the-Lake*
 Vandermeer Greenhouses Ltd. – *Niagara-on-the-Lake*
 Vandermeer Nursery Ltd. – *Ajax*
 Van Vliet Greenhouses Inc. – *Fenwick*
 VanZanten Greenhouses – *Fenwick*
 Veri Hydroponics Inc. – *Exeter*
 Vermeer's Greenhouses – *Welland*
 Versacold Corporation – *Vancouver*
 Viandes du Breton inc. (Les) – *Rivière-du-Loup*
 Vincor International Inc. – *Niagara Falls*
 Virgil Greenhouses Ltd. – *Niagara-on-the-Lake*
 Vittera Inc. o/a SWP – *Thunder Bay Terminal Elevator*
 Vittera "A" – Vittera "B" – *Thunder Bay*
 Vittera Food Processing – *Barrhead*
 Vitoef inc. – *Saint-Hyacinthe*
 Voogt Greenhouses Inc. – *Niagara-on-the-Lake*
 Voortman Cookies Ltd. – *Burlington*

W.J. O'Neil & Sons Ltd. – *Maidstone*
 W.T. Lynch Foods Limited – *Toronto*
 W. Martens Greenhouses Inc. – *Leamington*
 Waldan Gardens – *Wainfleet*
 Waterloo Flowers Limited – *Breslau*
 Weesjes Greenhouses Ltd. – *St. Thomas*
 Westland Greenhouses (Jordan) Ltd. – *Jordan Station*
 Weston Foods Inc. – *Etobicoke*
 Weston Bakeries Limited – *Kingston, Kitchener, Orillia, Ottawa, Sudbury, Toronto, Winnipeg*
 Bronson Bakery Limited – *Ottawa*
 Crissa Bakery – *Barrie*
 Golden Mill Bakery – *Hamilton*
 Maplehurst Bakeries Inc. – *Brampton*
 Pepe's Mexican Foods Inc. – *Etobicoke*
 Ready Bake Foods Inc. – *Mississauga*
 Weston Fruit Cake Co. – *Cobourg*
 Willow Spring Hydroponics Farms Ltd. – *Bothwell*
 Willy Haeck et Fils Inc. – *Saint-Rémi*
 Willy's Greenhouses Ltd. – *Niagara-on-the-Lake*
 Windset Greenhouses Ltd. – *Delta*
 Witzke's Greenhouses Ltd. – *Courtice*
 Woodhill Greenhouses Inc. – *Lynden*
 Young Street Gardens Ltd. – *Smithville*

FOREST PRODUCTS

AbitibiBowater Inc. – o/a Resolute Forest Products – *Alma, Amos, Baie-Comeau, Brooklyn, Bridgewater, Clermont, Fort Frances, Girardville, Grand Falls – Windsor, Grand-Mère, Iroquois Falls, Jonquière, La Doré, Maniwaki, Mistassini, Montréal, Price, Saint-Félicien, Saint-Raymond, Thorold*
 Abzac Canada Inc. – *Drummondville, Trois-Rivières*
 Alberta Newsprint Company – *Whitcourt*
 Alberta-Pacific Forest Industries Inc. – *Boyle*
 Atlantic Packaging Products Ltd. – *Agincourt, Brampton, Don Mills, Ingersoll, Mississauga, Scarborough*
 AV Cell Inc. – *Atholville*
 AV Nackawic Inc. – *Nackawick*
 Barco Materials Handling Limited – *Burns Lake*

Baytree Logging Ltd. – *Baytree*
 Bois-Francis inc. – *Saint-Phillippe-de-Néri*
 Building Products of Canada Corp. – *Edmonton, Pont Rouge*
 Cariboo Pulp and Paper Company Limited – *Quesnel*
 Canfor Corporation – *Vancouver*
 Canadian Forest Products – *Bear Lake*
 Canfor Pulp Limited Partnership – *Prince George*
 Intercontinental – *Prince George*
 Northwood – *Prince George*
 Prince George – *Prince George*
 Caraustar Industrial & Consumer Products Group – *Kingston*
 Cartons Northrich Inc. (Les) – *Granby*
 Cascades Boxboard Group – *Jonquière, Mississauga, Montréal, Toronto*
 Cascades Conversion Inc. – *Kingsey Falls*
 Cascades Enviropac – *Berthierville, Saint-Césaire*
 Cascades Fine Paper Group – *Breakeyville, Saint-Jérôme*
 Converting Center – *Saint-Jérôme*
 Cascades Inc. – *Kingsey Falls*
 Cascades Lupel – *Cap-de-la-Madeleine*
 Cascades Multi-Pro – *Drummondville*
 Cascades Speciality Products Group – *Kingsey Falls*
 Cascades Tissue Group – *Agincourt, Candiac, Kingsey Falls, Lachute*
 Catalyst Paper Corporation – *Crofton Division – Crofton – Powel River*
 Cie Matériaux de Construction BP Canada – *Joliette, Pont-Rouge*
 CDEX usine de sciage – *Val d'Or*
 Cherry Forest Products – *Division of Barco Handling – Pushlinch*
 Coldstream Lumber – *Vernon*
 Columbia Forest Products – *Saint-Casimir*
 Commonwealth Plywood Co. Ltd. – *Lachute, Low, Mont-Laurier, Princeville, Rapides-des-Joachims, Sainte-Thérèse, Shawinigan*
 Corporation Internationale Masonite Inc. (La) – *Lac Mégantic*

Dava Inc. – *Tring Junction*
 Daishowa-Marubeni International Ltd. – *Peace River*
 Domtar Inc. – *Dryden, Espanola, Kamloops, Montréal, Terrebonne, Windsor*
 Easy Pack Corporation – *Markham*
 Emballages Festival Inc. – *Montréal*
 Emballages Mitchel-Lincoln Ltée – *Drummondville, St-Laurent*
 Emterra Environmental – *North Vancouver, Surrey*
 Entreprises Interco inc. – *Saint-Germain-de-Grantham*
 Erie Flooring and Wood Products – *West Lorne*
 F.F. Soucy Inc. – *Rivière-du-Loup*
 Finewood Flooring & Lumber Limited – *Baddeck*
 Fiready Inc. – *Clair*
 Flakeboard Company Limited – *St. Stephen*
 Fortress Cellulose Spécialisée – *Thurso*
 George Guenzler & Sons Inc. – *Kitchener*
 Georgia-Pacific Canada, Inc. – *Thorold*
 Granules L.G. inc. – *Saint-Félicien*
 Greif Bros. Canada Inc – *LaSalle, Maple Grove*
 Groupe Lebel (2004) inc. – *Cacouna, Rivière-du-Loup*
 Bois Traitel Itée – *Saint-Joseph de Kamouraska*
 Groupe Savoie inc. – *Saint-Quentin*
 Haring Doors Ltd. – *London*
 Industries Maibec inc. – *Saint-Pamphile*
 Industries Ling Inc. – *Warwick*
 Hinton Pulp – *Hinton*
 Interlake Papers – *St. Catharines*
 Irving Forest Services Limited – *Saint John*
 Irving Papers Inc. – *Saint John*
 Irving Tissue Corporation – *Dieppe*
 Irving Tissue Inc. – *Dieppe*
 J.D. Irving, Limited – *Saint John, Deersdale*
 J.H. Huscroft Limited – *Creston*
 K&C Silviculture Ltd. – *Red Deer, Oliver*
 Kord Products Inc. – *Brampton*
 Kruger Inc. – *Montréal*
 Corner Brooke Pulp and Paper Limited – *Corner Brook*
 Division Bromptonville – *Sherbrooke*
 Division carton – *Montréal*

