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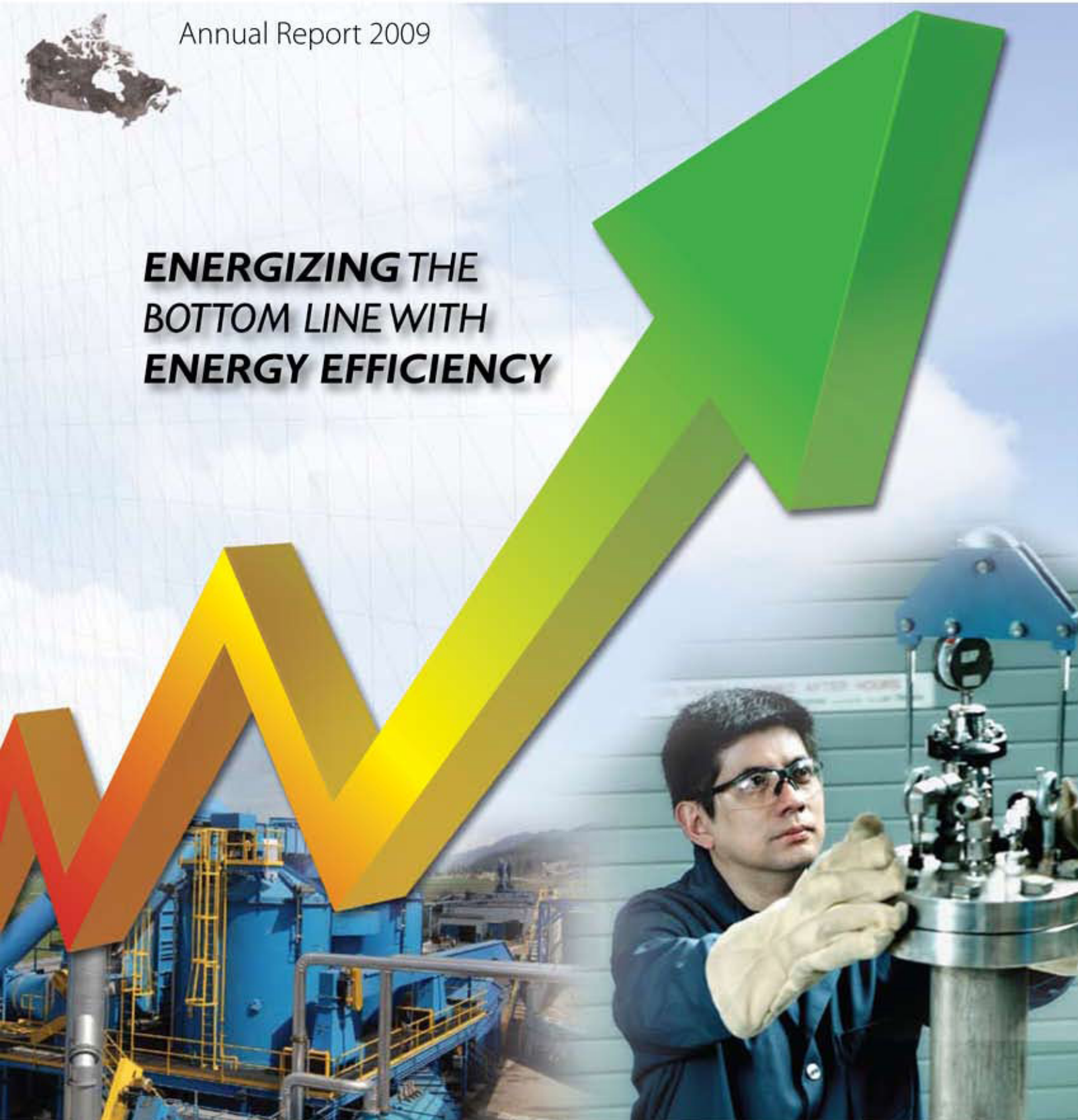
Ressources naturelles
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ecoENERGY
an ecoACTION initiative

Annual Report 2009

**ENERGIZING THE
BOTTOM LINE WITH
ENERGY EFFICIENCY**



Canadian Industry Program
for Energy Conservation

Canada

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CONTENTS



About CIPEC	02	Industry Sector Profiles	36
Message From the Chair — Remarkable Progress by an Extraordinary Partnership	04	Aluminum	38
The Results	08	Brewery	39
The Energy Efficiency Edge — Competing in a Tough Economy	10	Cement	40
Winning Ways in Tough Economic Times	12	Chemical	41
Virtual Approach Targets Real Energy Efficiency	16	Construction	42
Lead Your Organization to a Better Bottom Line	18	Dairy	43
Strength in Unity	22	Electrical and Electronics	44
ISO 50001: New Energy Management Standard Will Have Global Impact	26	Electricity Generation	45
Training in the Face of Economic Adversity	28	Fertilizer	46
Move to the Head of the (Tax) Class	30	Food and Beverage	47
Programs and Services	32	Foundry	48
Canadian Industry Program for Energy Conservation (CIPEC)	34	General Manufacturing	49
ecoENERGY Retrofit — Small and Medium-Sized Organizations	34	Mining	50
ecoENERGY for Industry — Assessment Incentive Classes 43.1, 43.2 and 29 and CRCE Tax Incentives	34	Oil Sands	51
Dollars to \$ense energy management workshops	35	Petroleum Products	52
Energy benchmarking and best practices	35	Plastics	53
		Pulp and Paper	54
		Rubber	55
		Steel	56
		Textiles	57
		Transportation Equipment Manufacturing	58
		Upstream Oil and Gas	59
		Wood Products	60
		CIPEC Executive Board	61
		CIPEC Task Force Council	62
		CIPEC Leader Companies by Sector	64
		CIPEC Trade Associations	81
		Industrial Programs Division Staff	82

ABOUT CIPEC

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

CIPEC is made up of 26 sector task forces covering more than 50 trade associations. Each task force represents companies that are engaged in similar industrial activities. The Task Force Council, with representatives from each CIPEC sector, provides a forum for sectors to share ideas and recommend ways to address common needs. Overall direction is provided by an 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 built through open communication. CIPEC continues to be the focal point for industry's response to Canada's energy efficiency efforts. Our role is to promote greater energy efficiency and to recognize and reward those who lead the way.

CIPEC carries out this mandate in part through a strong communications and awareness program anchored in its twice-monthly *Heads Up CIPEC* newsletter, which is sent out to more than 10,000 subscribers.

CIPEC also raises awareness of the goals and benefits of improved energy use in other ways. The Task Force Council and individual sectors are constantly working to broaden participation, encourage information sharing and bolster awareness of the role and achievements of CIPEC members.

CIPEC volunteers include successful business leaders and others recognized on the national stage. The profile of these leaders and their strong belief in CIPEC's principles attracts new members from industry and builds on the successful partnership between industry and government.

JOIN CIPEC

Participate in CIPEC by registering your company's commitment to energy efficiency improvements and greenhouse gas reductions. There is no fee to sign up as a CIPEC Leader, and there are a broad range of benefits, including the following:

- ecoENERGY Retrofit incentives
- financial assistance for process integration and computational fluid dynamics studies
- Natural Resources Canada's Dollars to \$ense workshops (and opportunities to have them delivered on-site and customized to meet specific company needs)
- technical guidebooks
- *Heads Up CIPEC* — an electronic newsletter with the latest energy efficiency information
- support for benchmarking studies and employee awareness initiatives
- opportunities to network with other industrial energy managers and practitioners

CONTACT CIPEC

www.oeo.nrcan.gc.ca/cipec

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.



REMARKABLE PROGRESS BY AN EXTRAORDINARY PARTNERSHIP

Glenn Mifflin

Vice-President, North Atlantic Refining Limited
Chair, CIPEC Executive Board

As I look forward to my third year as Chair of the CIPEC Executive Board, I am struck by the remarkable progress CIPEC continues to make and the extraordinary partnership it remains. My time as Chair has only deepened my sense of the profound importance of energy efficiency to the competitiveness of Canada's industrial sector. I also remain convinced of the pivotal role energy efficiency will play as we pursue sustainable growth for our economy.

These sentiments will be on display at Energy 2009, Canada's foremost industrial energy efficiency conference, which will take place in Toronto in November. Geared to industry representatives — from senior decision makers to engineers, operations managers and energy practitioners — this biennial event provides an opportunity to network and share ideas on tapping into energy-saving opportunities in Canada's industrial sector.

Following on the successes of past conferences, CIPEC is once again helping to reinvigorate Canada's corporate commitment to industrial energy efficiency — and as we reflect on the past year, we have much to celebrate.

However, the challenges faced by CIPEC Leaders this year, as they responded to economic conditions not seen for generations in Canada and around the world, must also be acknowledged. I am pleased to note that, despite these serious economic conditions, CIPEC Leaders remained committed to energy efficiency. The theme of this annual report, "Energizing The Bottom Line with Energy Efficiency," reflects how this commitment served CIPEC Leaders well this year.

THE YEAR IN REVIEW

Thanks to strong leadership, the dedicated efforts of the Executive Board, the Task Force Council, the 26 task forces, and excellent support from the Office of Energy Efficiency, companies under the CIPEC umbrella continued to make advances in energy efficiency during the past year.

These advances are reflected in the following statistics:

- 125 additional companies are receiving funding from the ecoENERGY Retrofit program and saving an estimated 455,000 gigajoules of energy annually.
- 191 organizations signed on as CIPEC Leaders, bringing the total to almost 1800 CIPEC Leaders.
- 1085 people registered for the Boiler Efficiency Calculator.
- Dollars to \$ense energy management workshops were delivered to 2200 people, bringing the total to 17,000 since the workshops were first offered in 1997.
- Over 16,000 publications were distributed.
- CIPEC's total estimated annual energy savings exceeded 4 petajoules.
- CIPEC's estimated annual greenhouse gas emissions reductions totalled 385 kilotonnes.

EXTRAORDINARY PARTNERSHIPS, REMARKABLE COOPERATION

Cooperation between industry and government is a hallmark of CIPEC's success. This spirit of cooperation has infused the industry-government relationship since CIPEC was founded in 1975, and this year was no exception.

In fact, even in the face of challenging economic circumstances, CIPEC managed to forge new partnerships and build on existing ones. I would like to welcome the 191 new CIPEC Leaders who joined us this year. No doubt each one of you could have chosen to put this decision off while you dealt with the year's unprecedented economic challenges, so your commitment to energy efficiency is all the more impressive.

CIPEC also reached out to like-minded associations as part of our efforts to forge new partnerships. I am especially excited about our new relationship with Partners for Project Green. This eco-business centre is helping companies surrounding Toronto Pearson International Airport reduce resource costs and operate in a green and more energy-effective manner. The eco-business zone consumes about 6 million megawatt-hours of electricity annually. By 2015, the partnership wants to reduce electricity consumption by 20 percent — enough electricity for more than 130,000 households. This is an ambitious target. However, I am confident that together we will achieve it. There are 21 CIPEC Leaders with facilities in the eco-business zone.

This year CIPEC continued to strengthen existing partnerships. We worked with our allies at the Cement Association of Canada to produce a detailed benchmarking study that offers great potential for building on the energy efficiency gains already made by Canadian cement producers.

The Canadian Manufacturers and Exporters (CME) association is a key player in CIPEC. Natural Resources Canada (NRCan) is one of the partners supporting the CME energy benchmarking study for Ontario. Any gains in energy efficiency that can be delivered to the bottom line are always appreciated. In today's tough markets, I know manufacturers will welcome this study.

This year we leveraged our partnerships with the Association québécoise pour la maîtrise de l'énergie, the Automotive Parts Manufacturers' Association, the Eco-Efficiency Centre in Halifax, Efficiency New Brunswick, the Mining Association of Canada and the Pulp and Paper Research Institute of Canada. Of course, I cannot salute all of our partners in a short letter like this one, but I can say emphatically that every partnership is valued and makes a significant contribution to CIPEC's work.

REMARKABLE PROGRESS, IMPRESSIVE VOLUNTEERISM

This year, as always, CIPEC continued to rely on a voluntary process to deliver significant energy efficiency gains. CIPEC members' total estimated annual energy savings exceeded 4 petajoules — enough energy for over 35,000 households — and estimated annual greenhouse gas emissions reductions are 385 kilotonnes.

Those unfamiliar with CIPEC might look at our progress and conclude that the gains we made resulted from a relationship driven by regulation and compulsion. The fact that the opposite is true — that we all voluntarily work toward a common goal based on shared interest — speaks to the power of CIPEC. It also bodes well for our collective future.

I am confident that any organization with common values and a shared vision can outperform its competitors when it comes to innovation, accountability and results. CIPEC's culture of cooperation, underpinned by an ethos of voluntary action, provides the foundation for almost 1800 CIPEC Leaders, whose strength and diversity reflect the strength and diversity of Canada.

SIGNIFICANT CHALLENGES, EXCITING OPPORTUNITIES

Throughout its history, CIPEC has demonstrated its relevance as a government-industry forum for policy change and adaptation. This year, CIPEC's role in the global negotiations on an emerging energy management standard, called ISO 50001, was a compelling illustration of how our members and government officials can work together in the interests of Canadian competitiveness and environmental progress.

Work on ISO 50001 should be completed toward the end of 2010. It will establish a framework for all types of organizations and companies to manage energy use. According to the International Organization for Standardization (ISO), ISO 50001 could influence up to 60 percent of the world's energy use, and I am pleased to report that CIPEC's voice is being heard at the negotiating table. I would like to take this opportunity to thank the Government of Canada for supporting CIPEC representation at the negotiations.

I also wish to express my gratitude to CIPEC's Executive Board and Task Force Council and the many volunteers on the sector task forces for their continuing contribution to energy sustainability in Canada. Without their commitment and expertise, CIPEC would not be poised to continue building on the successes of the past as we face the challenges of the future together.

Yours sincerely,

Glenn Mifflin

Vice-President, North Atlantic Refining Limited
Chair, CIPEC Executive Board

The American Council for an Energy-Efficient Economy (ACEEE) awarded CIPEC the "Champion of Energy, Efficiency in Industry" award at its Summer Study on Energy Efficiency in Industry in Niagara Falls, New York on July 30, 2009.

Presented to outstanding leaders involved with the industrial sector, the award recognizes leadership and accomplishment in the energy efficiency field. The winners are selected based on demonstrated excellence in program implementation, leadership, research and development, energy policy, private sector initiatives and international initiatives.

CIPEC was recognized for leadership in building government–industry partnerships to promote energy efficiency in industry. The enduring government–business partnership aspect of this program has been singled out by the ACEEE Board of Directors Awards Committee as a compelling model that offers significant opportunities for emulation.

THE RESULTS



CIPEC brings exceptional value to Canadian industry while supporting Canada's drive to improve energy efficiency and reduce greenhouse gas emissions. Its extraordinary impact is clear – CIPEC delivers results.

The Gross Domestic Product (GDP) created by CIPEC industries increased 47 percent between 1990 and 2007. With the help of effective energy management, energy consumption by these industries rose only 29.8 percent.

In 2007, CIPEC industries created approximately 28 percent of the country's GDP and provided jobs for 3.5 million Canadians.

The more than 5,000 companies that CIPEC represents reduced their combined energy intensity by 11.7 percent between 1990 and 2007, an average of 0.7 percent per year.

Improved energy efficiency enabled Canadian industry to avoid approximately \$2.1 billion in purchased energy in 2007 – enough energy to heat almost 2.7 million Canadian households for one year. Had energy intensity remained constant, GHG emissions would have been 36.2 megatonnes (Mt) higher.

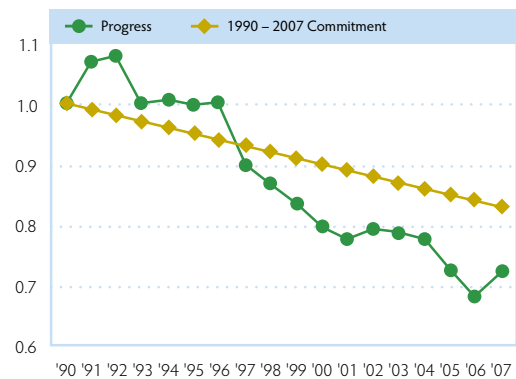
The mining, manufacturing and construction sectors improved their energy intensity by an average of 1.9 percent per year. Between 1990 and 2007, these sectors improved energy intensity by 27.8 percent.

From the fall 1997 to March 31, 2009, the CIPEC Dollars to \$ense workshops have helped companies save an estimated 13,900 terajoules of energy and cut carbon dioxide emissions by 1,548 kilotonnes.