Division de papiers journal – *Sherbrooke*
 Division des emballages – *Brampton, Lasalle*
 Gérard Crête & Fils inc. – *Saint-Rock-de-Makina, Saint-Séverin-de-Prouxville*
 Kruger Products Ltd. – *Calgary, Gatineau*
 Kruger Wayagamack Inc. – *Île-de-la-Potherie*
 Longlac Wood Industries Inc. – *Mississauga*
 Longue-Rive Planing and Drying Mills – *Longue-Rive*
 Manufacturing Region East – *Crabtree, Sherbrooke*
 Manufacturing Region West – *New Westminster*
 Produits Kruger Limitée – *Lennoxville*
 Scierie Manic, division de Kruger inc. – *Ragueneau*
 Scierie Parent inc. , division de Kruger inc. – *Parent*
 Lake Utopia Paper – *Utopia*
 Loger Toys Ltd. – *Brantford*
 Louisiana-Pacific Canada Ltd. – *Bois-Franc, Dawson Creek, East River, Golden, Swan River*
 Madawaska Doors Inc. – *Bolton*
 Marcel Lauzon inc. – *East Hereford*
 Maritime Paper Products Limited – *Dartmouth*
 Marwood Ltd. – *Tracyville*
 Master Packaging Inc. – *Borden-Carleton, Dieppe*
 Matt's Inc. – *Wallaceburg*
 MDF La Baie inc. – *La Baie*
 Millar Western Forest Products Ltd. – *Whitecourt Pulp Division – Whitecourt*
 Muskoka Timber Mills Limited – *Bracebridge*
 Neucel Specialty Cellulose – *Port Alice*
 Norampac Inc. – *Burnaby, Cabano, Calgary, Drummondville, Moncton, Saint-Bruno, St. Marys, Vaughan*
 Norampac Lithotech – *Scarborough*
 Norampac Inc. OCD – *Mississauga*
 Norampac Inc. Viau – *Montréal*
 Norampac – Newfoundland, a division of Cascades Canada Inc. – *St. John's*
 Norbord Inc. – *Plaster Rock*
 Northern Pulp Nova Scotia Corporation – *Abercrombie*
 Orchard International Inc. – *Mississauga*

Pacific BioEnergy Prince George Limited Partnership – *Prince George*
 Palliser Lumber Sales Ltd. – *Crossfield*
 Papiers Kingsey Falls, une division de Cascades Canada Inc. – *Kingsey Falls*
 Paper Source Converting Mill Corp. – *Granby*
 Papiers White Birch, division Stadacona SEC – *Québec*
 Perfecta Plywood Itée – *Saint-Hyacinthe*
 Planchers Mercier inc. – *Montmagny*
 Peterboro Cardboards Limited – *Peterborough*
 Pope & Talbot Ltd. – *Nanaimo*
 Poutres et Poteaux Val-Morin inc. – *Sainte-Agathe-des-Monts*
 Princeton Co-Generation Corporation – *Princeton*
 Produits Kruger Limitée – *Crabtree, Gatineau, Lennoxville*
 Rip-O-Bec inc. – *Saint-Apollinaire*
 Riverside Forest Products Limited – *Armstrong*
 Roland Boulanger & Cie Itée. – *Warwick*
 Rosmar Litho Inc. – *Baie D'Urfé*
 Sac Drummond Inc. – *Saint-Germain-de-Grantham*
 Scierie Girard inc. – *Shipshaw*
 Sonoco Canada Corporation – *Trois-Rivières*
 Spécialiste du Bardeau de Cèdre inc. (Le) – *Saint-Prosper*
 Tekwood – a Division of Teknion Limited – *Toronto*
 Tembec Inc. – *Témiscaming*
 Tembec Industries Inc. – *Chapleau*
 Tembec Paper Group – *Spruce Falls*
 Terrace Bay Pulp – *Terrace Bay*
 Tolko Industries Ltd. – *Armstrong, Heffley Creek, High Level, High Prairie, Kamloops, Kelowna, Lumby, Meadow, Lake Merritt, Quesnel, Slave Lake, The Pas, Vernon, Williams Lake*
 Twin River Paper Company Inc. – *Edmunston*
 West Fraser Timber Co. Ltd. – *Vancouver*
 100 Mile Lumber – *100 Mile House*
 Alberta Plywood Ltd. – *Slave Lake*
 Blue Ridge Lumber – *Whitecourt*
 Chetwynd Forest Industries – *Chetwynd*
 Eurocan Pulp and Paper Co. – *Kitimat*
 Fraser Lake Sawmills – *Fraser Lake*

Hinton Pulp – *Hinton*
Hinton Wood Products – *Hinton*
Houston Forest Products – *Houston*
Northstar Lumber – *Quesnel*
Pacific Inland Resources – *Smithers*
Quesnel Plywood – *Quesnel*
Quesnel River Pulp Co. – *Quesnel*
Quesnel Sawmill – *Quesnel*
Ranger Board – *Whitecourt*
Slave Lake Pulp Corporation – *Slave Lake*
Sundre Forest Products Inc. – *Sundre*
West Fraser LVL – *Rocky Mountain House*
West Fraser Mills – Chasm Division – *70 Mile House*
West Fraser Mills Ltd. – *Quesnel*
West Fraser Timber – *Williams Lake*
WestPine MDF – *Quesnel*
Williams Lake Plywood – *Williams Lake*
Zellstoff Celgar Limited Partnership – *Castlegar*

FOUNDRY

Ancast Industries Ltd. – *Winnipeg*
Bibby-Ste-Croix, Division Tuyauterie Canada Limitée – *Sainte-Croix*
Canadian Specialty Castings – *Niagara Falls*
Century Pacific Foundry Ltd. – *Surrey*
Deloro Stellite Inc. – *Belleville*
Elkem Métal Canada inc. – *Chicoutimi*
ESCO Limited – *Port Coquitlam, Port Hope*
Fonderie Générale du Canada, une compagnie Glencore – *Lachine*
Grenville Castings Limited – *Merrickville, Perth, Smiths Falls*
J & K Die Casting Ltd. – *Scarborough*
Johnson Matthey Limited – *Brampton*
M.A. Steel Foundry Ltd. – *Calgary*
Magotteaux Itée – *Magog*
Mueller Canada – *Saint-Jérôme*
Norcast Castings Company Ltd. – *Mont-Joli*
Peninsula Alloy Inc. – *Fort Erie, Stevensville*

Royal Canadian Mint – *Winnipeg*
Supreme Tooling Group – *Toronto*
Victaulic Custom Casting – *Richmond Hill*
Wabi Iron & Steel Corporation – *New Liskeard*
Wabtec Foundry – Div. of Wabtec Canada Inc. – *Wallaceburg*

GENERAL MANUFACTURING

3M Canada Company – *Brockville, Etobicoke, London, Morden, Perth*
A1 Label Inc. – *Toronto*
Aberfoyle Metal Treaters Ltd. – *Guelph*
Acadian Platers Company Limited – *Etobicoke*
Accuride Canada Inc. – *London*
Acier Les fab international inc. – *Terrebonne*
Active Burgess Mould & Design Ltd. – *Windsor*
Acuity Innovative Solutions – *Richmond Hill*
Advanced Ag and Industrial Ltd. – *Biggar*
AeroTek Manufacturing Limited – *Whitby*
AirBoss Produits d'Ingénierie inc. – *Acton Vale*
AirBoss Rubber Compounding – *Kitchener*
Airex Industries inc. – *Drummondville, Mississauga, Montréal*
Airia Brands Inc. – *London*
Airtek Systems Inc. – *Edmonton*
Airworks Compressors Corp. – *Edmonton*
Albany International Canada Inc. – *Perth*
Albarrie Canada Limited – *Barrie*
Alfield Industries, Division of Rea International Inc. – *Woodbridge*
Aluminum Surface Technologies – *Burlington*
Amec Usinage inc. – *Saint-Augustin-de-Desmaures*
American & Efird Canada Inc. – *Montréal*
Anchor Lamina Inc. – Reliance Fabrications – *Tilbury*
Anchor Lamina Inc. – *Cambridge, Mississauga, Windsor*
Annabel Canada inc. – *Drummondville*
A.P. Plasman Inc. – *Tecumseh, Tilbury, Windsor*
A.R. Thomson Group – *Edmonton*

Armtec Limited Partnership – *Guelph, Woodstock*
Art Design International inc. – *Saint-Hubert*
Artopex Plus inc. – *Granby, Laval*
Arva Industries Inc. – *St. Thomas*
Associated Tube Industries – *Markham*
Atlantic Packaging Products Ltd. – *Scarborough*
Atlas Industries Ltd. – *Saskatoon*
Automatic Coating Limited – *Scarborough*
AYK Socks Inc. – *Saint-Léonard*
Babcock & Wilcox Canada Ltd. – *Cambridge*
Baron Metal Industries Inc. – *Woodbridge*
Barrday Inc. – *Cambridge*
BASF The Chemical Company – *Georgetown*
Batteries Power (Iberville) Itée – *Saint-Jean-sur-Richelieu*
Baxter Corporation – *Alliston*
B.C. Instruments – *Barrie, Schomberg*
Beaulieu Canada inc. – *Acton Vale*
Belvedere International Inc. – *Mississauga*
Bennett Fleet (Québec) inc. – *Ville-Vanier*
Bentofix Technologies Inc. – *Barrie*
Bernard Breton inc. – *Saint-Narcisse-de-Beaurivage*
Bérou International inc. – *Anjou*
Best Color Press Limited – *Vancouver*
Blount Canada Ltd. – *Guelph*
Borden Cold Storage Limited – *Kitchener*
Bosch Rexroth Canada Corp. – *Welland*
Bourgault Industries Ltd. – *St. Brieux*
Braam's Custom Cabinets – *St. Thomas*
Brampton Engineering Inc. – *Brampton*
Brant Corrosion Control Inc. – *Brantford*
Brawo Brassworking Ltd. – *Burk's Falls*
BRC Business Enterprises Ltd. – *Georgetown*
Brenntag Canada Inc. – *Mississauga*
Bridgeline Limited – *Deseronto*
Broan-NuTone Canada Inc. – *Mississauga*
Builders Furniture Ltd. – *Winnipeg*
Burnco Manufacturing Inc. – *Concord*
Butcher Engineering Enterprises Limited (The) – *Brampton*
Byers Bush Inc. – *Mississauga*
CAE Inc. – *Saint-Laurent*

Calko (Canada) Inc. – *Montréal, Ville d'Anjou*
 Cambridge Towel Corporation (The) – *Cambridge*
 Camfil Farr (Canada) Inc. – *Laval*
 Cam-Slide – *Newmarket*
 Canada Mold Technology – *Woodstock*
 Cancoil Thermal Corporation – *Kingston*
 Cambridge Brass Inc. – *Cambridge*
 Cambridge Heat Treating Inc. – *Cambridge*
 Canada's Best Store Fixtures Inc. – *Woodbridge*
 Canada Colors and Chemicals Limited – *Plastics Division*
 – *Colborne*
 Cana-Datum Moulds Ltd. – *Etobicoke*
 Canadian Curtis Refrigeration Inc. – *Stoney Creek*
 Canadian General-Tower Limited – *Cambridge*
 Cannon Knitting Mills Limited – *Hamilton*
 Canwood Furniture Inc. – *Penticton*
 Cansew Inc. – *Montréal*
 Carrière Bernier Limitée – *Saint-Jean-sur-Richelieu*
 Carrière Union Ltée – *Québec*
 Casavant Frères s.e.c. – *Saint-Hyacinthe*
 Cascade Canada Ltd. – *Guelph*
 Cello Products Inc. – *Cambridge*
 Centerline (Windsor) Limited – *Windsor*
 Centre du Comptoir Sag-Lac inc. – *Alma*
 CertainTeed Gypsum Canada Inc – *Mississauga*
 Chandelles Tradition Ltée – *Laval*
 Climatizer Insulation Inc. – *Etobicoke*
 CMP Advanced Mechanical Solutions (Ottawa) Ltd.
 – *Ottawa*
 CMP Solutions Mécaniques Avancées Ltée – *Châteauguay*
 CNH Canada Ltd. – *Saskatoon*
 Collingwood Fabrics Inc. – *Collingwood*
 Colonial Tool Group Inc. – *Windsor*
 Colorama Dyeing and Finishing Inc. – *Hawkesbury*
 Colourific Coatings Ltd. – *Mississauga*
 Columbia Industries Limited – *Sparwood*
 Comp-Tech Mfg. Inc. – *North York*
 Compact Mould Ltd. – *Woodbridge*
 Compagnie américaine de fer et métaux inc. (La)
 – *Montréal*

Compagnies du Groupe DATA (Les) – *Granby*
 Compagnie Henry Canada inc. – *Lachine*
 Conference Cup Ltd. – *London*
 Consoltex Inc. – *Cowansville, Montréal*
 Control Skateboards Inc. – *Saint-Nicolas*
 Cooper-Standard Automotive – *Stratford*
 Corporation Emballages Flexible Sonoco Canada
 – *Terrebonne*
 Cosella-Dorken Products Inc. – *Beamsville*
 Créations Verbois inc. – *Rivière-du-Loup*
 Cristini North America Inc. – *Lachute*
 Crown Metal Packaging Canada LP – *Calgary, Concord,*
Ville Saint-Laurent
 CUMI Canada Inc. – *Summerside*
 D. Repol Enterprises Inc. – *Whitby*
 Data Group of Companies (The) – *Brampton, Brockville,*
Drummondville
 Davis Wire Industries Ltd. – *Delta*
 DCR Holdings Inc. – *Stoney Creek*
 Délavage National inc. – *Asbestos*
 Delta Elevator Co. Ltd. – *Kitchener*
 Dentex – *Montréal*
 Derma Sciences Canada Inc. – *Scarborough*
 Descor Industries Inc. – *Markham*
 DEW Engineering and Development Limited – *Miramichi,*
Ottawa
 Dipaolo CNC Retrofit Ltd. – *Mississauga*
 Display Merchandising Group Inc. – *Scarborough*
 Distributions Option Kit inc. (Les) – *Québec*
 Di-tech inc. – *Montréal*
 Dixie Electric Ltd. – *Concord*
 DK-Spec inc. – *Saint-Nicolas*
 Dorothea Knitting Mills Limited – *Toronto*
 Dortec Industries – *Newmarket*
 Doubletex inc. – *Montréal*
 Durable Release Coaters Limited – *Brampton*
 Durham Furniture Inc. – *Durham*
 Dutch Industries Ltd. – *Pilot Butte, Regina*
 Eastern Fluid Power Inc. – *Kingston*
 EHC Global – *Oshawa*

Emballages Alcan Lachine – *Lachine*
 Emerson Process Management – *Edmonton*
 Engauge Controls Inc. – *Lakeshore*
 Enstel Manufacturing Inc. – *Concord*
 Entreprises Dauphinais inc. (Les) – *Sherbrooke*
 Envirogard Products Ltd. – *Richmond Hill*
 Ezeflow Inc. – *Granby*
 Fabrication S Houle inc. – *Saint-Germain-de-Grantham*
 Farnel Packaging Limited – *Dartmouth*
 Fasteners & Fittings Inc. – *Milton*
 FBT Inc. – *St. Catharines*
 Fileco Inc. – *Division of Teknion Furniture Systems*
 – *Concord*
 Flexstar Packaging Inc. – *Richmond*
 Floform Industries Ltd. – *Edmonton, Winnipeg*
 Custom Countertops Ltd. – *Regina, Saskatoon*
 Fournitures Funéraires Victoriaville inc. – *Victoriaville*
 Fuller Industrial Corporation – *Lively*
 Futuretek-Bathurst Tool Inc. – *Oakville*
 Garaga Inc. – *Barrie*
 Garant – *Saint-François*
 Garland Commercial Ranges Limited – *Mississauga*
 Garlock du Canada Ltée – *Sherbrooke*
 Gartech Inc – *Stoney Creek*
 General Dynamics – *Produits de défense et Systèmes*
tactiques Canada Inc. – Saint-Augustin-de-Desmaures
 Genfoot Inc. – *Montréal*
 George A. Wright & Sons Ltd. – *Kingston*
 Georgia-Pacific Canada, Inc. – *Thorold*
 Geo. Sheard Fabrics (1994) Ltd. – *Coaticook*
 Global Casegoods Inc. – *Concord*
 Global Wood Concepts Ltd. – *North York*
 Gonderflex International inc. – *Longueuil*
 Goodyear Canada Inc. – *Napanee*
 Gosco Valves Inc. – *Oakville*
 Gregory Signs & Engraving Ltd. – *Vaughan*
 Groupe Altech 2003 inc. – *Pointe-Claire*
 Groupe Lacasse inc. – *Saint-Pie*
 Gunnar Manufacturing Inc. – *Calgary*
 H. Beck Machinery Ltd. – *Windsor*