At the end of 2007, the *Heads Up CIPEC* newsletter was sent to 10,000 recipients across Canada. This newsletter is distributed electronically twice per month.

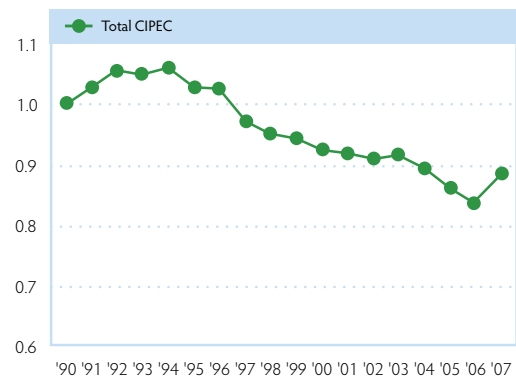
As of March 31, 2009, close to 1,800 industrial facilities have signed on as CIPEC Leaders.

Mining, Manufacturing and Construction Energy Intensity



The mining, manufacturing and construction sectors improved their energy intensity by an average of 1.9 percent per year between 1990 and 2007. This rate surpasses the public voluntary commitment made by these CIPEC members to achieve an average annual energy intensity improvement of 1.0 percent per year.

Total CIPEC Energy Intensity



All CIPEC industries improved their combined energy intensity by 11.7 percent, or an average of 0.7 percent per year, between 1990 and 2007. If energy intensity had remained constant, GHG emissions would have been 36.2 Mt higher in 2007.



THE ENERGY EFFICIENCY EDGE

COMPETING IN A
TOUGH ECONOMY

CIPEC Leaders are defined by their steadfast commitment to energy efficiency. In 2008–2009, this commitment was tested by economic challenges not seen for generations. CIPEC Leaders rose to the challenge and reaffirmed their dedication to advancing their companies’ interests through energy efficiency.

The theme of this annual report, “Energizing The Bottom Line with Energy Efficiency,” reflects how this commitment served CIPEC Leaders well this year. The voices of CIPEC Leaders are heard in these pages.



Photo: Rannie Turnigan



Photo: Rannie Turnigan





WINNING WAYS IN TOUGH ECONOMIC TIMES

CIPEC Leaders stay focused on energy efficiency

This year brought economic challenges not seen for generations in Canada. CIPEC Leaders, representing almost 1800 facilities and a wide range of industrial sectors, faced daily tests — but their commitment to energy efficiency was only reinforced.

“The wider economy may have faced a recession, but manufacturing was dealing with a depression,” says Rob McBain, President of Ancast Industries.

Despite the pressures facing this Winnipeg-based foundry operation, McBain’s focus on continuous improvement meant that energy efficiency remained a priority.

“We had to reduce staff and the number of shifts. So we needed to make sure our energy management adapted as well,” McBain says. One of the examples he cites was the way the computer monitoring system for the make-up air allowed the plant to turn air on and off around the reduced shift schedule, thereby saving energy and money.

Like many other CIPEC Leaders, Ancast was able to draw on a legacy of energy efficiency planning as it weathered the recession. As far back as the early 1990s, the company had instituted a policy of buying only high-efficiency electric motors. By 1993, Ancast Industries had initiated capital equipment purchases and operating procedure changes that promoted energy efficiency throughout the company. New furnaces, purchased in 1995, delivered savings of 5 percent to 10 percent in electric energy consumption per tonne of metal melted. “Our earlier energy efficiency measures are more important now than ever,” McBain says.

McBain’s assessment reflects a consensus view among senior executives around the world. *Countdown to Copenhagen: Government, Business and the Battle Against Climate Change*, a report from the Economist Intelligence Unit, says that, in response to the global recession, “a greater emphasis on cost control will lead many firms to embrace the easy wins of energy efficiency.” The report includes a survey of more than 500 senior executives, 62 percent of whom say they have implemented programs to improve energy efficiency in the last two years.

Canada’s auto parts makers, among the hardest hit by the economic turmoil, exemplify this proactive approach to managing economic challenges with an increased focus on energy efficiency. “Right now any nickel you can save is a good thing for auto parts manufacturers. A lot of them are in survival mode,” says Peter Corbyn. He is managing an Automotive Parts Manufacturers’ Association initiative launched this year. It is designed to build energy management capacity and reduce energy costs. (The project is funded in part through CIPEC. For details see “Strength in unity” on page 22.)

ALTERNATIVE FUEL SOURCES FIRE UP ENERGY EFFICIENCY AT HOLCIM CANADA CEMENT PLANT

“We have been using alternative fuels like tires and telephone poles for years. We have expanded into plastics, and we are looking at asphalt shingles next. Not only do we get a cheaper energy source, but we are also helping Quebec divert waste from landfills.”

— **Luc Robitaille**

Corporate Director, Environment
Holcim (Canada) Inc.
Joliette, Quebec

In fact, most CIPEC members are better prepared to deal with economic challenges partly because they are already running energy-efficient operations. “We are still making money while other paper companies are losing money,” says Antoine Baril, who leads the Energy Action Group at Cascades and is based in Kingsey Falls, Quebec. Cascades produces, converts and markets packaging and tissue products composed mainly of recycled fibres. Cascades employs nearly 13,000 men and women in more than 100 modern, versatile operating units in North America and Europe.

The Energy Action Group works like a consulting group across Cascades' operations and offers different sections of the company turnkey solutions for energy efficiency. The group and its projects are financed by savings from energy efficiency gains. In 2008, Cascades saved almost \$4 million through energy efficiency measures. More traditional projects like implementing energy management information systems are complemented by innovative thinking. For example, employees must register with an automated carpooling system when planning to use a company vehicle for business travel.

CIPEC Leaders are also predisposed to exploiting new technology in their quest for bottom-line savings. Many of these technologies proved their worth this year as cost control was ramped up across the board.

INVESTMENT IN STATE-OF-THE-ART CONTROLS WINS CUSTOMERS FOR ABERFOYLE METAL TREATERS

“A whole new control system for our furnaces came on line last year and it's helping us save energy by managing furnace cycles better, producing better products and increasing customer satisfaction.”

As a result, this year we won a contract to supply heat-treated stainless steel billets that will be made into high grade re-bar for heavy construction projects in Dubai.”

— **Harry Hall**

President
Aberfoyle Metal Treaters
Guelph, Ontario

A gasification system at Tolko Industries' Heffley Creek Division plywood mill near Kamloops, British Columbia, came online in 2006. Since then it has saved the company about \$1.5 million in annual energy costs. Tolko partnered with Nexterra to develop the gasification system, which converts 13,000 tonnes per year of wood residue into a clean-burning, renewable biofuel called syngas. Natural Resources Canada provided financial support for the project.

"The gasification project is absolutely one of the things that keeps our cost structure in line in these times of low demand and low prices," says Brenda Roberts, Plant Manager at Heffley Creek. "We are also very proud that we have managed to keep all 200 people employed through the downturn. Energy efficiency is a big part of that."

WINTERIZING A MILL SENDS SAVINGS TO THE BOTTOM LINE AT BUILDING PRODUCTS MAKER LOUISIANA PACIFIC

"We winterized the finishing end of our mill so we could turn off our process ovens on down days. It should cut our winter heating bill by about \$100,000."

— **Jennifer Frotten**
Lean Six Sigma Black Belt
Louisiana Pacific
East River, Nova Scotia

Nexterra is signing up new customers for its gasification technology, despite the financing pressures in today's weak economy. "The industrial sector was a tough sell this year, but most of our customers expect energy prices to rise when the economy recovers. Interest in our technology is continuing to grow," says Jonathan Rhone, President and CEO of Nexterra.

In late 2008, a Kruger Products paper mill in New Westminster, B.C., selected Nexterra to provide a direct-fired boiler that runs on syngas. "Our New Westminster mill is in an urban area, so we needed the cleanest technology available. And in a challenging economic climate, we also needed the most cost-competitive," says Frank van Biesen, Vice-President, Technology, at Kruger.

Financial support like this is always welcomed, but its impact is magnified during economic downturns. "Of course, cost savings help your return on investment. When the economy is down, head office always asks us to cut costs," says Denis Fortier, a project engineer at Formica Canada in Saint-Jean-sur-Richelieu, Quebec. Formica is a global company with almost a century of experience designing and manufacturing all types of surfacing materials.

NECESSITY IS THE MOTHER OF INVENTION AT ESCO FOUNDRY

"Of course, we are always trying a range of different things to get more savings from our energy efficiency projects. But today it has taken on a new importance. One of our new ideas is to move to board ladle liners to eliminate the need to preheat brick-lined ladles with natural gas-fired heaters."

— **Bradley Robertson**
Environment and Energy Manager
Esco
Port Hope, Ontario

This year Formica received almost \$30,000 in funding from Natural Resources Canada as part of an ecoENERGY Retrofit incentive for small and medium-sized industry. Fortier and his team used it for an air compressor retrofit project costing \$240,000. The new compressors, combined with some heat recovery measures, will save the company about \$70,000 per year in energy costs.

CIPEC members also advanced the cause of energy efficiency by combining financial and non-financial support from Natural Resources Canada.

The Cement Association of Canada published a benchmarking study in 2009. “The cement industry slid into recession ahead of the broader economy, so it made the benchmarking exercise more challenging. But despite the costs and time involved, we saw the need to go forward with it. Energy accounts for 50 percent of our industry’s costs, so we can never afford to ignore energy efficiency,” says Martin Vroegh, Environment Manager with St. Marys Cement in Bowmanville, Ontario.

LIGHTING RETROFIT SAVES MONEY AND BOOSTS MORALE AT MASTER PACKAGING

“We got funding through CIPEC to switch from metal halide to T8 fluorescent. We expect to save \$200,000 within two years. We’re considering doing it next at our Borden location.”

— Mike Auffrey

Director of Operations
Master Packaging
Dieppe, New Brunswick

Vroegh is also a CIPEC cement sector task force representative. He added that the government–industry communication channels opened up by CIPEC enabled Natural Resources Canada to make a valuable contribution to the design of the benchmarking study. “Without government input, it would have been hard for individual companies to focus on the benchmarking exercise as quickly.”

CIPEC also contributed significantly to industry competitiveness by launching a number of process integration studies. One such study, commissioned by Shell Canada for its Scotford Upgrader, identified a number of energy-saving options for Alan Luck, Process Engineer at Shell Canada, and his team to pursue.

The company, a CIPEC Leader, took advantage of Natural Resources Canada’s Assessment Incentive to complement its 2007 strategic energy review, which examined general areas for energy improvement opportunities at the Shell Canada site. “The study provided a more comprehensive understanding of the real energy-saving opportunities left to exploit at the upgrader,” says Luck, who is based at the Scotford Upgrader near Fort Saskatchewan, Alberta.

Process integration studies conducted before the economic downturn also continue to pay dividends. Canadian Fertilizer, in Medicine Hat, Alberta, took part in a process integration study in 2006. “The study showed us how to best combine the latest technology in our operations so we can continue to maximize energy efficiency,” says Russ Holowachuk, Vice-President and General Manager of Canadian Fertilizers Limited. Over the years, investments in technology and process control have produced major improvements. In 2008, the company was recognized for “environmental excellence” by the Government of Alberta’s EnviroVista program.

The ingenuity of CIPEC Leaders was put on display, time and again, as energy managers and other staff grappled with the effects of the recession.

In the years to come, CIPEC Leaders will continue to apply the energy efficiency lessons learned in 2009 as they meet new challenges.



VIRTUAL APPROACH TARGETS REAL ENERGY EFFICIENCY

CIPEC Leaders benefit from computational fluid dynamics studies

Energy efficiency can be as simple as using a finger to flip a light switch or as complex as running computer simulations with millions of calculations. Computational fluid dynamics (CFD) lies at the complex end of the energy efficiency spectrum. This year CIPEC Leaders continued to draw on the cutting-edge solutions offered by CFD to make progress on energy efficiency.

“CFD is entering the mainstream of engineering,” says Larry Hackman, Senior Research Associate with Syncrude Canada in Edmonton. However, he adds that CFD studies still require teams staffed by people with postgraduate training. Hackman has over 25 years experience in the CFD field.

“CFD has really come into its own in the last three or four years. Before that we were somewhat limited by computing power,” Hackman says. To illustrate his point, Hackman notes that in 2003 it took a year to do what today can be completed in two weeks. Hackman expects CFD to advance by “another order of magnitude” in the next three years.

CFD STUDY INCENTIVE FOR CIPEC LEADERS

The CFD study incentive, available only to CIPEC Leaders, can help to defray the cost of hiring a technical firm to conduct a CFD study. Funding is available for up to 50 percent of the cost of a CFD study, to a maximum of \$30,000.

CFD STUDIES CAN BE USED TO

- IDENTIFY AND ASSESS THE MOST EFFECTIVE AND EFFICIENT ENERGY-SAVING OPPORTUNITIES IN A LARGE OR COMPLEX INDUSTRIAL PROCESS
- DESIGN A NEW PRODUCTION UNIT
- PRE-TEST NEW DESIGN CONCEPTS AND MODIFICATIONS BEFORE SELECTION AND CONSTRUCTION
- OPTIMIZE PERFORMANCE BY IDENTIFYING AND RESOLVING OPERATIONAL ISSUES
- REDUCE GREENHOUSE GAS EMISSIONS

LEARN MORE: WWW.OEE.NRCAN.GC.CA/INDUSTRIAL/FINANCIAL-ASSISTANCE/ASSESSMENT/CFD/DETAILS.CFM

Without CFD, researchers have to apply more expensive and cumbersome techniques such as field trials or build large-scale pilot plants to mimic industrial processes. Today, CFD still requires some work with pilot plants, but CFD is becoming more powerful all the time. “Typically, they are more powerful because, once they are validated with experiments, they can be used on a wide range of problems with similar physics,” Hackman says. CFD studies can also save money by avoiding shutdowns of key equipment.

One of the latest CFD projects involving a CIPEC Leader is a joint venture by NRCan’s CanmetENERGY and Shell Canada. Shell’s Montreal refinery, which conducted two earlier CFD studies with CanmetENERGY, wants to make a dozen heaters burn fuel more efficiently and at the same time ensure that nitrogen oxide emissions do not increase.

These vertical cylindrical heaters are fairly common, so any CFD-related advances Shell makes could have broader implications for other CIPEC Leaders. The CanmetENERGY team’s goal is to design combustion technologies that are generic enough to be adapted to different situations in a range of industry sectors. “When you’re burning fuel that you’re paying for, you want the heat to go to the product you’re making, no matter what it is. CFD can help us minimize the heat that is leaving the unit as exhaust,” says Allan Runstedtler, a research scientist at CanmetENERGY in Ottawa.

CFD’s ability to take companies into uncharted energy management territory, together with the advances ushered in by ever-faster computer processing power, have also combined to drive up interest.

As a research and development laboratory, CanmetENERGY is mandated to expand and improve CFD tools and to demonstrate their novel application to industrial processes.

“We’re constantly working to meet demand for CFD studies. But we can’t possibly meet all the demand,” Runstedtler says. “It’s really the right time for the private sector to deliver these studies to improve industrial energy efficiency.” The CFD study incentive is helping to promote private sector delivery of CFD to industry.

There is wide scope for CFD to bring about improvements. Most Canadian industrial furnaces and heaters are thermally inefficient, operating at an efficiency rate of less than 50 percent. These furnaces account for more than two thirds of greenhouse gas emissions from industry. CFD has the potential to help CIPEC Leaders make progress on both the efficiency and the emissions reduction front.

CFD SERVICE PROVIDERS NETWORK

Natural Resources Canada will develop a network of private sector CFD service providers by 2010. CIPEC members and other industry representatives who want to carry out CFD projects will be able to access this network to speed up tendering and project design.

Scientists use CFD to build virtual prototypes of large combustion units and study their energy efficiency. By means of computer-aided design, they then apply physics and chemistry to predict the real-world performance of the unit. They use powerful computer hardware and software for calculations and data visualization. CFD can also be used to design new production units and to pre-test new design concepts and modifications before construction begins. In addition, it can help to determine how to reduce greenhouse gas emissions from a specific industrial process.

Another important research focus involves using CFD to reduce refineries’ dependence on refinery fuel derived from crude oil. At least 90 percent of a typical refinery’s energy comes from crude oil. More efficient fuel combustion could deliver significant energy efficiency gains.

CFD studies and the funding incentive available exclusively to CIPEC Leaders are examples of how CIPEC continues to give its members access to the groundbreaking energy efficiency research and programs needed to drive energy efficiency gains in the years ahead.