Hallink RSB Inc. – *Cambridge*
 Hamilton Kent – *Toronto*
 Harber Manufacturing Limited – *Fort Erie*
 Hartmann Canada Inc. – *Brantford*
 Hendrickson Spring – *Stratford*
 Henninger's Diesel Limited – *Sudbury*
 Heritage Memorials Limited – *Windsor*
 Hercules SLR Inc. – *Dartmouth*
 Hilroy, A Division of MeadWestvaCo Canada LP – *Toronto*
 Hitachi Canadian Industries Ltd. – *Saskatoon*
 Horst Welding Ltd. – *Listowel*
 Hurteau & Associés inc. (Fruits & Passion) – *Candiac*
 Hydroform Solutions – *Brampton*
 Iafate Machine Works Limited – *Thorold*
 Infasco – *Marieville*
 IKO Industries Ltd. – *Brampton, Hawkesbury*
 IMAX Corporation – *Mississauga*
 Imprimerie Interweb inc. – *Boucherville*
 Indal Technologies Inc. – *Mississauga*
 Independent Mirror Industries Inc. – *Toronto*
 Industries Graphiques Cameo Crafts Limitée – *Montréal*
 Industries Peintek inc.(Les) – *Chesterville*
 Integrated Mechanical Services Inc. – *Stratford*
 Interface Flooring Systems (Canada) Inc. – *Belleville*
 J.A. Wilson Display Ltd. – *Mississauga*
 JAB Produits Récréatifs inc. – *Batiscan*
 Jay Ge Electroplating Ltd. – *Laval*
 Jervis B. Webb Company of Canada Ltd. – *Hamilton*
 Jobal Industries Ltd. – *Brampton*
 John Gavel Custom Manufacturing Ltd. – *Emo*
 Johnsonite Canada Inc. – *Waterloo*
 Jones Packaging Inc. – *London*
 JTL Integrated Machine Ltd. – *Port Colborne*
 Juliana Manufacturing Ltd. – *Winnipeg*
 KelCoatings Limited – *London*
 KI Canada Corporation – *Pembroke*
 KIK Custom Products – *Etobicoke*
 Franke Kindred Canada Limited – *Midland*
 Kobay Tool & Stampings Inc. – *Scarborough*
 Korex Canada – *Toronto*

Korex Don Valley ULC – *Toronto*
 Kwaliti Labels Inc. – *Richmond Hill*
 KWH Pipe (Canada) Ltd. – *Huntsville, Saskatoon*
 Kuntz Electroplating Inc. – *Kitchener*
 Compagnie Américaine de Fer et Métaux inc. (La) – *Montréal*
 Lac-Mac Limited – *London*
 Lainages Victor Itée – *Saint-Victor*
 Lanart Rug inc. – *Saint-Jean-sur-Richelieu*
 Lantz Truck Body Ltd. – *Port Williams*
 Larsen & D'Amico Manufacturing Ltd. – *Edmonton*
 Laser Impressions Inc. – *Saskatoon*
 Laval Tool & Mould Ltd. – *Maidstone*
 Lee Valley Tools Ltd. – *Carp, Ottawa*
 Linamar Corporation – *Guelph*
 Cemtol Mfg. – division of Linamar Corporation – *Guelph*
 Skyjack Inc. – *Guelph*
 Lincoln Electric Company of Canada LP – *Toronto*
 Lincoln Fabrics Ltd. – *St. Catharines*
 L'Oréal Canada inc. – *Ville Saint-Laurent*
 Lowe-Martin Group (The) – *Mississauga, Ottawa*
 Ludlow Technical Products Canada, Ltd. – *Gananoque*
 Luzenac Incorporated – *Timmins*
 Maclean Engineering & Marketing Co. Limited – *Collingwood*
 Magnum Signs Inc. – *Kent Bridge*
 Maksteel Service Centre – *Mississauga*
 Manluk Industries Inc. – *Wetaskiwin*
 Manor Tool & Die Ltd. – *Oldcastle*
 Mansour Mining Inc. – *Sudbury*
 Manufacturier de bas de nylon Doris Itée – *Montréal*
 Manufacturier TechCraft inc. – *Laval*
 Marimac Group (The) – *Iroquois, Montréal*
 Maritime Geothermal Ltd. – *Petitcodiac*
 Matériaux Spécialisés Louiseville inc. – *Louiseville*
 Maverick Canada Limited – *Wallaceburg*
 McCabe Steel – a division of Russel Metals Inc. – *Stoney Creek*
 McCloskey International Limited – *Peterborough*

MeadWestvaCo Packaging Systems LP – *Ajax, Pickering, Toronto*
 Métal Leetwo Inc. – *Pointe-Claire*
 Metal World Incorporated – *Toronto*
 Métalus inc. – *Drummondville*
 Metex Heat Treating Ltd. – *Brampton*
 Metro Label Company Ltd. – *Toronto*
 Metro Label Pacific Ltd. – *Langley*
 Métro Jonergin Inc. – *Saint-Hubert*
 Metroland Printing, Publishing & Distributing – *Mississauga*
 Metso Minerals Canada Inc. – *North Bay*
 Meubles Canadel inc. – *Louiseville*
 Meubles Idéal Itée – *Saint-Charles-de-Bellechasse*
 Michelin North America (Canada) Inc. – *New Glasgow*
 MIRALIS inc. – *Saint-Anaclet-de-Lessard*
 MLT International – *Saint-Pie*
 Mobilier MEQ Itée – *La Durantaye*
 Modern Dyers – *Hamilton*
 Moli Industries Ltd. – *Calgary*
 Momentum – *Newmarket*
 Mondo America Inc. – *Laval*
 Mondor Itée – *Saint-Jean-sur-Richelieu*
 Montebello Packaging – *Hawkesbury*
 Montréal Woollens (Canada) Ltd. – *Cambridge*
 Moore Canada Corporation o/a RR Donnelley – *Cowansville, Edmonton, Fergus, Mississauga, Montréal, Oshawa, Scarborough, Trenton, Vancouver*
 Morbern Inc. – *Cornwall*
 MS Gregson div. de RAD Technologies Inc. – *Drummondville*
 Multy Industries Inc. – *North York*
 Nahanni Steel Products Inc. o/a Jancox Stampings – *Brampton*
 National Rubber Technologies Corp. – a division of KN Rubber – *Toronto*
 Newalta Corporation – *Abbotsford, Airdrie, Amelia, Brooks, Calgary, Cranbrook, Drayton Valley, Drumheller, Eckville, Edmonton, Elkpoint, Fort St. John, Gordondale, Grande Prairie, Halbrite, Hays, Hughenden, Nanaimo, Nisku, Nilton Junction, North Vancouver, Pigeon Lake, Prince George,*

Raymond, Red Earth, Redwater, Regina, Richmond, Sparwood, Stauffer, Stettler, Surrey, Taber, Valleyview, West Stoddart, Willesden Green, Winfield, Zama
 Nexans Canada Inc. – *Montréal-East*
 NGF CANADA Limited – *Guelph*
 NODMAN Automation Systems – *Rockwood*
 Nord Gear Limited – *Brampton*
 North American Decal – *Markham*
 Northern Industrial Plating Ltd. – *Saskatoon*
 Norwest Precision Limited – *Weston*
 Novanni Stainless Inc. – *Coldwater*
 Nutech Brands Inc. – *London*
 Oberthur Jeux et Technologies inc. – *Montréal*
 OCM Manufacturing – *Ottawa*
 Oetiker Limited – *Alliston*
 O-I Canada Corporation – *Montréal*
 Olympic Tool & Die Inc. – *Mississauga*
 Owens-Corning – *Toronto*
 P. Baillargeon Itée – *Saint-Jean-sur-Richelieu*
 Padinox Inc. – *Charlottetown, Winsloe*
 Paisley Brick & Tile Co. Ltd. – *Paisley*
 Pan-Oston Ltd. – *Peterborough*
 Patt Technologies Inc. – *Saint-Eustache*
 Pavage U.C.P. Inc. – *Charlesbourg*
 Pavex Itée – *Jonquière*
 Pididi Design Associates Limited – *Mississauga*
 Pinnacle Finishing – *Chatham*
 Pinnacle Mold Inc. – *Tecumseh*
 Placage Chromex inc. – *Sainte-Foy*
 Plastiques Cellulaires Polyform inc. – *Granby*
 Polycor Granite Bussière inc. – *Saint-Sébastien*
 Polycote Inc. – *Concord*
 Polytainers Inc. – *Toronto*
 Poudrier Frères Itée – *Victoriaville*
 Poutrelles Delta inc. – *Sainte-Marie*
 Powell PowerComm Inc. – *Edmonton, Grande Prairie, Hardisty, Lloydminster, Nisku, Olds, Provost*
 Powercast Manufacturing inc. – *Saint-Eustache*
 Premier Tech Horticulture Itée – *Rivière-du-Loup*
 Prémoulé Comptoirs – *Saint-Augustin-de-Desmaures*

Prescott Finishing Inc. – *Prescott*
 Prestige Glass International – *Elliot Lake*
 PrintWest Communications Ltd. – *Regina, Saskatoon*
 Productions Ranger (1988) inc. (Les) – *Granby*
 Produits Belt-Tech inc. (Les) – *Granby*
 Pro-Meubles inc. – *Granby*
 Procter & Gamble Inc. – *Belleville*
 Produits D'Acier Hason inc. (Les) – *Berthierville, Lanoraie*
 Produits Verriers Novatech inc. (Les) – *Sainte-Julie*
 Créations Vernova inc. (Les) – *Sainte-Julie*
 Groupe Verrier Novatech – *Sainte-Julie*
 Portes Novatech inc. – *Sainte-Julie*
 Pro-Flange Limited – *Cambridge*
 ProFile Industries Ltd. – *North York*
 Pullmatic Manufacturing – *Unionville*
 QBD Cooling Systems Inc. – *Brampton*
 Railtech Ltd. – *Baie d'Urfé*
 Ramstar Carbide Tool Inc. – *Oldcastle*
 Rayonese Textile inc. – *Saint-Jérôme*
 Ready Rivet & Fastener Ltd. – *Kitchener*
 Reko International Group Inc. – *Oldcastle*
 Concorde Machine Tool – *Tecumseh*
 Reko Automation & Machine Tool – *Tecumseh*
 Resco Canada Inc. – *Grenville-sur-la-Rouge*
 Reversomatic Manufacturing Ltd. – *Woodbridge*
 Ridgewood Industries Ltd. – *Cornwall*
 RLD Industries Ltd. – *Ottawa*
 Royal Building Technologies – *Woodbridge*
 Royal Dynamics Co. – *Woodbridge*
 Royal Machine Manufacturing Co. – *Woodbridge*
 Royal Window Coverings (Canada) Inc. – *Boisbriand*
 Royalbond Co. – *Woodbridge*
 Roxul (West) Inc. – *Grand Forks*
 Russel Metals Inc. – *Calgary, Mississauga*
 McCabe Steel – a division of Russel Metals Inc. – *Stoney Creek*
 Russell Industries – *St. Catharines*
 Canadian Babbitt Bearings Ltd. – *Brantford*
 CME Protective Coatings – *Sarnia*
 Gudgeon Thermfire International Inc. – *London*

S.A. Armstrong Limited – *Scarborough*
 S.C. Johnson and Son, Limited – *Brantford*
 Sable Marco inc. – *Pont-Rouge*
 Sabre Machine Tool Inc. – *Oldcastle*
 Safety-Kleen Canada Inc. – *Breslau*
 Saint-Gobain Ceramic Materials Canada Inc. – *Niagara Falls, Paris*
 Sandvik Materials Technology, Tube Production Unit, division of Sandvik Canada Inc. – *Arnprior*
 Sandvik Tamrock Canada Inc. – *Lively*
 Sani Métal Itée – *Québec*
 Sarjeant Company Ltd. (The) – *Barrie, Orillia*
 Scapa Tapes North America Ltd. – *Renfrew*
 Sher-Wood Hockey inc. – *Sherbrooke*
 Shorewood Packaging Corp. – *Scarborough*
 Siemens Milltronics Process Instruments Inc. – *Peterborough*
 SIHI Pumps Limited – *Guelph*
 Simmons Canada Inc. – *Brampton*
 Sixpro inc. – *Notre-Dame-du-Bon-Conseil*
 SMS Siemag Ltd. – *Oakville*
 Société Industrielle de décolletage et d'outillage Itée – *Granby*
 Société Laurentide Inc. – *Shawinigan*
 SOFAME Technologies Inc. – *Montréal*
 Sonaca NMF Canada – *Mirabel*
 Soprema inc. – *Drummondville*
 Soucy Techno inc. – *Rock Forest*
 Soudure Germain Lessard inc. – *Boucherville*
 Spartek Systems – *Sylvan Lake*
 Spec Furniture Inc. – *Toronto*
 Spinrite LP – *Listowel*
 Sportspal Products – *North Bay*
 Stanfield's Limited – *Truro*
 Stedfast Inc. – *Granby*
 Steelcase Canada Ltd. – *Markham*
 Stepan Canada Inc. – *Longford Mills*
 St. Lawrence Corporation – *Iroquois*
 Suntech Heat Treating Ltd. – *Brampton*
 Superior Radiant Products Ltd. – *Stoney Creek*

Supremex inc. – *Lasalle, Mississauga*
 Techform Products Limited – *Penetanguishene*
 Technologies Fibrox Itée (Les) – *Thetford Mines*
 Technologies Veyance Canada Inc. – *Saint-Alphonse de Granby*
 Teknion Furniture Systems Ltd. – *Toronto*
 Teknion Roy & Breton Inc. – *Saint-Romuald*
 RBLogistek – *Saint-Romuald*
 RBTek – *Saint-Romuald*
 Roy & Breton – *Saint-Vallier*
 Teknion Concept – *Lévis*
 Teknion Form – *Concord*
 Teknion Québec – *Montmagny*
 Télió & Cie – *Montréal*
 TenCate Protective Fabrics Canada – *Magog*
 Textiles Monterey (1996) inc. – *Drummondville*
 Thermetco inc. – *Montréal*
 Times Fiber Canada Limited – *Renfrew*
 Top Grade Molds Ltd. – *Mississauga*
 Toronto Stamp – *Toronto*
 Tractel Limited – Swingstage Division – *Scarborough*
 Tranches Polycor inc. – *Saint-Sébastien*
 Transcontinental Interweb Toronto – *Mississauga*
 Imprimerie Interglobe inc. – *Beauceville*
 Imprimeries Transcontinental S.E.N.C. – *Boucherville, Saint-Hyacinthe*
 Transcontinental de la Capitale – *Québec*
 Transcontinental Printing 2005 G.P. – *Saskatoon*
 Transcontinental RBW Graphics – *Owen Sound*
 Trenergy Inc. – *St. Catharines*
 Tricots Confort Absolu inc. (Les) – *Montréal*
 Tri-Service Metal Products Inc. – *Ajax*
 Tube-Fab Ltd. – *Charlottetown, Mississauga*
 Tuiles Polycor Inc. – *Saint-Sébastien*
 Tylon Prototype – *Campbellville*
 Ultramet Industries Inc. – *Breslau*
 Uni-Fab – *Oldcastle*
 Unifiller Systems Inc. – *Delta*
 Unimotion-Gear – Division of Magna Powertrain Inc.
 – *Aurora*

Unique Tool & Gauge Inc. – *Windsor*
 Unitrak Corporation Limited – *Port Hope*
 Univar Canada Ltd. – *Weston*
 USINATECH Inc. – *Melbourne*
 USNR/Kockums Cancar Company – *Plessisville*
 VA TECH Ferranti-Packard Transformers Ltd.
 – *Hamilton*
 Van Wyck Packaging Ltd. – *Owen Sound*
 Vannatter Group Inc. – *Wallaceburg*
 Velcro Canada Inc. – *Brampton*
 VeriForm Incorporated – *Cambridge*
 Vesta Marble & Granite Ltd. – *Ottawa*
 Vibac Canada inc. – *Montréal*
 Vision Extrusion Group – *Woodbridge*
 Vitafoam Products Canada Ltd. – *Downsview*
 V.N. Custom Metal Inc. – *North York*
 VicWest Steel – *Oakville*
 VOA Canada Inc. – *Collingwood*
 Vulcan Contentants (Québec) Itée – *Lachine*
 Wabash Alloys Mississauga – *Mississauga*
 Waiward Steel Fabricators Ltd. – *Edmonton*
 Waterloo Textiles Limited – *Cambridge*
 Waterville TG Inc. – *Waterville*
 Watts Water Technologies (Canada) Inc. – *Burlington*
 Walsh Brothers Welding – *Mitchell*
 Web Offset Publications Limited – *Pickering*
 Welland Forge – *Welland*
 Welsh Industrial Manufacturing Inc. – *Stoney Creek*
 Wescam Inc. – *Burlington*
 Wheaton's Woodworking Ltd. – *Berwick*
 Wheeltronic Ltd. – *Mississauga*
 Windham Harvest Specialties Limited – *Simcoe*
 Wolverine Tube (Canada) Inc. – *London*
 Woodman Machine Products Ltd. – *Kingston*
 YKK Canada Inc. – *Montréal*
 Zip Signs Ltd. – *Burlington*
 Zodiac Fabrics Company – *London*

LIME

Carmeuse Beachville (Canada) Limited – *Blind River*
 Carmeuse Lime (Canada) Limited – *Dundas, Ingersoll*
 Chemical Lime Company of Canada Inc. – *Langley*
 Ebel Quarries Inc. – *Warton*
 Graymont (NB) Inc. – *Havelock*
 Graymont (QC) Inc. – *Bedford, Boucherville, Joliette, Marbleton*
 Graymont Western Canada Inc. – *Cache Creek, Calgary, Richmond (C.O.)*
 Summit Plant – *Coleman*
 Exshaw Plant – *Exshaw*
 Faulkner Plant – *Faulkner*