Photo: Faimie Turriegan

LEAD YOUR ORGANIZATION TO A BETTER BOTTOM LINE

CIPEC Leaders deliver energy efficiency and financial gains

This year, 191 new organizations signed on as CIPEC Leaders. They join the almost 1800 members, from a wide range of industrial sectors, that have registered their commitment to energy-saving improvements with the Canadian Industry Program for Energy Conservation (CIPEC) — a voluntary, joint industry — Government of Canada partnership sponsored by Natural Resources Canada and supported by the Department's Industrial Programs Division.

CIPEC MEMBERSHIP BENEFITS

AS A CIPEC LEADER, YOUR COMPANY CAN BENEFIT FROM THE FOLLOWING:

FINANCIAL INCENTIVES

- ACCESS TO THE ECOENERGY RETROFIT INCENTIVE
- ELIGIBILITY FOR ECOENERGY ASSESSMENT INCENTIVES
- DISCOUNTS TO ATTEND NATURAL RESOURCES CANADA'S DOLLARS TO \$ENSE ENERGY MANAGEMENT WORKSHOPS

INFORMATION

- ACCESS TO NATURAL RESOURCES CANADA'S INDUSTRY OFFICERS, WHO CAN HELP YOU FIND WHAT YOU ARE LOOKING FOR
- ACCESS TO ON-SITE CUSTOMIZED WORKSHOPS

RECOGNITION

- A PLAQUE THAT YOUR COMPANY CAN PROUDLY DISPLAY
- INCLUSION OF YOUR COMPANY'S NAME ON NATURAL RESOURCES CANADA'S WEBSITE
- INCLUSION IN CIPEC'S ANNUAL REPORT
- A FEATURE STORY IN *HEADS UP CIPEC*, IF YOU WANT TO PUBLICIZE YOUR ENERGY EFFICIENCY SUCCESSES

This year 125 companies signed agreements with the Industrial Programs Division under the ecoENERGY Retrofit program, saving an estimated 455,000 gigajoules of energy annually and a corresponding amount in energy costs. This represents substantial progress over last year, which was a success in its own right.

Doug Dittburner, a CIPEC member since 2000, exemplifies CIPEC's commitment to energy efficiency.

"Focusing on energy efficiency makes a substantial difference to the bottom line — period," says Dittburner, Chief Engineer and Energy Team Leader at Molson. He also represents Canada's food and beverage sector on the CIPEC Task Force Council.

In more than eight years as part of CIPEC, Dittburner has been pursuing ways to boost energy efficiency — first in the production of hundreds of millions of tubs of margarine, for Unilever Canada, and later in the production of millions of litres of beer, for Molson. Beer and margarine may not have much in common, but for Dittburner everything comes down to energy efficiency.

"If you're not looking seriously at the cost of energy, you're making a big mistake," says Dittburner. "And focusing on energy efficiency also reduces our impact on natural resources, so we can ensure continued access to water, malted barley and hops for future production."

Dittburner's counterpart at Labatt agrees that focusing on energy efficiency is critical. "As Canadians, we didn't always value resources like energy and water, because they were so plentiful. But now we know it's unacceptable not to use energy and water wisely, and continuously look for ways to reduce usage," says Barry Elliott, Labatt's Manager of Utilities.

While these two CIPEC leaders do not agree on a favourite beer, their shared passion for using energy savings to enhance their company's bottom line means Canada's brewing giants are making the most of their CIPEC membership.

Labatt has used meters and energy software to make impressive progress on energy efficiency. Coupled with a targeting function based on historical information, the metering software can easily identify underperformance and pinpoint where remedial measures are most appropriate.

The combination of daily monitoring of energy consumption in each area and a solid energy management system for correcting problems and implementing best practices reduced total energy use across Canada by 18 percent and total water use by 30 percent between 2006 and 2008. This builds on earlier successes: Labatt reduced energy usage per unit of production by almost 25 percent in the 1990s.

Over the years, Labatt has received \$250,000 for several energy projects under Natural Resources Canada's ecoENERGY incentive programs for industry.

Today, Labatt's energy program continues to motivate employees. "Plant managers are always calling me to ask what the next step is. They are really focused on saving even more energy," Elliott says.

Similar enthusiasm grips the Molson team. Since installing an energy-metering system in 2004, the brewer has cut power consumption by 23 percent, natural gas by 38 percent and water by 34 percent.

"We believe our employees are the primary agents of change, and that's why we are continuing to educate them about the tangible impact of their contribution to making our world a healthier place. Many energy reduction measures have already been implemented at the suggestion of our employees," says Daniel Pelland, Chief Brewing Officer at Molson and a member of the company's senior management team. Molson is bolstering its commitment to sustainable development by focusing on increased employee awareness with the help of three initiatives: Défi Climat, Earth Hour and its second Energy Efficiency Week.

In 2008, Molson used an NRCan ecoENERGY for Industry Assessment Incentive and an incentive from natural gas giant Enbridge to conduct a process integration study. The study identified annual energy savings of \$1.8 million.

Process integration studies provide a holistic vision of energy use in large and complex industrial facilities. They provide target companies with an energy efficiency road map of short, medium and long-term strategies for achieving greater energy efficiency.

"CIPEC is working hand in hand with our vision. The information we have access to, the research and the incentives help us implement our vision for energy efficiency," Pelland says.

CIPEC also offers considerable opportunities to network with and learn from industry representatives from all parts of Canada.

"The CIPEC network is important to us. Labatt is a big company, and our small energy team needs to cover all the different energy-saving technologies out there. To share the experience of other people in the network is a huge plus," Elliott adds.

Many of these CIPEC Leaders represent small and medium-sized organizations. These entities have smaller energy teams, so CIPEC networking is a key advantage. These organizations also appreciate the access to information and other resources offered by CIPEC.

“We always crosscheck CIPEC information with our research before we make any decisions on energy efficiency,” says Barry Faulkner, Contract Administrator at Aberfoyle Metal Treaters. Aberfoyle caters to the heavy steel industry and employs a staff of 28 in Guelph, Ontario.

The company received \$46,000 in funding under the ecoENERGY Retrofit Incentive for Industry to retrofit the combustion burners on the company’s largest furnace. The project cost about \$250,000 and will save the company about \$100,000 in annual energy costs.

“These kinds of results are the best advertising we could possibly get for the ecoENERGY incentive programs,” says Michael Burke, Director of the Industrial Programs Division at NRCan’s Office of Energy Efficiency.

The Retrofit Incentive program, designed to help industry implement energy-efficient measures with financial incentives, will operate until March 2012, subject to the availability of funding. Burke is looking for another 500 or more projects from CIPEC Leaders across the country to help fund. He recommends that applicants try to “stack” funding from other sources such as utilities. Burke also encourages industry to bundle energy efficiency projects. A package of measures makes a better business case and is more likely to lead to bigger reductions in energy bills.

These kinds of bottom-line savings are more important than ever as Canadian industry weathers tough economic times. CIPEC Leaders have an inherent advantage when it comes to delivering energy savings to their company’s bottom line — and giving them a competitive edge in good times and bad.

JOIN CIPEC TODAY

Becoming a CIPEC Leader is easy. All you need to do is submit a letter confirming your company’s intention to implement energy-efficient measures and report on progress.

There is no cost to register as a CIPEC Leader.

LEARN MORE:

www.oeenrcan.gc.ca/industrial/opportunities/cipecleader



STRENGTH IN UNITY

Cooperation continues to define CIPEC's success in 2009

Cooperation between industry and government is embedded in CIPEC's operations. This spirit of cooperation continued to thrive in 2009 as CIPEC's support for industry initiatives went from strength to strength. Benchmarking studies, research projects and new partnerships between industrial sectors and government characterized much of the cooperation.

The number of current benchmarking studies grew this year with the addition of studies from the Cement Association of Canada, Canadian Manufacturers and Exporters and the forest research institute FPInnovations – Paprican Division. Since 2001, a total of 20 CIPEC sectors have benchmarked facilities, generating valuable data and spurring uptake of energy efficiency measures.

This year also saw NRCan's Industrial Programs Division — the division that supports CIPEC — invest in new industry partnerships. Two of the most prominent and high-profile new partnerships are with the Automotive Manufacturers' Association and with Partners in Project Green, which represents a growing community of businesses working together to green their bottom line by creating an internationally recognized eco-business zone around Toronto Pearson International Airport.

ENERGY BENCHMARKING: SPREADING BEST PRACTICES ACROSS CANADA'S INDUSTRIAL SECTORS

CIPEC offers a benchmarking and best practices program for Canada's industrial sectors. The program provides quantitative and qualitative indicators for companies to compare their energy use, greenhouse gas emissions and energy management practices with similar operations. These indicators come from collecting and analyzing energy-related data and energy management practices.

BENCHMARKING GUIDES AND PUBLICATIONS ARE AVAILABLE FOR THESE SECTORS:

- ALUMINUM
- AMMONIA
- BREWERY
- CEMENT
- CONSTRUCTION
- DAIRY
- FERTILIZER
- FOOD AND BEVERAGE
- FOUNDRY

- LIME
- MINING
- OIL SANDS
- PETROLEUM PRODUCTS
- PLASTICS
- PULP AND PAPER
- RUBBER
- STEEL
- TEXTILES
- TRANSPORTATION AND
MANUFACTURING
- WOOD PRODUCTS

To find out more about the CIPEC benchmarking initiative, including how to benchmark your facility, visit www.oee.nrcan.gc.ca/industrial/technical-info/benchmarking

The program is helping industry achieve significant energy efficiency gains. It is also helping CIPEC members remain competitive in today's tough global markets by giving Canadian companies a way to benchmark themselves against sector leaders at home and, in some cases, abroad.

"Our benchmarking study involved two of the world's leading cement experts. Each facility received its own confidential report along with a shared document that profiled the entire industry anonymously," says Bob Masterson, Director of Policy for the Cement Association of Canada.

In 2001, Canada's cement industry and CIPEC produced a benchmarking study that was well received by industry. The 2009 study builds on that success. "Our members showed great commitment to getting this job done. It represented more than 18 months of work and involved considerable effort by plant-level personnel, corporate

environment and energy managers and senior executives from the cement industry," Masterson says.

The benchmarking study, based on 75 criteria, offered three key findings. First, because of the significant quantity of energy consumed by cement kilns, the best way to capitalize on energy efficiency opportunities is to make improvements to the kiln process, however small they may be. Second, energy efficiency upgrades in electrically driven systems have the potential to generate substantial cost savings. Third, increasing the proportion of alternative, renewable and low-carbon energy sources can lead to significant reductions in greenhouse gas emissions.

The cement benchmarking study also illustrated one of the chief advantages of benchmarking — improving communication between government regulators and industry, across sectors and within companies. "Our members can talk to each other and be confident that everyone is using the same metrics — benchmarking makes it easier to compare apples to apples," Masterson says. He also points out that his association is sharing the benchmarking study with the U.S. cement industry.

The study's benchmarking tools allow cement plants to conduct regular self-assessments of energy performance. These assessments are consistent with internationally recognized quality management principles and best practices.

NRCan's Industrial Programs Division is also one of the partners supporting the Canadian Manufacturers and Exporters energy benchmarking study. The study is defining potential energy savings in the manufacturing sector and feeding into program development for the sector. Three hundred Ontario-based small, medium-sized and large companies from all manufacturing sectors filled out an online energy diagnostic tool by answering technical and management questions.

The companies received individual energy management benchmarking reports to help identify energy efficiency improvement opportunities. In all, 88 companies participated in an on-site benchmarking exercise. This two-day audit was conducted by senior energy professionals from a leading national engineering firm and provided companies with further insights into energy-saving opportunities.

The Industrial Programs Division has forged another strong partnership with FPInnovations–Paprican Division. They have collaborated on several benchmarking studies and energy efficiency guides. CIPEC members in the pulp and paper sector are now using the 2008 report, *Benchmarking Energy Use in Canadian Pulp and Paper Mills*.

To find out more about research projects and other technical information available through CIPEC, visit

www.oeenrncan.gc.ca/industrial/technical-information.cfm?attr=24

“One of the most important findings was showing where mills are using steam,” says Tom Browne, Program Manager for Mechanical Pulping at FPInnovations-Paprican and one of the authors of the study. The findings showed that managing steam use affects the cost of producing newsprint by up to \$70 per tonne of newsprint. “This is a significant difference when you consider it applies to a product that sells for about \$600 a tonne,” Browne points out.

FPInnovations-Paprican plans to update the study again in 2011 with another snapshot of how Canadian pulp and paper mills are progressing on energy efficiency. “We have to stay focused on continually improving energy efficiency, because the competition is. The Swedes, for example, are benchmarking energy use in every mill every five years,” Browne says.

RESEARCH PROJECTS: DELIVERING THE DATA CIPEC LEADERS NEED

CIPEC Leaders, representing a wide range of industrial sectors, are always looking for fresh data and ideas to improve energy efficiency. In addition to benchmarking studies, a range of smaller studies and projects are supported by CIPEC to help members. CIPEC’s support takes a variety of forms, from financial assistance for studies to provision of expertise.

Process integration (PI) studies are among the most powerful analytical tools funded by CIPEC. They go beyond conventional energy audits in that they are designed to optimize interactions between systems in industrial facilities that consume significant amounts of energy. Incentives are available for up to 50 percent of the cost of a process integration study, to a maximum of \$50,000.

“PI studies at ammonia facilities showed how and where energy efficiency can be optimized within a plant. They also verified the effectiveness of existing systems. Incorporating PI methodologies provides invaluable information to our members as they strive to improve performance continuously.” says Dave Finlayson, Vice President of Science and Risk Management at the Canadian Fertilizer Institute.

This year’s projects also included a collaborative venture between FPInnovations-Paprican, the world’s largest private, not-for-profit forest research institute, and CIPEC involving field-testing of off-road fuel efficiency in forestry vehicles. “CIPEC helped us focus what we were doing and make it more sophisticated. The parameters we’re using now, like fuel intensity, are more refined,” says Cameron Rittich, a researcher at FPInnovations. CIPEC also helped FPInnovations broaden the scope of the study, making it more long-term.

“CIPEC is more than just a silent partner for us. They have helped us get the study out to members through trade shows and other avenues,” says Jan Michaelsen, Program Leader for Energy and Emissions at FPInnovations.

ALLIANCES: BUILDING NETWORKS FOR CIPEC MEMBERS

CIPEC continued to widen its range of partnerships as well as formal and informal alliances. Under an agreement signed with the Automotive Parts Manufacturers' Association, CIPEC will be working with 24 Canadian auto parts makers and produce a suite of energy efficiency tools. "CIPEC is extremely supportive of what we're doing. They see the value of looking at innovative ways to approach energy efficiency in the industry," says Peter Corbyn, who is managing the project.

To find out more about leadership and networking opportunities through CIPEC, visit

www.oee.nrcan.gc.ca/industrial/leadership-networking.cfm?attr=24

The goal of the project is to reduce the energy costs and carbon footprint of the 24 participating companies by at least 5 percent by April 2010. It will also improve senior management's awareness of energy costs and greenhouse gas emissions in the industry. A total of 24 engineering students will be trained to implement effective energy management practices, thereby boosting human resource capacity. A centrepiece of the project will be an interactive website for participants to share information.

Partners in Project Green is another significant alliance benefiting from CIPEC support. Launched by the Toronto and Region Conservation Authority and the Greater Toronto Airports Authority, Partners in Project Green aims to help businesses surrounding Toronto Pearson International Airport reduce resource costs and operate in a green and more energy-effective manner.

The four founding municipal partners are Toronto, Peel, Brampton and Mississauga. Natural Resources Canada is providing funding from the ecoENERGY for Industry program delivered through CIPEC. The program is designed to improve industrial energy intensity and reduce energy-related industrial greenhouse gases and air pollution.

"By 2015 we want to reduce electricity consumption by 20 percent. The eco-business zone covered by Project Green consumes one twenty-sixth of all of Ontario's electricity, so 20 percent is a big number," says Chris Rickett, project manager for Partners in Project Green. The area uses about 6 million megawatt-hours of electricity annually.

This year also saw CIPEC help develop an energy management information system initiative. Launched by the Council of Energy Ministers (federal, provincial and territorial energy ministers), the initiative provides companies with the data and analysis needed to become more energy-efficient and meet an emerging international energy management standard. (For details see "ISO 50001: New energy management standard will have global impact" on page 26.) A pilot by Efficiency New Brunswick showed how best to link energy information with financial and emission-saving investment decisions.



ISO 50001: NEW ENERGY MANAGEMENT STANDARD WILL HAVE GLOBAL IMPACT

CIPEC brings industry voice to international negotiations

With a new global energy management standard on the way, CIPEC is ensuring that the voice of Canadian industry is being heard during negotiations. According to the International Organization for Standardization (ISO), ISO 50001 could influence up to 60 percent of the world's energy use. Scheduled for launch toward the end of 2010, ISO 50001 will establish an energy management framework for all types of organizations and companies.

Canadian delegates to the negotiations say this new voluntary energy management standard could quickly become a de facto requirement for businesses competing in today's globalized world.

"These kinds of standards are very much about trade. Imagine an auto company insisting that all its suppliers meet ISO 50001. The implications could cascade right down a supply chain," says Ron Morrison, head of the Canadian delegation to the ISO 50001 talks.

"Canadian industry representatives recognize a global energy management standard as a priority to enhance competitiveness."

ISO 50001 AT A GLANCE

- IS SCHEDULED FOR LAUNCH IN LATE 2010.
- STANDARDIZES ENERGY MANAGEMENT IN THE AREAS OF
 - ENERGY USE
 - PROCUREMENT OF ENERGY-USING EQUIPMENT AND SYSTEMS
- MEASURES CURRENT ENERGY USE
- INCLUDES A MEASUREMENT SYSTEM TO DOCUMENT, REPORT AND VALIDATE CONTINUOUS IMPROVEMENT IN ENERGY MANAGEMENT
- CAN PROVIDE DIRECTION FOR EMISSIONS REDUCTION PROJECTS

A GLOBAL STANDARD THAT MEANS BUSINESS

The idea that ISO 50001 may become an important "discriminator" in today's global, largely tariff-free international trade is not much of a stretch. Consider the impact of ISO 9001, the quality management standard, and ISO 14001, the environmental management standard. Together, these two standards are used by over one million organizations in 175 countries, and adoption rates are soaring in leading global trading nations like China.

"Having an international standard will mean we have a cornerstone document to get alignment across Canada. This is especially important for small and medium-sized businesses because it's often a challenge for them to implement energy efficiency programs," Morrison says.

Morrison is also on the CIPEC Executive Board and the board of directors of the Canadian Manufacturers and Exporters association. CIPEC is coordinating the efforts of a 22-member ISO 50001 advisory committee that includes representatives from industry, utilities, the federal government, provincial governments and academia.

CIPEC BRINGS CANADIAN INDUSTRY TO THE NEGOTIATING TABLE

“We are fortunate to have Ron Morrison as the head of the Canadian delegation because it guarantees an industry perspective is always at the table to complement the standards-setting process,” says Michael Burke, Director of the Industrial Programs Division with NRCan’s Office of Energy Efficiency and a member of the Canadian delegation. The talks involve 25 countries from all regions of the world and representatives of the United Nations Industrial Development Organization (UNIDO).

ISO 50001 comes at an opportune time for industry because it is filling a gap on the global energy efficiency scene. Several countries, such as Ireland and the United States, had begun developing and implementing their own standards. Without a unifying global standard, industry risks having to comply with a broad range of international rules and regulations.

Once ISO 50001 is launched, it will bring clarity and uniformity to energy management. Evidence of the growing need for a global standard can be seen in the pace of the negotiations. Typically, new ISO standards take upwards of five years before they see the light of day. ISO 50001 is on schedule to be launched in 2010 after less than three years of negotiations.

A SIMPLE, EFFECTIVE FRAMEWORK WITH CLEAR BENEFITS

The standard will be based on the continual improvement and “plan-do-check-act” approach used in ISO 9001 and ISO 14001. It is expected to provide organizations and companies with a widely accepted framework for integrating energy efficiency into their management practices.

“It will be a clear, user-friendly tool. We are working hard to eliminate any obstacles to the adoption of ISO 50001, especially for small and medium-sized enterprises. Things like paperwork and reporting requirements will be kept to a minimum,” says Morrison.

This emphasis on clarity and simplicity will help create transparency and facilitate communication on energy management between governments and the private sector. It should also promote energy management best practices and reinforce the value of good energy management. Companies adhering to the standard will make better use of existing energy-consuming assets, thereby reducing costs and possibly increasing their capacity.

Users will also benefit from a logical and consistent methodology for identifying and implementing ways to continually increase energy efficiency across facilities. Canadian companies operating in more than one country will be able to implement a single, harmonized standard across all their operations.

ISO 50001 will also include guidance on establishing baselines, measuring, and documenting and reporting energy management improvements. This in turn will help facilities evaluate and set priorities for the implementation of new energy-efficient technologies. The standard will also be useful for introducing energy management practices and tools to reduce emissions.

As the new standard is adopted, it will provide a shared framework for organizations to promote energy efficiency along the supply chain by encouraging suppliers to manage their energy use more efficiently.

CIPEC: INDUSTRY’S ALLY FOR IMPLEMENTING ISO 50001

Today’s hypercompetitive global market, combined with the challenges brought on by a global recession, means that industry cannot afford any missteps. In this environment, implementing ISO 50001 may be seen as a burden, especially for smaller companies. Yet with the right support, the new standard spells opportunity — an opportunity to increase energy efficiency, reduce costs and improve environmental performance.

“At CIPEC we know how to implement energy management programs. Things like performance measurement, baselines and best practices are what we are all about. Our members can begin to leverage CIPEC resources now to prepare to implement ISO 50001,” Burke says.



Photo: Raimie Turraigan

TRAINING IN THE FACE OF ECONOMIC ADVERSITY

CIPEC members remain committed to energy efficiency training

Helping companies cut costs and increase profits through energy efficiency training is a cornerstone of CIPEC's success. Since 1997, nearly 17,000 representatives of industrial, commercial and institutional organizations across Canada have enrolled in Dollars to \$ense energy management workshops offered by NRCan's Office of Energy Efficiency.

In the year ended March 31, 2009, some 760 representatives from industry attended Dollars to \$ense workshops across the country. This represents a decline over the previous year, as economic turbulence put pressure on training budgets. In some cases, it also jeopardized the ability of companies to repeat and reinforce the gains resulting from energy efficiency training. That being said, the news on the training front was still encouraging.

"Frankly, we were a little surprised at the uptake on our spring energy efficiency training, given the economic situation. But it validated our thinking that training is too important to be neglected," says Graham Knowles, a consultant with the Canadian Plastics Industry Association and the plastics sector representative on the CIPEC Task Force Council.

There were other bright spots too. "Many CIPEC Leaders stood apart and resisted the urge to forgo energy efficiency training in the interest of cost-cutting," says Stephen Dixon, Principal of TdS Dixon and a member of NRCan's Dollars to \$ense workshop team. He noted that some workshops boasted high attendance. CIPEC figures also show that many sessions across the country were sold out.

Stephen Dixon and Garth White conducted four customized CIPEC workshops on behalf of the Canadian Plastics Industry Association, which were also supported by the Ontario Power Authority. Participants also received the Guide to Energy Efficiency Opportunities in the Canadian Plastics Processing Industry, which was jointly prepared by the Association and CIPEC.

Both Dixon and White have over 20 years of experience in energy management. "Training is something that CIPEC Leaders take particularly seriously. It's a big component of their commitment to energy efficiency," Dixon points out. Industry representatives become CIPEC Leaders by registering their commitment to energy-saving improvements. There are now almost 1800 CIPEC Leaders drawn from a wide range of industrial sectors.

CIPEC Leader Marc-Antoine Joly, Maple Leaf Foods' Energy Manager in Mississauga, incorporates annual training sessions into his energy efficiency plans. But he acknowledges that it can be a tough sell when the economy slows down. "Training needs defending. It faces significant budgetary pressures during economic downturns. But for the effect it has, the payback is huge," Joly says.

CUSTOMIZED DOLLARS TO \$ENSE ENERGY MANAGEMENT WORKSHOPS MEETING SPECIFIC ENERGY EFFICIENCY NEEDS

CIPEC members continue to work with the Office of Energy Efficiency to customize workshops so that companies can learn how to reduce energy costs in good economic times and bad.

Depending on the selected workshop — whether it's **Spot the Energy Savings Opportunities, Energy Monitoring, Energy Master Plan, Energy Efficiency Financing** or a combination of these — CIPEC identifies the issues related to energy management and industry-specific requirements.

CIPEC also relies on input from sector representatives, draws on industry benchmarking studies, and conducts on-site consultations.

In this way, CIPEC can assemble specific resource material and customize a workshop targeting your particular circumstances.

Contributing to the customization of the Dollars to \$ense workshop shows CIPEC's commitment to offering needs-based, targeted services to our partners and members.

For more information on how to customize a workshop or for a list of scheduled workshops, contact your liaison at the CIPEC Secretariat or visit www.oeenrcan.gc.ca/industrial/training-awareness.

Across Canada, Maple Leaf Foods has saved more than \$76 million in energy costs since 2000. Joly credits the important role that training plays in reinforcing and capitalizing on energy efficiency gains: "Without training it's almost impossible to make substantial gains in energy efficiency."

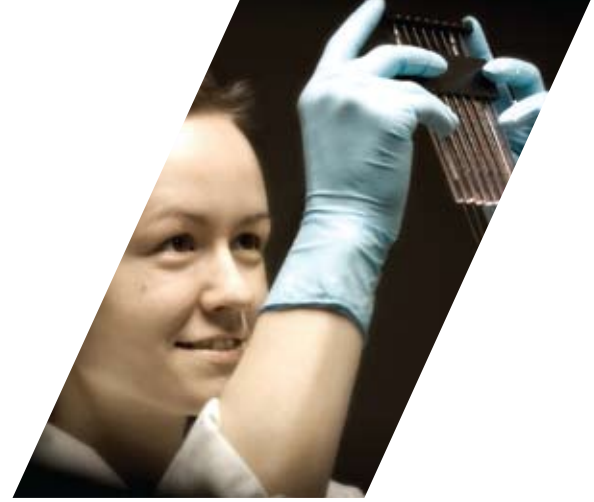
Saving money on energy costs is the most compelling argument for training. As a rule of thumb, Joly argues that \$1 invested in energy efficiency training can yield \$10 in savings. Of course, every situation is different, but Joly says the culture of best practices reinforced by training justifies the upfront investment.

To muster support for training budgets during downturns, advocates of energy efficiency training also cite one of the basic facts of business life: market share is won and lost during transitions. Well-trained staff play a key role in keeping a company competitive. They help preserve market share in declining markets and can help capture new markets as the economy rebounds.

Taking time out for energy efficiency training also enables employees to stand back from the day-to-day operation of the business and gain an understanding of the longer-term implications of energy management and its impact on the bottom line. If employees are given the time to train, they will identify new ways to save energy and reduce costs. Ironically, economic downturns can actually increase the opportunity to train. "When production slows down like we've seen this year and last year, it can free up staff to take advantage of training opportunities," Dixon says.

Ongoing training can also ensure that previous investments in energy efficiency are leveraged. Conversely, skipping training can mean losing corporate memory and forcing a company to retrain staff from scratch in the future. Repetition is one of the most important ingredients in successful training programs.

Training is also an investment in people. It reinforces the two-way commitment between staff and management in tough markets. It also demonstrates that employees are valued at a time when they may feel worried about job security. "People left our sessions pumped up. They had a handle on doing something constructive to make their company more competitive," Knowles says.



MOVE TO THE HEAD OF THE (TAX) CLASS

Deductions under Class 43.1 and Class 43.2 of the Income Tax Regulations encourage energy efficiency and renewable power

The accelerated capital cost allowance under Class 43.1 and Class 43.2 of the *Income Tax Regulations* makes investments in energy efficiency and renewable power financially more attractive for industry. Because the cost of an asset can be depreciated and deducted more quickly for income tax purposes, income taxes payable early in the life of the asset are reduced and more funds are available to invest in the asset.

Under Class 43.1, qualifying assets may be deducted at 30 percent per year. Under Class 43.2, qualifying assets acquired after February 22, 2005, and before 2012 may be deducted at 50 percent per year. In addition, some intangible costs incurred on projects where Class 43.1 or Class 43.2 assets are used may be eligible for a 100 percent deduction as “Canadian Renewable and Conservation Expenses” in the year they are incurred.

“Class 43.1 and Class 43.2 are an attractive proposition for many CIPEC members. In the pulp and paper industry, for example, it has enabled mills to make capital investments to make better use of bioenergy resources and lower their energy costs at the same time,” says Paul Lansbergen, Director of Energy, Economics and Climate Change for the Forest Products Association of Canada. Lansbergen is also a member of the CIPEC Task Force Council, representing the pulp and paper and wood products sectors.

CLASS 43.1 AND CLASS 43.2 ELIGIBILITY (SUBJECT TO DETAILED RULES IN INCOME TAX REGULATIONS)

- HIGH-EFFICIENCY COGENERATION
- WIND POWER
- SMALL HYDROELECTRIC
- FUEL CELLS
- PHOTOVOLTAICS
- WAVE AND TIDAL POWER
- ELECTRICITY FROM GEOTHERMAL
- ELECTRICITY FROM CERTAIN WASTE SOURCES
- ACTIVE SOLAR
- DISTRICT HEATING THAT USES COGENERATION
- HEAT FOR AN INDUSTRIAL PROCESS FROM CERTAIN WASTE SOURCES
- HEAT RECOVERY USED IN ELECTRICITY GENERATION AND INDUSTRIAL PROCESSES
- LANDFILL GAS OR DIGESTER GAS
- CONVERSION OF BIOMASS INTO BIO-OIL

- BIOGAS FROM ANAEROBIC DIGESTION
- GROUND SOURCE HEAT

LEARN MORE:

FOR TECHNICAL INFORMATION ON CLASS 43.1, CLASS 43.2 AND CANADIAN RENEWABLE AND CONSERVATION EXPENSES, PLEASE ORDER THE FREE GUIDE ENTITLED *CLASS 43.1 TECHNICAL GUIDE AND TECHNICAL GUIDE TO CANADIAN RENEWABLE AND CONSERVATION EXPENSES* FROM THE CLASS 43.1/43.2

SECRETARIAT: TOM.JEWETT@NRCAN-RNCAN.GC.CA / 613-996-0890.

ELIGIBILITY CRITERIA

The eligibility criteria are described in the *Class 43.1 Technical Guide and Technical Guide to Canadian Renewable and Conservation Expenses*, available from Natural Resources Canada.

The eligibility criteria for Class 43.1 and Class 43.2 are generally the same. However, cogeneration systems that use fossil fuels must meet a higher efficiency standard for Class 43.2. Cogeneration systems that meet only the lower efficiency standard set out in Class 43.1 continue to be eligible for Class 43.1.

EXPANDING ELIGIBILITY

The Department of Finance Canada is working to enact amendments announced in Budget 2007 and Budget 2008 to broaden eligibility criteria for the accelerated capital cost allowance for clean energy generation equipment. The Department is also reviewing other potential tax measures to encourage environmentally friendly investment. For instance, Budget 2009 announced consultations with stakeholders to identify specific assets used in carbon capture and storage with a view to making them eligible for the accelerated capital cost allowance.

CANADIAN RENEWABLE AND CONSERVATION EXPENSES

The early phase of renewable energy and energy efficiency projects usually involves intangible costs like fees for feasibility studies. Many of these intangible costs are covered under the category of Canadian

Renewable and Conservation Expenses. These expenses are 100 percent deductible in the year they are incurred. Deductions can be carried forward indefinitely for use in later years, or they can be ceded to shareholders through flow-through share agreements.

CLASS 29 FOR MANUFACTURING AND PROCESSING MACHINERY AND EQUIPMENT

For a limited time, industries that invest in manufacturing and processing equipment may take advantage of Class 29 in Schedule II of the *Income Tax Regulations*. It provides a 50 percent straight-line accelerated capital cost allowance (CCA) for certain manufacturing and processing equipment.

Historically, machinery and equipment used primarily in Canada for manufacturing or processing goods for sale or lease were included in Class 43 and were eligible for a 30 percent declining-balance CCA rate. Budget 2007 proposed a temporary incentive for eligible machinery and equipment acquired on or after March 19, 2007, and before 2009 that are used primarily in such manufacturing or processing activity. Under regulations proposed to implement this incentive, machinery and equipment eligible for the temporary incentive are included in Class 29.

Budget 2008 proposed to extend accelerated CCA treatment for investment in the manufacturing and processing sector for three additional years. This included a one-year extension of the 50 percent straight-line accelerated CCA rate for eligible assets acquired after March 18, 2007, and before 2010 (instead of before 2009), followed by accelerated CCA treatment on a declining basis for eligible assets acquired in 2010 and 2011.