MINING

Aerosion Ltd. – *Aldersyde*
 ArcelorMittal Mines Canada – *Port-Cartier*
 Barrick Gold – *Hemlo*
 Williams Operation – *Hemlo*
 BHP Billiton Diamonds Inc. – *Yellowknife*
 Canadian Salt Company Limited (The) – *Pugwash*
 Construction DJL Inc. – *Boucherville, Bromont*
 Continental, division de Construction DJL inc.
 – *Boucherville, Shawinigan*
 De Beers Canada Inc. – *Toronto, Yellowknife, Timmins*
 Démix Agrégats – *Varenes*
 Démix Agrégats, une division de Holcim (Canada) inc.
 – *Laval*
 Glencore Canada Corporation – *Toronto*
 Brunswick Smelter – *Belledune*
 Mine Matagami – *Matagami*
 Goldcorp Inc. – *Vancouver*
 Goldcorp Canada Ltd. – *Musselwhite Mine*
 – *Thunder Bay*
 Goldcorp Inc. – *Porcupine Gold Mine Division*
 – *South Porcupine*

Hillsborough Resources Limited – *Campbell River*
Hudson Bay Mining & Smelting Co. Ltd. – *Flin Flon*
Hy-Tech Drilling Ltd. – *Saskatoon*
Iron Ore Company of Canada – *Labrador City*
Luzenac Inc. – *Timmins*
Mine Agnico Eagle Limitée, division LaRonde
– *Rouyn-Noranda*
Mines Opinaca Itée (Les) – *Rouyn-Noranda*
Mines Wabush – *Sept-Îles*
New Gold – *New Afton Mine – Kamloops*
Teck Metals Ltd. – *Trail*
Teck Resources Limited – *Vancouver*
Vale Inco – *Birchtree, Copper Cliff, Creighton, Garson, McCreedy East, Mississauga, Murray, Port Colborne, Stobie, Thompson, Toronto, Totten, Victor, Voisey's Bay*

OIL SANDS

Suncor Energy Inc. – *Suncor Group – Sarnia*
Synchrude Canada Ltd. (Oil Sands) – *Fort McMurray*

PETROLEUM PRODUCTS

Bitumar Inc. – *Hamilton, Montréal*
Chevron Canada Limited – *Burnaby, Vancouver*
Husky Energy Inc. – *Calgary*
Husky Oil Operations Ltd. – *Rainbow Lake*
Imperial Oil Limited – *Calgary*
Irving Oil Limited – *Saint John*
North Atlantic Refining Limited – *Come By Chance*
Nova Chemicals (Canada) Limited – *Calgary*
Shell Canada Limited – *Calgary*
Suncor Energy Products Partnership – *Calgary*
Ultramar Ltée – *Montréal*

PIPELINES

Duke Energy Gas Transmission – *Calgary, Chetwynd, Fort Nelson, Hope, Mile 117, Mile 126, Pink Mountain, Taylor, Vancouver*
Enbridge Pipelines Inc. – *Calgary, Edmonton*
Floating Pipeline Company (The) – *Halifax, Saint John*

PLASTICS

1 Source Design Ltd. – *Wallaceburg*
ABC Group Inc. – *Toronto*
ABC Air Management Systems – *Rexdale, Ronson*
ABC Plastic Moulding – *Brydon, Orlando*
MSB Plastics Manufacturing Ltd. – *Etobicoke*
PDI Plastics Inc. – *Etobicoke*
Polybottle Group Limited – *Edmonton, Vancouver*
Saflex Polymers Limited – *Weston*
Salga Associates – *Concord*
ADS Groupe Composites Inc. – *Thetford Mines*
Advanced Panel Products Ltd. – *Nisku*
AMCOR PET Packaging – *Moncton*
American Biltrite (Canada) Itée – *Sherbrooke*
Amhil Enterprises – *Burlington, Mississauga*
Ani-Mat inc. – *Sherbrooke*
A.P. Plasman Inc. – *Windsor*
Armtex Limited Partnership – *Orangeville*
BainUltra inc. – *Saint-Nicolas*
Baytech Plastics Inc. – *Midland*
Berry Plastics Canada Inc. – *Waterloo*
Berry Plastics – *Belleville*
Blue Falls Manufacturing Ltd. – *Coleman, Thorsby*
Cam-Slide – *Newmarket*
Camoplast Inc. – *Richmond*
Camtac Manufacturing – *division of Linamar Holdings Inc. – Guelph*
Canplas Industries Ltd. – *Barrie*
Cascades Inopak – *Drummondville*
CKF Inc. – *Etobicoke, Langley, Rexdale*
Clorox Company of Canada Ltd. (The) – *Brampton, Orangeville*
Co-Ex-Tec – *Concord*
Compact Mould Ltd. – *Brampton*
D & V Plastics Inc. – *Acton*
DDM Plastics – *Tillsonburg*
Deflex Composite inc. – *Saint-Victor*
Downeast Plastics Ltd. – *Cap-Pelé*
Dura-Tech Industrial & Marine Limited – *Dartmouth*
DynaPlas Ltd. – *Scarborough*
Emballage Saint-Jean Itée – *Saint-Jean-sur-Richelieu*
Emballages Poliplastic Inc. – *Granby*
Entreprises Hamelin – *Division de Groupe Hamelin Inc. – Boucherville*
Fabrene Inc. – *North Bay*
Fenplast – *Delson*
Fibres Armtex inc. – *Magog*
Flexahopper Plastics Ltd. – *Lethbridge*
Formica Canada inc. – *Saint-Jean-sur-Richelieu*
FRP Systems Ltd. – *Thunder Bay*
Genpak Limited Partnership – *Mississauga*
Greif Bros. Canada Inc. – *Belleville*
Groupe Accent-Fairchild inc. – *Saint-Laurent*
Groupe RCM inc. – *Yamachiche*
GSW Building Products – *Barrie*
High-Q Design Ltd. – *Edmonton*
Hinspergers Poly Industries Ltd. – *Mississauga*
Horizon Plastics International Inc. – *Cobourg*
Husky Injection Molding Systems Ltd. – *Bolton*
Hymopack Ltd. – *Etobicoke*
Imaflex Inc. – *Montréal*
Industries de moulage Polymax (Les) – *Granby*
Industries de moulage Polytech inc. (Les) – *Granby*
Industries Nigan (Les) – *Cookshire-Eaton*
Injection Technologies Inc. – *Windsor*

Intertape Polymer Group – *Truro*
 IPEX Inc. – *Edmonton, Invader, Langley, L'Assomption, London, Mississauga, Saint-Jacques-de-Montcalm, Saint-Joseph-de-Beauce, Saint-Laurent, Scarborough*
 Jacobs & Thompson Inc. – *Weston*
 Jokey Plastics North America Inc. – *Goderich*
 Kal-Trading Inc. – *Mississauga*
 Kohler Canada Co. – *Armstrong*
 L-D Tool & Die Inc. – *Div. of Madix Engineering Inc. – Stittsville*
 Lefko Produits de Plastiques inc. – *Magog*
 Masternet Ltd. – *Mississauga*
 Matrix Packaging Inc. – *Mississauga*
 Mold-Masters Limited – *Georgetown*
 Molded Plastic Consultants – *Shanty Bay*
 Neocon International – *Dartmouth*
 Newdon Industries Ltd. – *Fergus*
 Newell Rubbermaid – *Calgary, Mississauga*
 Niigon Technologies Ltd. – *MacTier*
 Norseman Plastics Limited – *Etobicoke*
 Nu-Co Plastics – *Blenheim*
 Ontario Plastic Container Producers Ltd. – *Brampton*
 Pano Cap (Canada) Limited – *Kitchener*
 Papp Plastics & Distributing Limited – *Windsor*
 Par-Pak Ltd. – *Brampton*
 Plastiflex Canada Inc. – *Orangeville*
 Plastiques Cascades inc. – *Kingsey Falls*
 Plastiques GPR inc. – *Saint-Félix-de-Valois*
 Plastiques Novaprofil inc. – *Sainte-Julie*
 Plastube inc. – *Granby*
 PM Plastics Ltd. – *Windsor*
 Polar Plastique Itée – *Montréal*
 Pollard Windows Inc. – *Burlington*
 Polybrite – *Richmond Hill*
 Pultrall Inc. – *Thetford Mines*
 Reid Canada Inc. – *Mississauga*
 Reinforced Plastic Systems – *Mahone Bay, Minto*
 Reliance Products LP – *Winnipeg*
 Richards Packaging Inc. – *Etobicoke*

Rochling Engineering Plastics Ltd. – *Orangeville*
 Ropak Packaging – *Langley, Oakville, Springhill*
 Royal Group Technologies Limited – *Woodbridge*
 Candor Plastics Co. – *Woodbridge*
 Crown Plastics Extrusions Co. – *Woodbridge*
 Dominion Plastics Co. – *Woodbridge*
 Dynast Plastics Co. – *Winnipeg*
 Gracious Living Industries – *Woodbridge*
 Imperial Plastics Co. – *Woodbridge*
 Industrial Plastics – *Saint-Hubert*
 Le-Ron Plastics Inc. – *Surrey*
 Majestic Plastics Co. – *Woodbridge*
 Montréal PVC – *Saint-Laurent*
 Prince Plastics Co. – *Woodbridge*
 Regal Plastics Co. – *Woodbridge*
 Residential Building Products – *Saint-Lambert-de-Lauzon*
 Royal EcoProducts Co. – *Concord*
 Royal Flex-Lox Pipe Limited – *Abbotsford*
 Royal Foam Co. – *Woodbridge*
 Royal Group Resources Co. – *Woodbridge*
 Royal Outdoor Products Co. – *Woodbridge*
 Royal Pipe Co. – *Woodbridge*
 Royal Plastics Co. – *Concord*
 Royal Polymers Limited – *Sarnia*
 Royal Tooling Co. – *Woodbridge*
 Roytec Vinyl – *Woodbridge*
 Thermoplast – *Laval*
 Ultimate Plastics Co. – *Woodbridge*
 S & Q Plastic – *Division of Uniglobe (Canada) Inc. – Mississauga*
 SABIC Specialty Extrusion Canada – *Long Sault*
 Silgan Plastics Canada Inc. – *Lachine, Mississauga*
 Soniplastics Inc. – *Boucherville*
 Sonoco Flexible Packaging Canada Corporation – *Mississauga*
 Soucy Baron Inc. – *Saint-Jérôme*
 Tarkett inc. – *Farnham*
 Technologies d'extrusion appliquées (Canada) inc. – *Varenes*

Truefoam Limited – *Dartmouth*
 Valley Acrylic Bath Ltd. – *Mission*
 Vifan Canada inc. – *Lanorai-d'Au-ray, Montréal*
 Vulsay Industries Ltd. – *Brampton*
 W. Ralston (Canada) Inc. – *Brampton*
 Winpak Heat Seal Packaging Inc. – *Vaudreuil-Dorion*
 Winpak Portion Packaging Ltd. – *Toronto*
 Woodbridge Foam Corporation – *Woodbridge*

STEEL

Abraham Steel Service Ltd. – *Woodbridge*
 AltaSteel Ltd. – *Edmonton*
 ArcelorMittal Dofasco Inc. – *Hamilton*
 ArcelorMittal Montréal inc. – *Contrecoeur-Est, Contrecoeur-Ouest, Hamilton East, Longueuil, Saint-Patrick-Montréal*
 ArcelorMittal Tubular Products – *Woodstock*
 Armtec Limited Partnership – *Guelph*
 Brannon Steel – *Brampton*
 Bull Moose Tube Limited – *Burlington*
 Douglas Barwick Inc. – *Brockville*
 Essar Steel Algoma Inc. – *Sault Ste. Marie*
 Gerdau Ameristeel Corporation – *Cambridge*
 Gerdau Ameristeel Whitby – *Whitby*
 Gerdau Ameristeel Manitoba – *Selkirk*
 Ivaco Rolling Mills 2004 LP – *L'Orignal*
 Lakeside Steel Corp. – *Welland*
 Laurel Steel – *Division of Harris Steel – Burlington*
 Nelson Steel – *Division of Samuelson & Co. Ltd. – Stoney Creek*
 Nova Tube inc. – *Montréal*
 Ontario Chromium Plating Inc. – *Oakville*
 Rio Tinto Fer et Titane inc. – *Tracy*
 Spencer Steel Ltd. – *Ilderton*
 Samuel Plates Sales – *Stoney Creek*
 Tree Island Steel Ltd. – *Richmond*
 U.S. Steel Canada Inc.
 Hamilton Works – *Hamilton*
 Lake Erie Works – *Nanticoke*

TRANSPORTATION EQUIPMENT MANUFACTURING

A.G. Simpson Automotive Inc. – *Cambridge, Oshawa, Scarborough*

ABC Group Inc. – *Toronto*

ABC Climate Control Systems Inc. – *Toronto*

ABC Flexible Engineered Product Inc. – *Etobicoke*

ABC Group Exterior Systems – *Toronto*

ABC Group Interior Systems – *Toronto*

ABC Group Product Development – *Toronto*

ABC Metal Products Inc. – *Toronto*

LCF Manufacturing Ltd. – *Rexdale, Weston*

Aalbers Tool & Mold Inc. – *Oldcastle*

Anton Mfg. – *Concord*

Arcon Metal Processing Inc. – *Richmond Hill*

Avcorp Industries Inc. – *Delta*

Aviation Lemex inc. – *Saint-Hubert*

B & W Heat Treating Canada ULC – *Kitchener*

Bombardier Aerospace – *Downsview*

Bombardier Aéronautique – *Mirabel, Saint-Laurent*

Bombardier Produits Récréatifs Inc. – *Valcourt*

Bovern Enterprises Inc. – *Markham*

Cami Automotive Inc. – *Ingersoll*

Capital Tool & Design Ltd. – *Concord*

Chalmers Suspensions International Inc. – *Mississauga*

Chemin de fer Canadien Pacifique – *Montréal*

Citerne Almac International inc. – *Lanoraie*

Composite Atlantic Limited – *Lunenburg*

Corvex Mfg. – division of Linamar Corporation – *Guelph*

CSI Gear Corporation – *Mississauga*

Chrysler Canada LLP

Brampton assembly plant – *Brampton*

Cpk interior products plant – *Port Hope*

Etobicoke casting plant – *Etobicoke*

Dana Canada Corporation – *Burlington, Cambridge, Oakville*

Dana Thermal Products – *Mount Forest*

Dortec Industries – Division of Magna International Inc. – *Newmarket*

Dresden Industrial – *Rodney, Stratford*

Dura-Lite Heat Transfer Products Ltd. – *Calgary*

DYNA-MIG Mfg. of Stratford Inc. – *Stratford*

Eston Manufacturing – division of Linamar Corporation – *Guelph*

Eurocopter Canada Limited – *Fort Erie*

F & P Mfg., Inc. – *Tottenham*

Faurecia Automotive Seating – *Bradford*

Ford Motor Company of Canada, Limited – *Oakville, St. Thomas, Windsor*

Formet Industries – *St. Thomas*

GATX Rail Canada – *Coteau-du-Lac, Moose Jaw, Montréal, Red Deer, Rivière-des-Prairies, Sarnia*

General Motors of Canada Limited – *Oshawa, St. Catharines*

Global Emissions Systems Inc. – *Whitby*

Glueckler Metal Inc. – *Barrie*

Groupe Environnemental Labrie – *Saint-Alphonse*

Halla Climate Control Canada Inc. – *Belleville*

Hastech Mfg. – *Guelph*

Héroux Devtek inc. – *Longueuil, Scarborough*

Hitachi Construction Truck Manufacturing Ltd. – *Guelph*

Honda of Canada Mfg. – *Alliston*

Kingsville Stamping Ltd. – *Kingsville*

Jefferson Elora Corporation (JEC) – *Elora*

Johnson Controls LP – *London, Milton, Mississauga, Tillsonburg*

Lafrate Machine Works Ltd. – *Thorold*

Lunenburg Industrial Foundry & Engineering Limited – *Lunenburg*

Leggett & Platt Inc. London – *London*

Schukra of North America – *Lakeshore*

Linex Manufacturing – division of Linamar Corporation Inc. – *Guelph*

Litens Automotive Partnership – *Woodbridge*

LPP Manufacturing – division of Linergy Manufacturing Inc. – *Guelph*

– *Guelph*

Mancor Canada Inc. – *Oakville*

Massiv Die-Form – *Brampton*

Métal Marquis inc. – *La Sarre*

Modatek Systems – *Milton*

National Steel Car Limited – *Hamilton*

Nemak of Canada – *Windsor Aluminum Plant – Windsor*

Neptunus Yachts – *St. Catharines*

Niagara Piston Inc. – *Beamsville*

Northstar Aerospace (Canada) Inc. – *Milton*

NTN Bearing Corporation of Canada – *Mississauga*

Omron Dualtec Automotive Electronics Inc. – *Oakville*

Ontario Drive & Gear Limited – *New Hamburg*

Orenda Aerospace Corporation – *Mississauga*

Orlick Industries Limited – *Hamilton*

Pilkington Glass of Canada Limited – *Collingwood*

Platinum Tool Technologies – *Oldcastle*

Pratt & Whitney Canada Corp. – *Enfield, Longueuil, Saint-Hubert*

Presstran Industries – *St. Thomas*

Prévost – division of Volvo Group Canada – *Sainte-Claire*

Prince Metal Products Ltd. – *Windsor*

Procor Limited – *Edmonton, Joffre, Oakville, Regina, Sarnia*

Quadrad Manufacturing – division of Linamar Corporation Inc. – *Guelph*

Remtec Inc. – *Chambly*

Roctel Manufacturing – division of Linamar Corporation Inc. – *Guelph*

Rollstamp Mfg., division of Decoma International Inc.