Budget 2009 proposed that, in lieu of the accelerated CCA on a declining basis for eligible assets acquired in 2010 and 2011, the 50-percent straight-line accelerated CCA treatment applies. The half-year rule, which generally allows half the CCA write-off otherwise available in the year the asset is first available for use by the taxpayer, will apply to the properties that are subject to this measure.

**ENERGY EFFICIENCY
PROGRAMS AND
SERVICES TO MEET
INDUSTRY NEEDS**



Natural Resources Canada offers several energy efficiency and renewable energy programs and services to meet the needs of Canadian industry. This section summarizes what is available and tells the reader where to find more information.

NETWORKING OPPORTUNITIES

- **Canadian Industry Program for Energy Conservation.**

FINANCIAL SUPPORT

- **ecoENERGY Retrofit — Small and Medium-Sized Organizations**
- **ecoENERGY for Industry — Assessment Incentive**
- **Tax incentives — Classes 43.1 and Class 43.2 and Canadian Renewable and Conservation Expenses (CRCE) Tax Incentives Program**

EMPLOYEE-TRAINING ASSISTANCE

- **Dollars to \$ense energy management workshops**

TECHNICAL SUPPORT

- **Canadian Industry Program for Energy Conservation**

CANADIAN INDUSTRY PROGRAM FOR ENERGY CONSERVATION (CIPEC)

CIPEC is a voluntary industry-government partnership that promotes energy efficiency improvements and reductions in greenhouse gas emissions across Canada's industrial sectors. CIPEC, which is funded under the ecoENERGY for Industry initiative, comprises 26 sector taskforces involving over 50 trade associations. (For more information, including how to join CIPEC, see page 21.)

ECOENERGY RETROFIT — SMALL AND MEDIUM-SIZED ORGANIZATIONS

Small and medium-sized industrial facilities (fewer than 500 employees) that are considering energy efficiency improvements can benefit from the ecoENERGY Retrofit Incentive. The program covers up to 25 percent of project costs, to a maximum of \$50,000 per application and \$250,000 per corporate entity.

The incentive helps companies overcome financial barriers to energy efficiency retrofits. It applies to energy-saving projects that modify or upgrade existing industrial buildings, equipment, systems and processes.

Fax: 613-992-3161
info.ind@nrcan-rncan.gc.ca
www.oeenrcan.gc.ca/industrial/financial-assistance/retrofit/index.cfm

ECOENERGY FOR INDUSTRY — ASSESSMENT INCENTIVE

NRCan offers a financial incentive to help industrial companies conduct process integration (PI) and computational fluid dynamics (CFD) studies that go beyond conventional energy audits.

PI studies focus on the efficiency of overall plant processes and systems and their interactions, while CFD studies simulate process flows and reactions to improve the efficiency of specific processes and systems.

The ecoENERGY Assessment Incentive covers up to 50 percent of the cost of a PI or CFD study, to a maximum of \$50,000 for the former or \$30,000 for the latter. The Incentive can be used to help defray the cost of hiring technical experts to identify and assess the most effective and efficient energy-saving opportunities in a large or moderately complex industrial process. These include the design of new production units and modifications to existing facilities.

Fax: 613-992-3161
info.ind@nrcan-rncan.gc.ca
www.oeenrcan.gc.ca/industrial/financial-assistance/assessment/

CLASSES 43.1, 43.2 AND 29 AND CRCE TAX INCENTIVES

Canadian tax law now makes energy-efficient systems and alternative energy sources, such as solar, wind and biofuels, more fiscally attractive for industry.

Under classes 43.1 and 43.2 of the *Income Tax Regulations*, certain capital expenditures on systems that produce heat and/or electric power efficiently from fossil fuels or from alternative renewable energy sources are eligible for accelerated capital cost write-offs, at 30 percent and 50 percent respectively on a declining balance basis.

For a limited time, companies which invest in manufacturing and processing equipment may take advantage of Class 29 in Schedule II of the *Income Tax Regulations*. It provides a 50 percent straight-line accelerated capital cost allowance for certain manufacturing and processing equipment.

Without these accelerated write-offs, many of these assets would be depreciated at annual rates of only 4, 6, 8 or 20 percent. NRCan is the technical authority for classes 43.1 and 43.2.

In addition to the Class 43.1 or Class 43.2 capital cost allowance, the *Income Tax Regulations* allow expenses incurred during the development and startup of renewable energy and energy conservation projects (i.e. Canadian Renewable and Conservation Expenses [CRCE]) to be fully deducted or financed through flow-through shares.

To qualify as CRCE, expenses must be incurred for a project for which it is reasonable to expect at least 50 percent of the capital costs incurred would be for equipment described in Class 43.1 or 43.2.

Tel.: 613-996-0890

www.oeo.nrcan.gc.ca/industrial/financial-assistance/tax-incentives.cfm

DOLLARS TO \$ENSE ENERGY MANAGEMENT WORKSHOPS

Hundreds of organizations have cut operating costs by adopting energy-saving practices offered through NRCan's Dollars to \$ense workshops. The workshops are facilitated by leading energy efficiency experts. They give owners, managers and operators of industrial facilities a competitive edge in managing energy costs in their operations.

There are four full-day Dollars to \$ense workshops:

- **Energy Master Plan** outlines the benefits of creating and integrating an action plan in an organization.
- **Spot the Energy Savings Opportunities** shows participants how to identify, and capitalize on, immediate savings opportunities through practical exercises and hands-on demonstrations.
- **Energy Monitoring** shows companies how to measure and analyze energy use.
- **Energy Efficiency Financing** improves awareness of, and skills in, obtaining financing for energy efficiency projects.

The workshops can also be customized to meet the needs of industrial sector organizations and companies. Professional instructors will consult with company representatives to identify specific requirements and then assemble the relevant information and resource materials for the target audience.

Register online by visiting the website below or contact NRCan to find out more about workshop customization.

Tel.: 613-996-6585

Fax: 613-943-5380

innov.gen@nrcan-rncan.gc.ca

www.oeo.nrcan.gc.ca/industrial/training-awareness

ENERGY BENCHMARKING AND BEST PRACTICES

CIPEC offers a benchmarking and best practices program for Canada's industrial sectors. The program provides quantitative and qualitative indicators for companies to compare their energy use and energy management practices with similar operations. The indicators are based on the collection and analysis of energy-related data and energy management practices. The program is designed to help industry achieve significant energy efficiency gains.

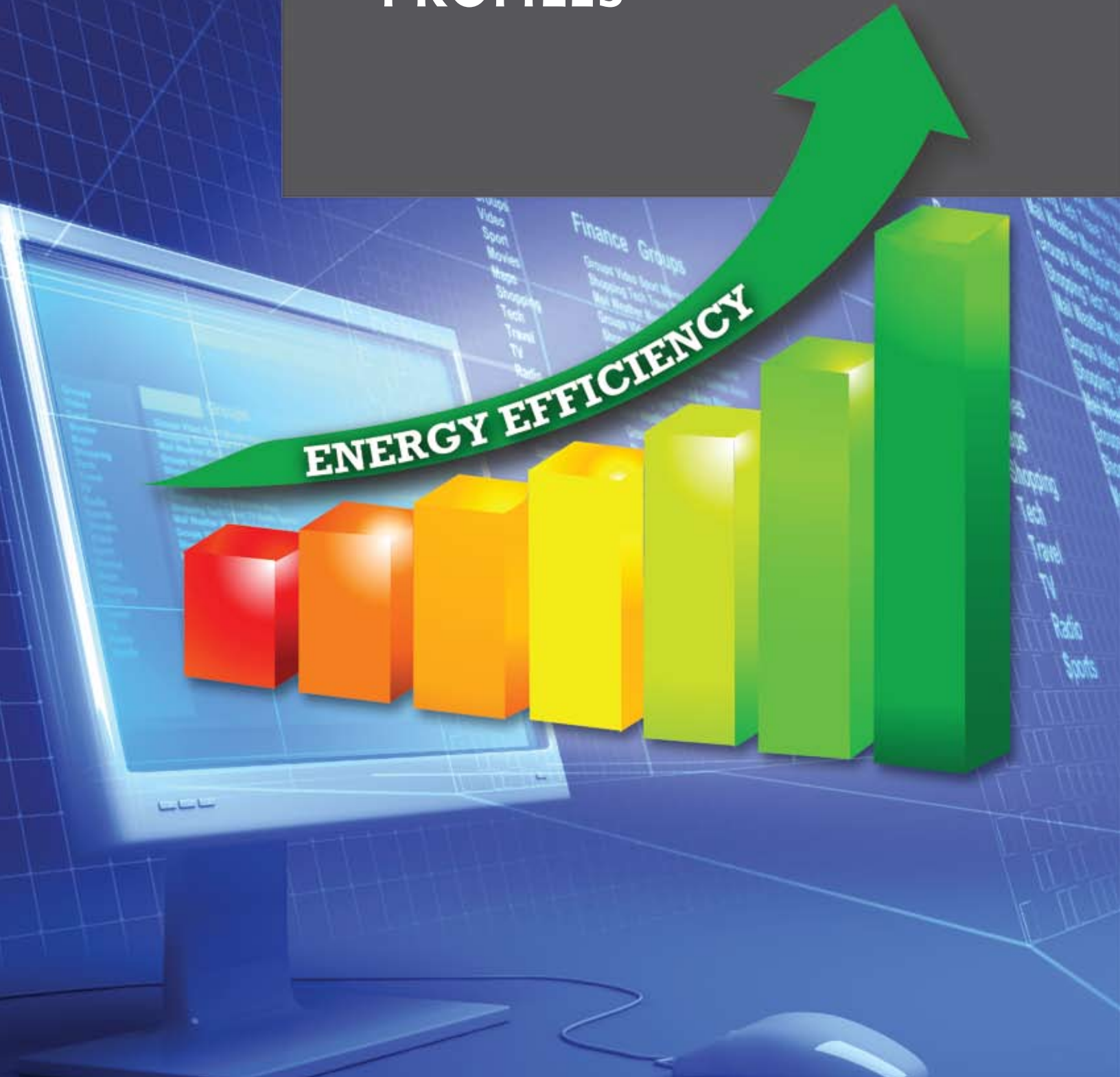
Tel: 613-996-6891

Fax: 613-992-3161

Cipec.peeic@nrcan-rncan.gc.ca

www.oeo.nrcan.gc.ca/industrial/technical-info/benchmarking

INDUSTRY SECTOR PROFILES



ENERGY IMPACTS THE BOTTOM LINE

Accurate measurement and meaningful data are fundamental to measuring energy improvements. Data used in this report are collected primarily by Statistics Canada, with funding from Natural Resources Canada (NRCan) and Environment Canada, and supplemented by information from associations participating in the Canadian Industry Program for Energy Conservation (CIPEC) as well as other government bodies.

Statistics Canada data are collected through the annual Industrial Consumption of Energy Survey, which covers approximately 4,300 establishments in the manufacturing sector. The survey gathers information by establishment on energy fuel consumption in natural units for 13 fuel types in 87 manufacturing industries. Survey results are used to track energy efficiency improvements, calculate carbon dioxide emissions and inform the public about energy conservation.

In its continuing efforts to make it easier for companies to respond to the survey, Statistics Canada began streamlining the questionnaire and the data collection process in data reference year 2004. These changes include standardizing some special industry questionnaires, making provisions for respondents to explain major changes in energy consumption to minimize follow-up enquiries, and converting fuels to a standard unit of measure.

Data analysis and interpretation involve the collective effort of NRCan's Office of Energy Efficiency (OEE), CIPEC trade associations and the Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC) at Simon Fraser University in Burnaby, British Columbia. CIEEDAC then produces energy intensity indicators for each sector based on production and gross domestic product. Primary funding for CIEEDAC comes from the OEE, with additional contributions from industry associations that participate in CIPEC and from the provinces of Quebec and British Columbia.

Much of the data is available on-line. Statistics Canada data are published in CANSIM table 128-0005—Energy fuel consumption of manufacturing industries in natural units, by North American Industry Classification System (NAICS) and table 128-0006—Energy fuel consumption of manufacturing industries in gigajoules, by North American Industry Classification System (NAICS).

The link to Statistics Canada is cansim2.statcan.ca

The OEE publishes Energy Efficiency Trends in Canada on an annual basis at: oee.nrcan.gc.ca/corporate/statistics/neud/dpa/data_e/publications.cfm

Data from CIEEDAC is available at: www.cieedac.sfu.ca/CIEEDACweb/mod.php?mod=userpage&menu=16&page_id=9

ALUMINUM

Profile // Canada's aluminum sector is a world leader in aluminum production. The combined output of the industry's plants in the provinces of Quebec and British Columbia makes a major contribution to Canada's national and local economies.

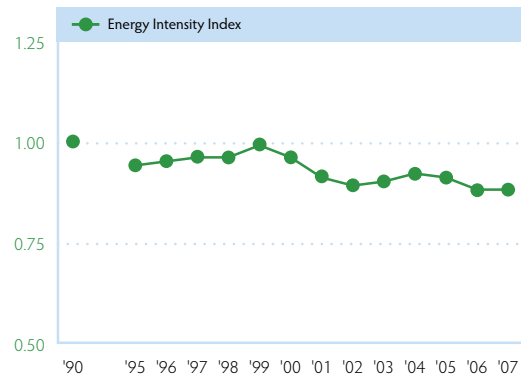


HIGHLIGHTS

- Energy intensity in the aluminum sector remained virtually unchanged in 2007, as both production and consumption of energy increased marginally by almost the same amount.
- Electricity is the source of choice for energy in the aluminum sector at 91 percent, followed by natural gas at 5 percent.

Aluminum Sector – NAICS 331313

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

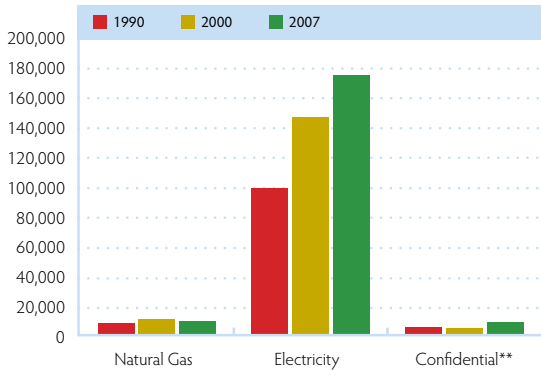


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008
Production - Natural Resources Canada, *Production of Canada's Leading Minerals* December 2008.

Aluminum Sector – NAICS 331313

Energy Sources in Terajoules per year (TJ/yr)



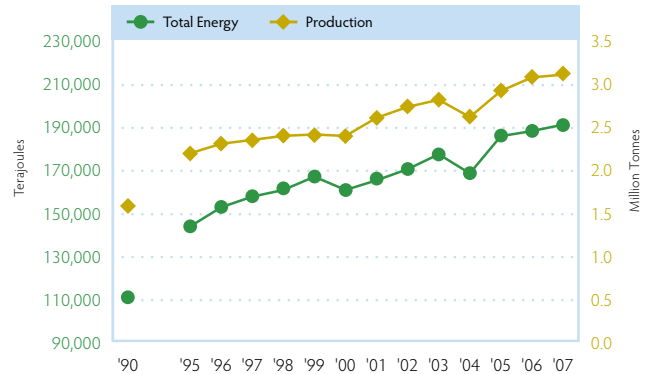
** Confidential includes: Heavy Fuel Oil (HFO), Middle Distillates (LFO) and Propane (LPG)

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.

Aluminum Sector – NAICS 331313

Total Energy and Production (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008
Production - Natural Resources Canada, *Production of Canada's Leading Minerals* December 2008

BREWERY

Profile // The Canadian brewing industry prides itself on its world-class beers, its leadership in educating consumers to drink responsibly, its three-century history in Canada, its diversity and its impressive environmental record.

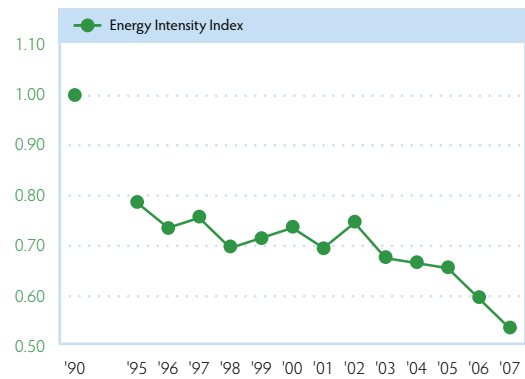
HIGHLIGHTS

- In 2007, the brewery sector energy consumption was almost half of what it was in 1990.
- The sector reduced its energy use from 7,804 TJs in 1990 to the current 4,403 TJs, while increasing production by over 1 million hectolitres.
- This translates into a remarkable gain in energy intensity, from 0.346 GJ/hectolitre in 1990 to 0.184 in 2007.
- The brewery sector reduced its energy consumption by 9 percent in 2007 over that of 2006.

Brewery Sector – NAICS 31212

Energy Intensity Index (1990 – 2007)

Base Year 1990 = 1.00

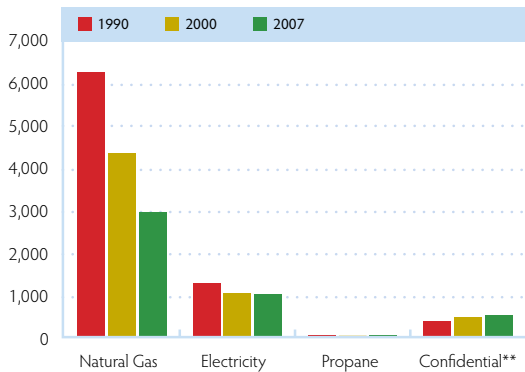


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008
 Production - Brewers Association of Canada, Ottawa, October 2008.

Brewery Sector – NAICS 31212

Energy Sources in Terajoules per year (TJ/yr)



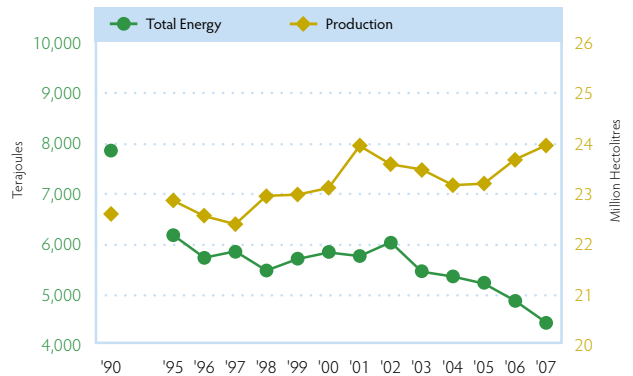
**Confidential includes: Heavy Fuel Oil (HFO), Middle Distillates (LPO)

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.

Brewery Sector – NAICS 31212

Total Energy and Production Output (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008
 Production - Brewers Association of Canada, Ottawa, October 2008.

CEMENT

Profile // The cement industry is the cornerstone of Canada's domestic construction industries and significant exporter that contributes substantially to the country's balance of payments. Cement is the active component in the manufacture of concrete, comprising 10 to 15 percent of finished concrete products. Concrete is the second most consumed product next to water.

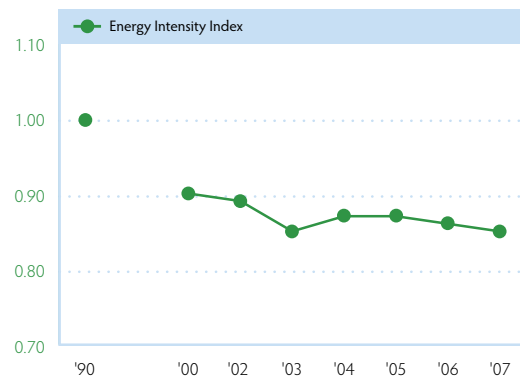


HIGHLIGHTS

- Energy intensity in the cement industry has shown a downward turn after the highs in early 2000.
- The decline in energy intensity that started in 2005 continued in 2007, primarily due to reduced energy use despite a decline in production of cementitious production.
- Heat consumption of kilns remain the largest source for energy consumption in this sector.

Cement Sector – NAICS 327310

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

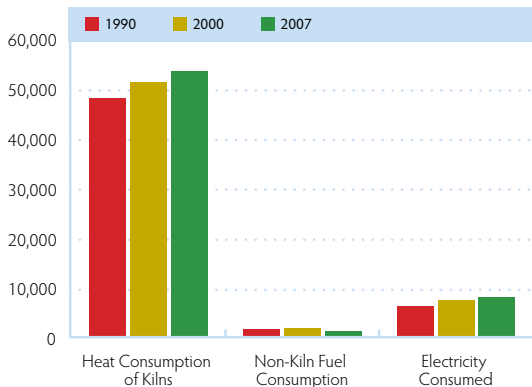


Data Sources

Fuel Consumption and Cementitious Production - *Portland Cement Association (PCA) Spring 2009.*

Cement Sector – NAICS 327310

Energy Sources in Terajoules per year (TJ/yr)

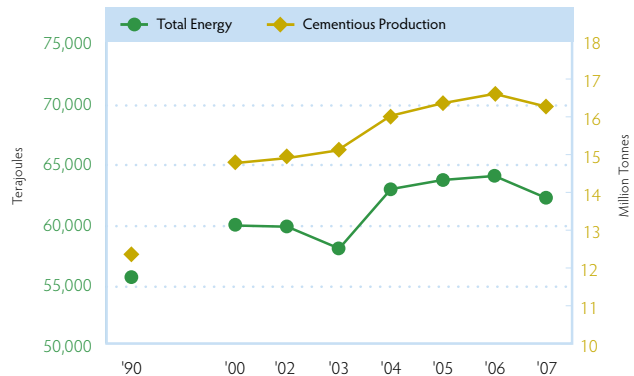


Data Sources

Fuel Consumption and Cementitious Production - *Portland Cement Association (PCA) Spring 2009.*

Cement Sector – NAICS 327310

Total Energy and Consumption and Production Output (1990 – 2007)



Data Sources

Fuel Consumption and Cementitious Production - *Portland Cement Association (PCA) Spring 2009.*

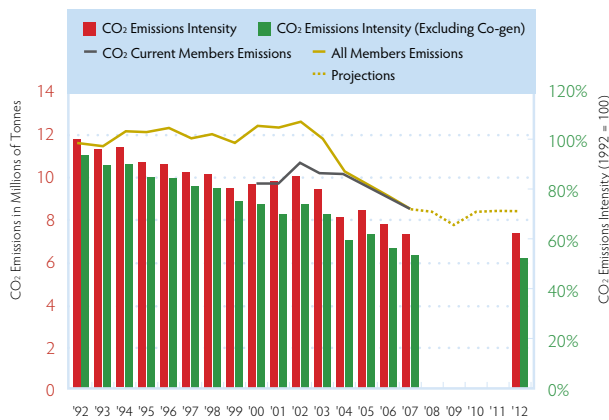
CHEMICAL

Profile // The chemical sector encompasses a diverse industry that produces organic and inorganic chemicals, plastics and synthetic resins. The Canadian Chemical Producers' Association (CCPA) is the trade association that represents manufacturers in this sector. Its member companies produce the majority of industrial chemicals manufactured in Canada.

HIGHLIGHTS

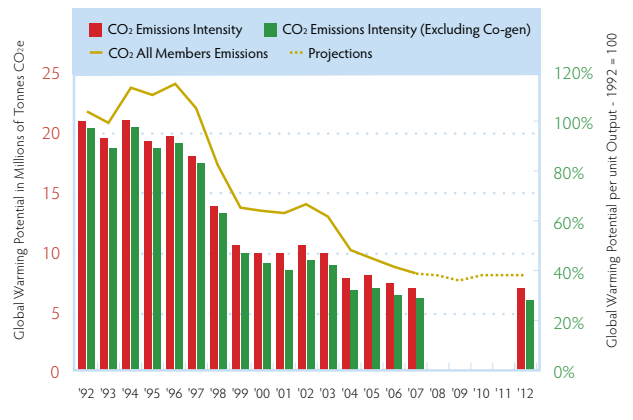
- The chemical sector's product output has increased by 39 percent from 1992 to 2007.
- During the same time period, total CO₂ emissions from CCPA members have decreased by 30 percent.
- In terms of global warming potential, member companies' GHG emissions – millions of tonnes of CO₂e emissions — have declined by 63 percent in 2007 compared to 1992 amounts.

Chemical Sector – NAICS 331313



Data Source
CCPA Reducing Emissions, 2008

Chemical Sector – NAICS 331313



Data Source
CCPA Reducing Emissions, 2008

CONSTRUCTION

Profile // The construction sector is Canada's largest industry, composed of a diverse array of companies whose work touches every economic sector and region of the country.

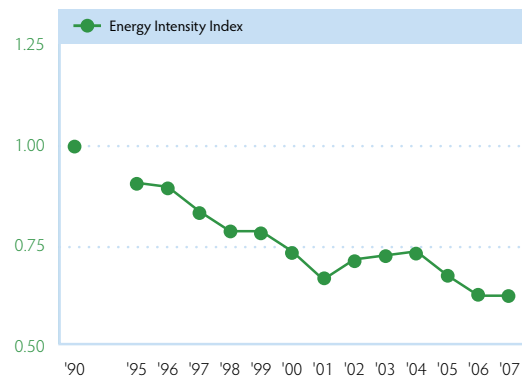


HIGHLIGHTS

- The energy intensity in the construction sector remained virtually unchanged in 2007 over 2006, as the 2.8 percent increase in energy consumed was more than offset by a 3.8 percent increase in the gross domestic product of this sector.
- Use of propane in the sector increased by 65 percent, although propane comprises only 7 percent of the total fuel use. Middle distillates was the other fuel category that showed a marginal increase of 1.9 percent in 2007 over 2006.
- The construction sector uses less energy than it did in 1990, by as much as 7 percent.

Construction Sector – NAICS 23

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

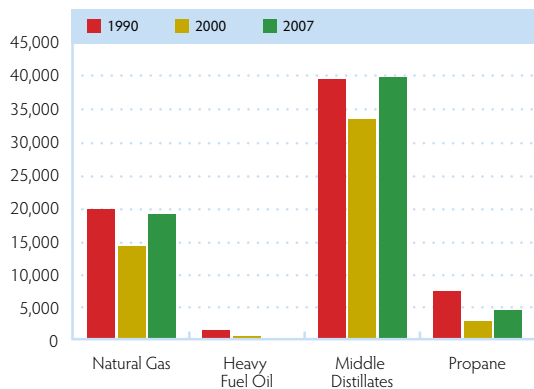


Data Sources

Energy Use - Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). *Development of Energy Intensity Indicators for Canadian Industry 1990 – 2007*. Simon Fraser University, March 2009.
Output - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Construction Sector – NAICS 23

Energy Sources in Terajoules per year (TJ/yr)

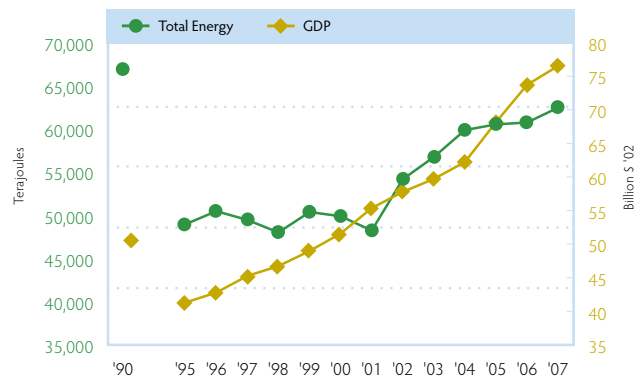


Data Sources

Energy Use - Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). *Development of Energy Intensity Indicators for Canadian Industry 1990 – 2007*. Simon Fraser University, March 2009.

Construction Sector – NAICS 23

Total Energy and Economic Output (1990 – 2007)



Data Sources

Energy Use - Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). *Development of Energy Intensity Indicators for Canadian Industry 1990 – 2007*. Simon Fraser University, March 2009.
Output - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

DAIRY

Profile // Canada's dairy product processing sector operates facilities and employs people across the country.

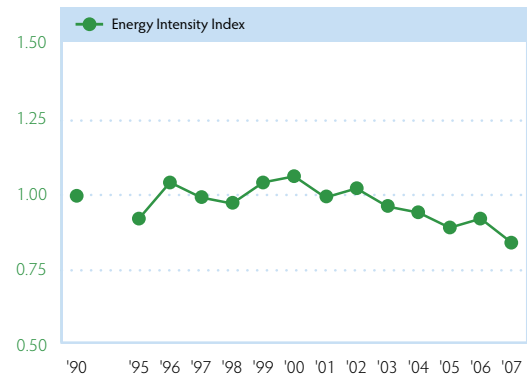


HIGHLIGHTS

- Energy consumption in the dairy sector declined in 2007 to 10,085 TJs, from 10,844 in 2006, a 7 percent drop.
- Production in the sector increased to 75.93 million hectolitres, from 74.30 million hectolitres in 2006, an increase of 2 percent.
- The two above favourable changes reduced overall energy intensity in the dairy sector by 9 percent; from 1.46 to 1.33.

Dairy Sector – NAICS 3115

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

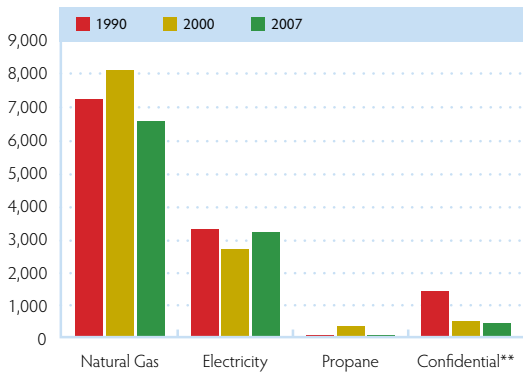


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008
Production - Stats Can Report 23-001, *The Dairy Review*, August 2008 and Stats Can Report 23-014, *Dairy Statistics 2007*, February 2009.

Dairy Sector – NAICS 3115

Energy Sources in Terajoules per year (TJ/yr)



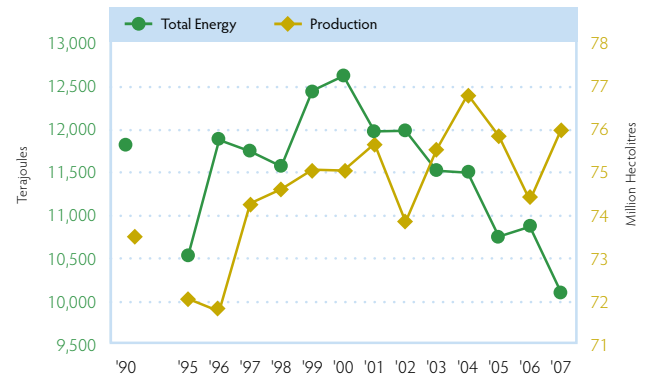
**Confidential includes: Heavy Fuel Oil (HFO), Middle Distillates (LPO)

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.

Dairy Sector – NAICS 3115

Total Energy and Production (1990 – 2007)

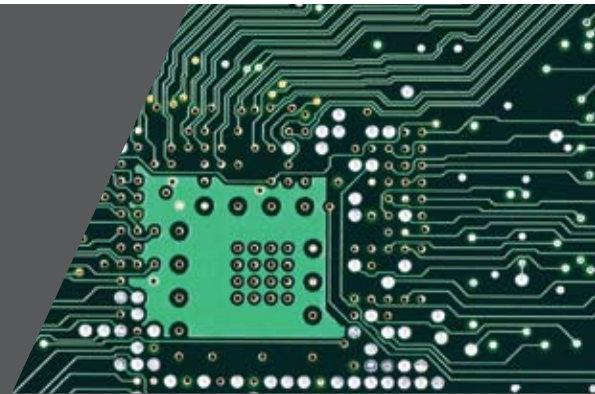


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008
Production - Stats Can Report 23-001, *The Dairy Review*, August 2008 and Stats Can Report 23-014, *Dairy Statistics 2007*, February 2009.

ELECTRICAL & ELECTRONICS

Profile // The electrical and electronics sector includes companies that produce electrical appliances, lighting, consumer electronics, communications and electronic equipment, cabling, office equipment, industrial equipment and other electrical products. The industry is a major exporter and a growing contributor to the national economy.