– *Concord*

Satisfied Brake Products Inc. – *Cornwall*

Simcoe Parts Service Inc. – *Alliston*

Spinic Manufacturing – division of Linamar Corporation

Inc. – *Guelph*

Stackpole International – *Ancaster, Mississauga*

StandardAero – *Winnipeg*

STT Technologies Inc. – *Concord*

Summo Steel Corp. – *Burlington*

Sydney Coal Railway Inc. – *Sydney*

Tool-Plas Systems Inc. – *Oldcastle*

Toyota Motor Manufacturing Canada Inc. – *Cambridge*

Traxle Mfg – division of Linamar Corporation Inc. – *Guelph*

TRW Automotive – *St. Catharines, Woodstock*

TS Tech Canada Inc. – *Newmarket*

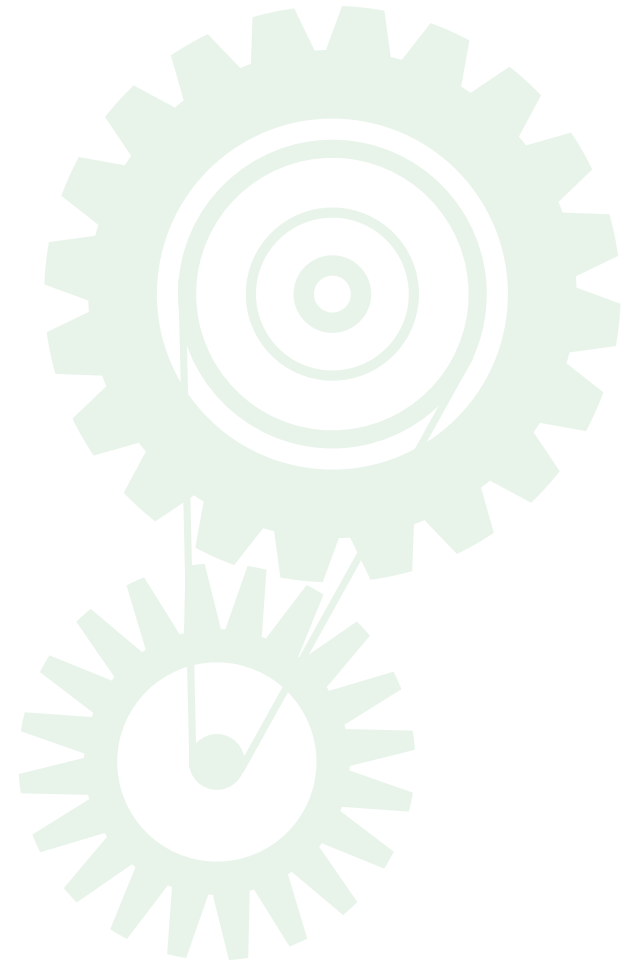
Unison Engine Components – *Orillia*
 Vehcom Manufacturing – division of Linamar Corporation
 Inc. – *Guelph*
 Ventra Group Co. – *Calgary*
 Flex-n-Gate Bradford – *Bradford*
 Flex-n-Gate Canada – *Tecumseh*
 Flex-n-Gate Seeburn – *Beaverton, Tottenham*
 Veltri Metal Products – *Glencoe, Tecumseh, Windsor*
 Ventra AFR – *Ridgetown*
 Ventra Plastics Kitchener – *Kitchener*
 Ventra Plastics Windsor – *Windsor*
 Volvo Cars of Canada Toronto – *Toronto*
 Wallaceburg Preferred Partners – *Wallaceburg*
 Woodbridge Foam Corporation – *Mississauga*

Pengrowth Corporation – *Calgary*
 Penn West Petroleum Ltd. – *Calgary*
 Talisman Energy Inc. – *Calgary, Carlyle, Chauvin (Alta.),*
Chauvin (Sask.), Chetwynd, Edson, Grande Prairie,
Lac La Biche, Shaunavon, Turner Valley, Warburg, Windsor
 TAQA North Ltd. – *Calgary, Niton Junction*

For an up-to-date list of CIPEC Leaders, visit
[nrcan.gc.ca/energy/efficiency/industry/
 opportunities/5233](http://nrcan.gc.ca/energy/efficiency/industry/opportunities/5233).

UPSTREAM OIL AND GAS

AltaGas Services Inc. – *Wabasca*
 Baytex Energy Ltd. – *Taber*
 BP Canada Energy Company – *Calgary, Edson, Grande*
Prairie, Rocky Mountain House
 Cenovus Energy Inc. – *Calgary*
 Chevron Canada Resources – *Calgary*
 Connacher Oil and Gas Ltd. – *Calgary*
 ConocoPhillips Canada – *Atlantic French Corridor, Big*
Valley, Calgary, Deep Basin, Edson, Foothills, Jenner,
Kaybob/Edson, Mackenzie Delta, Morrin, Northern Plains,
Rimbey/O'biese, Southern Plains, Vulcan, Wembley
 Crescent Point Energy Trust – *Calgary, Sounding Lake*
 Devon Canada Corporation – *Calgary, Central, Deep*
Basin, Fairview, Foothills, Fort McMurray, Fort St. John,
Lloydminster, NE British Columbia/NW Alberta,
Northern Plains, Peace River
 Encana Corporation – *Calgary*
 Imperial Oil Limited – *Calgary*
 Keyera Energy – *Rocky Mountain House*
 Nexen Canada Ltd. – *Calgary*
 Nuvista Energy Ltd. – *Calgary*
 Paramount Resources Ltd. – *Calgary*



CIPEC Trade Associations

Aerospace Industries Association of Canada (AIAC)	Canadian Gas Association (CGA)	(The) Explorers and Producers Association of Canada (EPAC)
Alberta Food Processors Association (AFPA)	Canadian Lime Institute (CLI)	Fisheries Council of Canada (FCC)
Aluminum Association of Canada (AAC)	Canadian Manufacturers & Exporters (CME) CME Alberta Division CME British Columbia Division CME Manitoba Division CME New Brunswick Division CME Newfoundland and Labrador Division CME Nova Scotia Division CME Ontario Division CME Prince Edward Island Division CME Quebec Division CME Saskatchewan Division	Food and Beverage Ontario
Atlantic Dairy Council		Food and Consumer Products of Canada (FCPC)
Automotive Parts Manufacturers' Association (APMA)		Forest Products Association of Canada (FPAC)
Baking Association of Canada (BAC)		FPIinnovations
Beer Canada		(The) Mining Association of Canada
Canadian Association for Surface Finishing (CASF)	Canadian Meat Council (CMC)	North American Insulation Manufacturers Association (NAIMA Canada)
Canadian Association of Petroleum Producers (CAPP)	Canadian Plastics Industry Association (CPIA)	Ontario Agri Business Association (OABA)
Canadian Chamber of Commerce (CCC)	Canadian Steel Producers Association (CSPA)	Packaging Association of Canada (PAC)
Canadian Construction Association (CCA)	Canadian Vehicle Manufacturers' Association (CVMA)	Petroleum Technology Alliance Canada (PTAC)
Canadian Construction Innovations	Cement Association of Canada (CAC)	Quebec Forest Industry Council (QFIC)
Canadian Electricity Association (CEA)	Chemistry Industry Association of Canada (CIAC)	Rubber Association of Canada (RAC)
Canadian Energy Pipeline Association (CEPA)	Council of Forest Industries (CFI)	Wine Council of Ontario (WCO)
Canadian Fertilizer Institute (CFI)	Electro-Federation Canada (EFC)	
Canadian Foundry Association (CFA)		
Canadian Fuels Association		

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