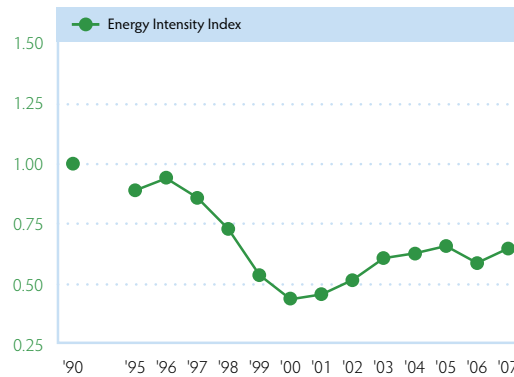


HIGHLIGHTS

- The increased usage of electricity, in the electrical and electronics sector, caused an increase in the energy intensity.
- The energy intensity index in this sector increased by 10 percent, due primarily to the increase in electricity used as a fuel to 13,436 TJs in 2007, from 11,767 TJs in 2006 (a 14 percent increase).
- The associated increase in Gross Domestic Product by 3 percent, somewhat mitigated the effects of the surge in electricity usage; therefore, the corresponding increase energy intensity index was limited to only 10 percent.

Electrical and Electronics Sector – NAICS 334, 335

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

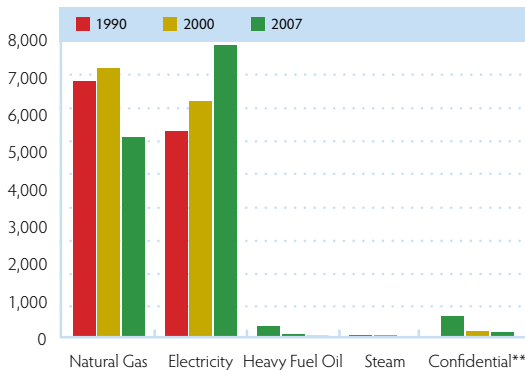


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.
Output - GDP: Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Electrical and Electronics Sector – NAICS 334, 335

Energy Sources in Terajoules per year (TJ/yr)



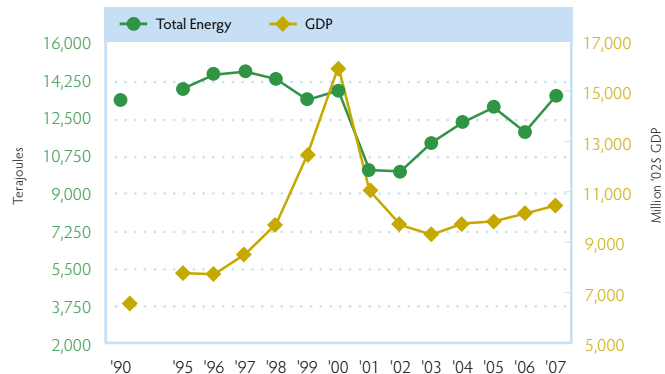
** Confidential includes: Middle Distillates (LFO), Propane, LPG and Wood Waste

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.

Electrical and Electronics Sector – NAICS 334, 335

Total Energy and Economic Output (1990 – 2007)



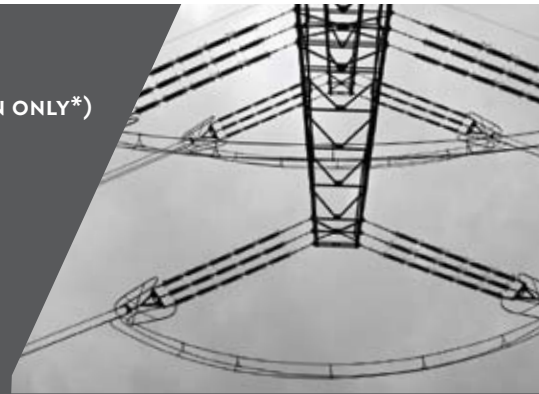
Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.
Output - GDP: Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

ELECTRICITY GENERATION (UTILITY GENERATION ONLY*)

Profile // Electricity is a major driver of the Canadian economy. Approximately one-quarter of the energy used by Canadians is electricity, and there is no substitute in most applications. Canadians use the electricity generated in residential, commercial, industrial and utility sectors.

* This sector excludes industrial electricity generation.

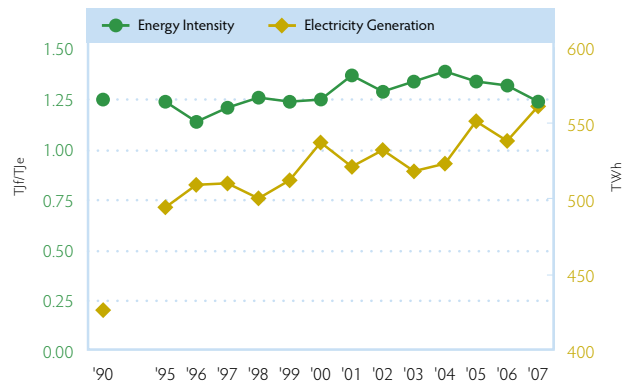


HIGHLIGHTS

- The energy intensity in the electrical generation sector improved by 6 percent in 2007 over 2006, despite an increase in total electricity generation.
- The improvement in 2007 over 2006 is attributable to an increasing use of hydroelectric power as a fuel source, relative to fossil fuels and nuclear fuel.
- Total green house gas emissions from fossil fuels declined, despite a small increase in the use of fossil fuels as a source of fuel; the reduction is directly attributable to the increase in the share of hydroelectric energy as a fuel source.

Electricity Generation Sector – NAICS 22111

Utility Production and Energy Intensity (1990 – 2007)

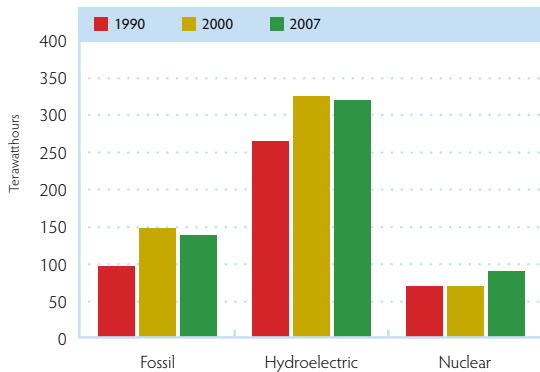


Data Source

Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). A Review of Energy Consumption and Production Data: Canadian Electricity Generation Industry 1990 – 2007. March 2009.

Electricity Generation Sector – NAICS 22111

Utility Generation Sources (1990, 2000, 2007)

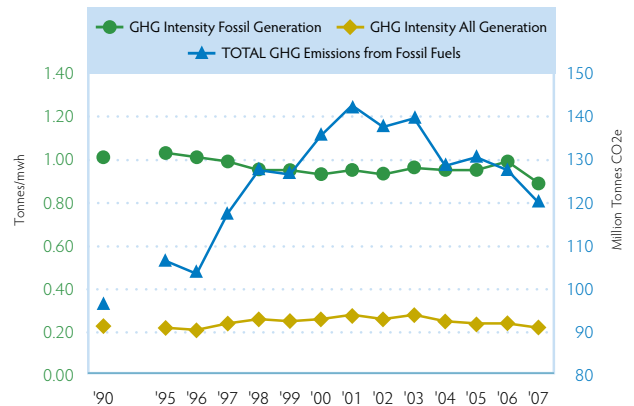


Data Sources

Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). A Review of Energy Consumption and Production Data: Canadian Electricity Generation Industry 1990 – 2007. March 2009.

Electricity Generation Sector – NAICS 22111

Utility GHG Emissions vs Utility Production (1990 – 2007)

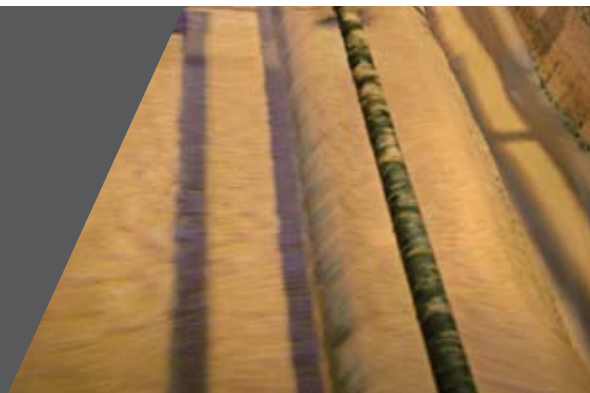


Data Source

Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). A Review of Energy Consumption and Production Data: Canadian Electricity Generation Industry 1990 – 2007. March 2009.

FERTILIZER

Profile // Canada's fertilizer industry is one of the world's major producers and exporters of nitrogen, potash and sulphur fertilizers.



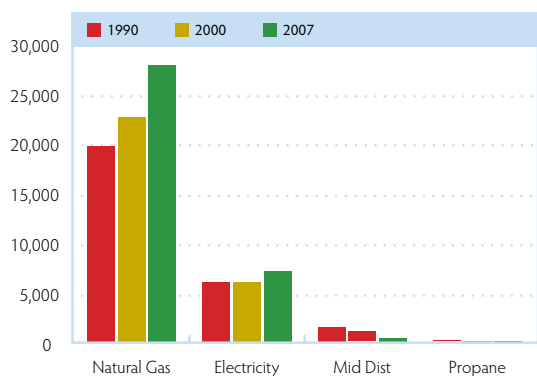
HIGHLIGHTS

- The decline in the chemical fertilizer (except potash) output, from 9,487,000 tonnes in 2006 to 9,235,000 tonnes in 2007 caused a marginal increase in energy intensity in the nitrogen fertilizer sector, despite the reduced energy usage in the sector by about 2.5 percent.

- Potash mines energy usage increased by 32 percent; however, given the significant increase in potash production by 38 percent to 11,426,000 tonnes, the energy intensity in this sector in fact improved to 3.1 GJ/tonne in 2007, from 3.25 GJ/tonne in 2006.
- Natural gas remains the fuel of choice for energy both in the chemical fertilizer and potash sectors at 89 percent, and 79 percent respectively.

Potash Mines Sector – NAICS 212396

Energy Sources Terajoules per Year (TJ/yr)

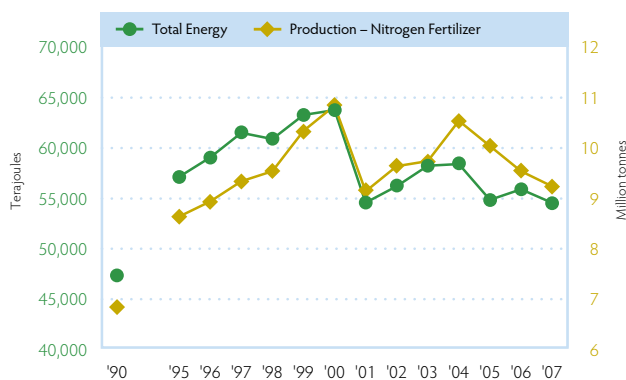


Data Source

Canadian Industrial Energy End-use Data and Analysis Centre (CIEEDAC). *Development of Energy Intensity Indicators for Canadian Industry 1990 – 2007*. Simon Fraser University, March 2009.

Nitrogenous Fertilizer Sector – NAICS 325313

Total Energy and Physical Output (1990 – 2007)

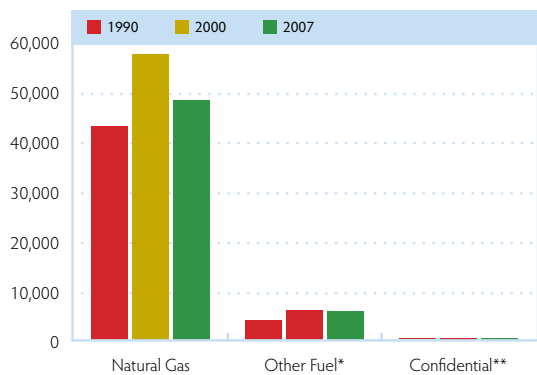


Data Sources

Canadian Fertilizer Institute (CFI), 1990, 1999 - 2007, November 2008. Canadian Fertilizer Institute (CFI), 1995 - 1998, March 2006.

Nitrogenous Fertilizer Sector – NAICS 325313

Energy Sources Terajoules per Year (TJ/yr)



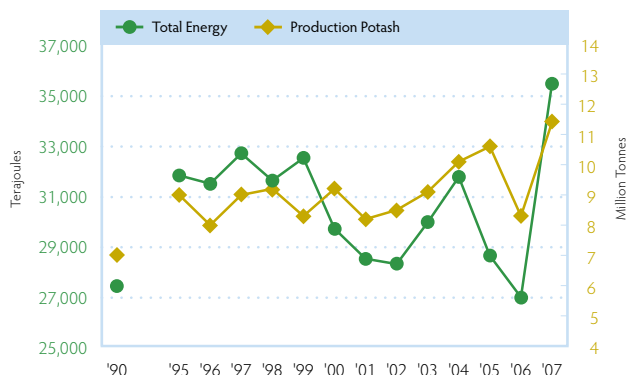
* Other Fuel includes: Electricity, LFO (Middle Distillates) and LPG (Propane)
 ** Confidential includes: HFO (heavy fuel oil) and Steam

Data Source

Natural Gas - 1990, 1999-2007, Canadian Fertilizer Institute, November 2008
 Natural Gas - 1995-1998, Canadian Fertilizer Institute, March 2007.
 Other Fuels 1990 - 2005. Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). *Development of Energy Intensity Indicators for Canadian Industry 1990-2007*. Simon Fraser University. March 2009.

Potash Mines Sector – NAICS 212396

Total Energy and Physical Output (1990 – 2007)



Data Sources

Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC). *Development of Energy Intensity Indicators for Canadian Industry 1990-2007*. Simon Fraser University, March 2009.

FOOD & BEVERAGE

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 confections.



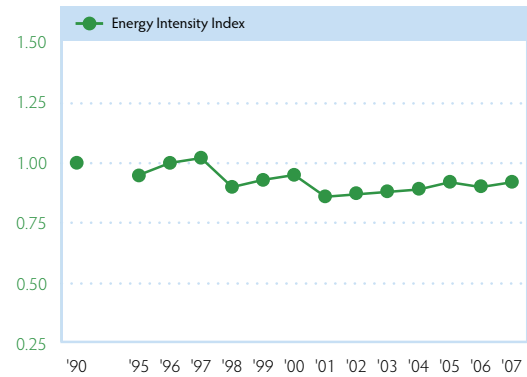
HIGHLIGHTS

- The 3 TJ increase in energy consumption in the food and beverage sector, resulting directly from the increased use of electricity, caused the energy intensity index to increase 2 percent in 2007, over 2006.
- Natural gas remained the fuel of choice for energy in the food and beverage sector at 62 percent; the decline in the use of natural gas by 2 percent in the food and beverage sector, was more than offset by the increased use of electricity.
- The marginal increase of almost 1 percent in gross domestic product for the sector could not mitigate the increase in energy intensity.

Food and Beverage Sector – NAICS 311, 3121

Energy Intensity Index (1990 – 2007)

Base Year 1990 = 1.00

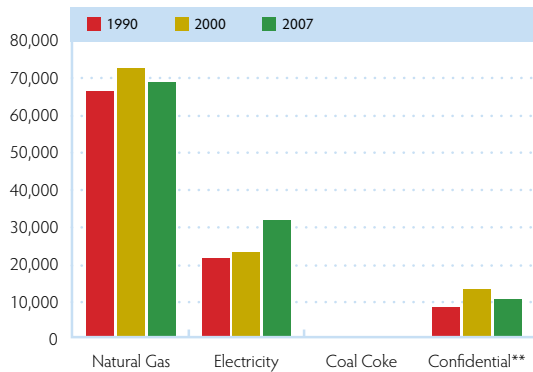


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.
 Production - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Food and Beverage Sector – NAICS 311, 3121

Energy Sources in Terajoules per year (TJ/yr)



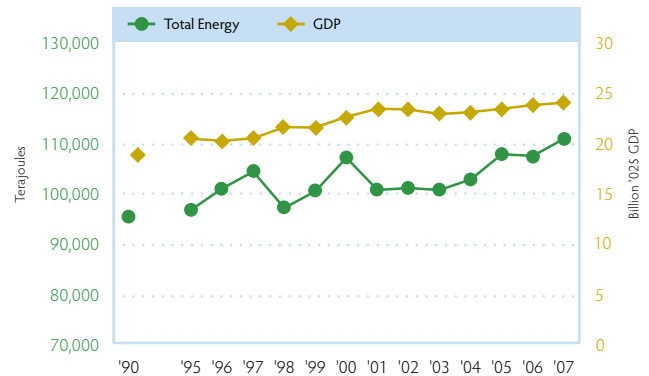
** Confidential includes: Heavy Fuel Oil, Middle Distillates (LFO), Propane (LPG), Wood Waste and Steam

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.

Food and Beverage Sector – NAICS 311, 3121

Total Energy and Economic Output (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.
 Production - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

FOUNDRY

Profile // Metal castings are the first step in the value-added manufacturing chain and are utilized in the manufacture of most durable goods. Markets and industries served by foundries include the automotive sector, construction, agriculture, forestry, mining, pulp and paper, heavy industrial machinery and equipment, aircraft and aerospace, plumbing, soil pipe, municipal road castings, defence, railway, petroleum and petrochemical, electricity distribution and a myriad of specialty markets.

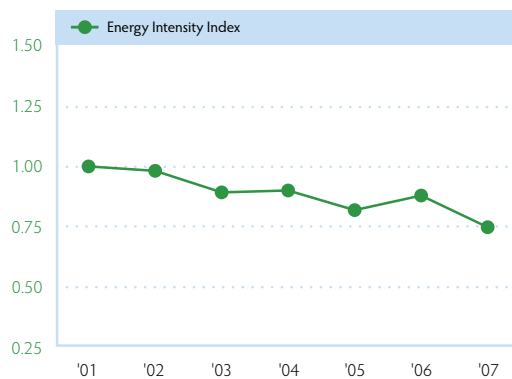


HIGHLIGHTS

- The energy use in the foundry sector declined in 2007 to 10,156 TJs from 13,085 in 2006, a drop of 22 percent.
- The reductions in the source of energy used occurred in both of the two major fuel sources, namely natural gas as well as electricity at 22 percent, and 23 percent respectively.
- Despite a corresponding decline in the gross domestic product for the sector in 2007, the foundry sector's energy intensity improved by 17 percent; the improvement is directly attributable to curtailed energy use.

Foundry Sector – NAICS 3315

Energy Intensity Index (2001 – 2007)
Base Year 2001 = 1.00

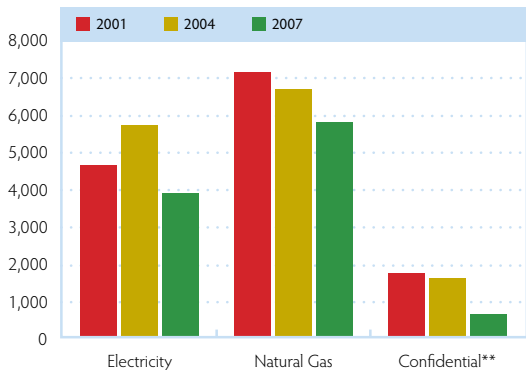


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008
Production - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Foundry Sector – NAICS 3315

Energy Sources in Terajoules per year (TJ/yr)



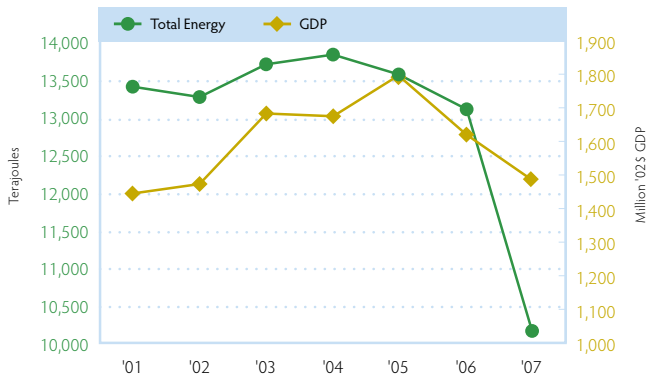
** Confidential includes: Coal Coke, Heavy Fuel Oil (HFO), Middle Distillates (LFO) and Propane (LPG)

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008.

Foundry Sector – NAICS 3315

Total Energy and Economic Output (2001 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, Ottawa*. December 2008.
Production - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

GENERAL MANUFACTURING

Profile // The general manufacturing sector comprises a variety of industries, including leather, clothing, furniture, printing activities, construction materials, floor coverings, insulation, glass and glass products, adhesives, and pharmaceuticals. The sector encompasses approximately 2000 small, medium-sized and large companies.



HIGHLIGHTS

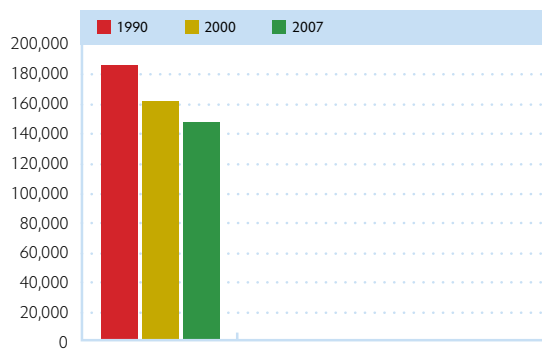
- Energy consumption in the General Manufacturing sector declined by 11 percent, to 145,544 TJs in 2007.
- Despite an almost 2 percent decline in the sector's gross domestic product in 2007, the energy intensity in the general manufacturing sector improved by 8 percent; the improvement is directly attributable to the decline in energy consumption in 2007 from 164,000 TJs in 2006.
- The general manufacturing sector's energy consumption has been declining since 1990; total energy consumed dropped from a high of 185,000 TJs in 1990, a 21 percent decline over the 17 year period.

***NAICS Category Name

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

General Manufacturing Sector – NAICS***

Energy Sources in Terajoules per year (TJ/yr)



Confidential**
 ** Confidential includes: Coal, Coke, Petroleum Coke, Heavy Fuel Oil (HFO), Middle Distillates (LFO), Propane (LPG), Wood Waste and Steam, Natural Gas and Electricity

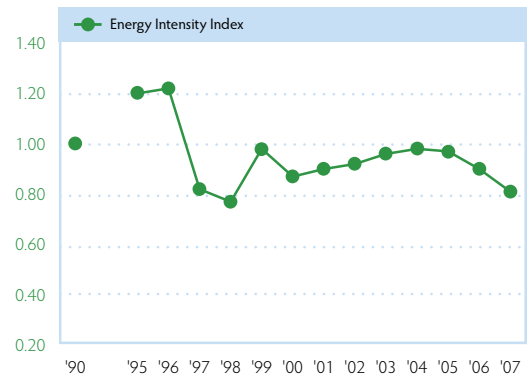
Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.

General Manufacturing Sector – NAICS***

Energy Intensity Index (1990 – 2007)

Base Year 1990 = 1.00

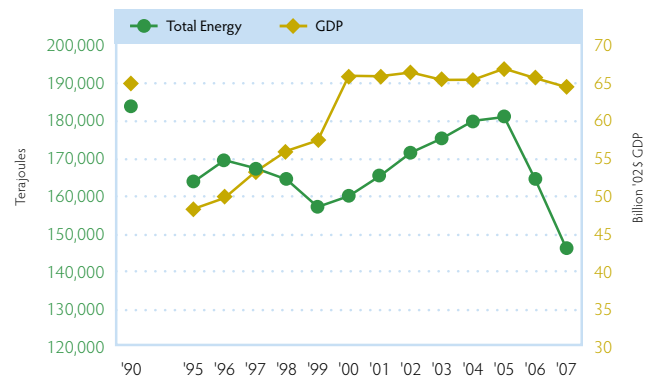


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.
 Production - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008; Statistics Canada National Accounts: Industry-based.

General Manufacturing Sector – NAICS***

Energy Intensity and Economic Output (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey*, Ottawa, December 2008.
 Production - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008; Statistics Canada National Accounts: Industry-based.

MINING

Profile // Canada's metal mining industry produces minerals and metals for domestic and export markets.

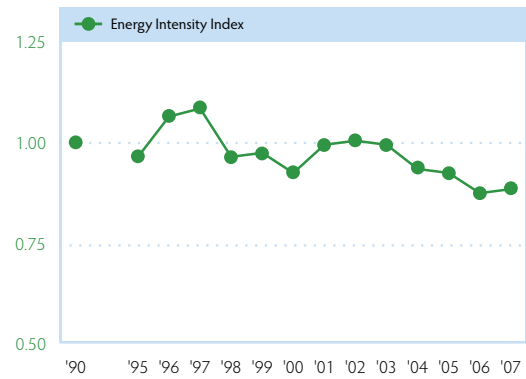


HIGHLIGHTS

- The metal mining sector energy consumption declined to 73,391 TJs in 2007, from 75,395 TJs in 2006, a drop of 3 percent.
- Energy consumption in this sector has been on the decline from a high of 101,000 TJs in 1990 to current levels translating into a 28 percent reduction in energy consumption over the 17 year period.
- The production in the metal mining sector also depicts a declining trend since 1990; however, in 2007 the larger drop in production outweighed the lesser drop in energy consumption — thus the energy intensity increased albeit slightly at 3 percent.

Metal Mining Sector – NAICS 2122

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

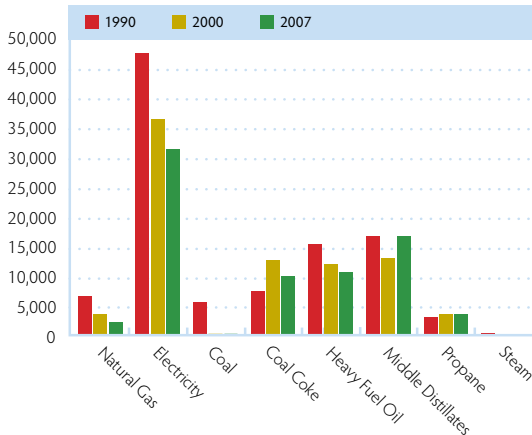


Data Sources

Energy Use and Production - Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC), *Development of Energy Intensity Indicators for Canadian Industry 1990-2007*. Simon Fraser University, January 2009.

Metal and Mining Sector – NAICS 311, 3121

Energy Sources in Terajoules per year (TJ/yr)

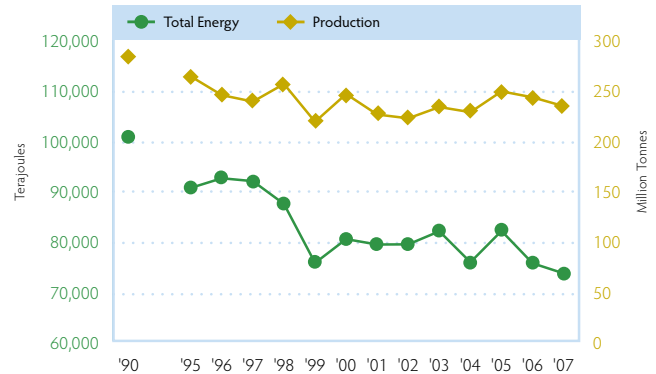


Data Sources

Energy Use and Production - Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC), *Development of Energy Intensity Indicators for Canadian Industry 1990-2007*. Simon Fraser University, January 2009.

Metal and Mining Sector – NAICS 311, 3121

Total Energy and Production Output (1990 – 2007)



Data Sources

Energy Use and Production - Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC), *Development of Energy Intensity Indicators for Canadian Industry 1990-2007*. Simon Fraser University, January 2009.

OIL SANDS

Profile // Canada's oil sands sector includes plants in northern Alberta and one heavy oil upgrader in Saskatchewan. The sector is a major employer and a significant contributor to Canada's exports and GDP.



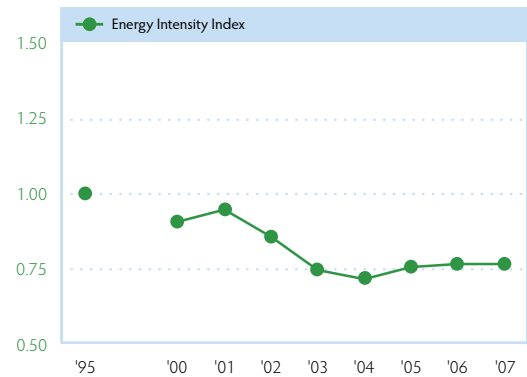
HIGHLIGHTS

- Energy intensity in the oil sands sector was virtually unchanged in 2007, from 2006.
- The increase in total energy use by 3.8 percent was offset by an equal associated increase in bitumen production.
- Natural gas remains the prime source for energy at 44 percent of total energy source, followed by process gas at 30 percent; these two fuels make up almost three quarters of all energy sources in the oil sands sector.

Oil Sands Sector – NAICS 211114

Energy Intensity Index (1995 – 2007)

Base Year 1995 = 1.00

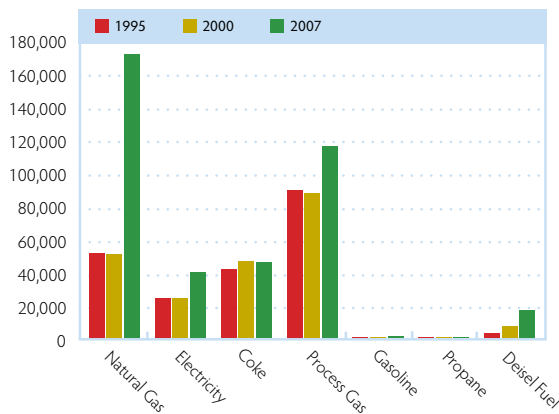


Data Source

Alberta Energy and Utilities Board 2009 (Fort McMurray office).

Oil Sands Sector – NAICS 211114

Energy Sources in Terajoules per year (TJ/yr)

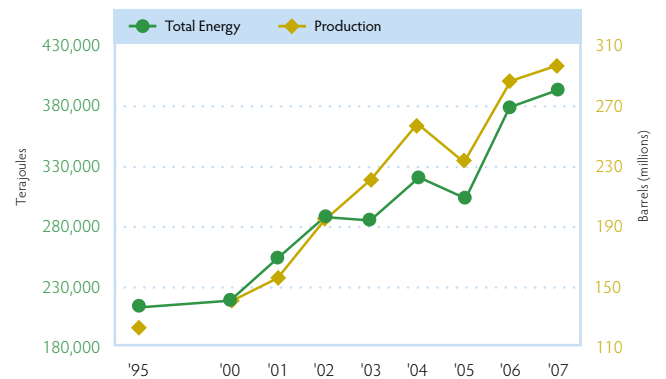


Data Sources

Alberta Energy and Utilities Board 2009 (Fort McMurray office).

Oil Sands Sector – NAICS 211114

Total Energy and Production (1995 – 2007)



Data Source

Alberta Energy and Utilities Board 2009 (Fort McMurray office).

PETROLEUM PRODUCTS

Profile // Canada's petroleum products sector markets gasoline, diesel, heating oil, jet fuels, lubricating oil and other related products through a network of approximately 15,000 wholesale and retail outlets.



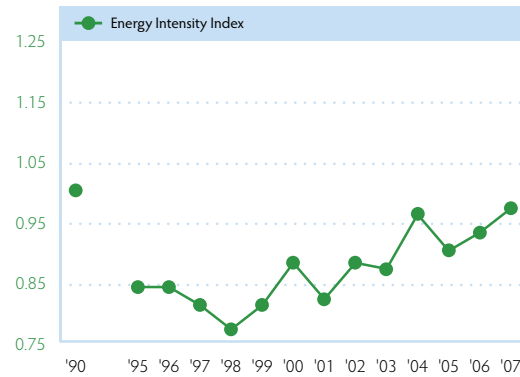
HIGHLIGHTS

- The 2007 energy intensity index in the petroleum products sector is below the 1990 level.
- In 2007, the energy intensity increased 4 percent over 2006, primarily due to a marginal decrease in gross domestic product, coupled with a 4 percent increase in energy use.
- Refinery fuel gas remains the main source of energy in the sector.

Petroleum Products Sector – NAICS 324110

Energy Intensity Index (1990 – 2007)

Base Year 1990 = 1.00

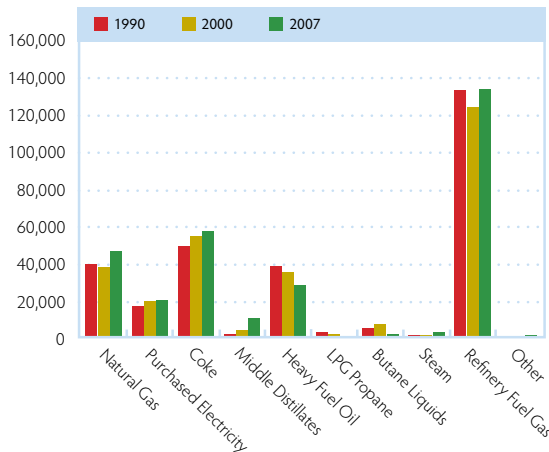


Data Source

Review of Energy Consumption in Canadian Oil Refineries: 1990, 1994 to 2007. Prepared for the Canadian Petroleum Products Institute (CPPI) and Canadian Industry Program for Energy Conservation by John Nyboer.
 Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC).
Development of Energy Intensity Indicators for Canadian Industry 1990 – 2007. Simon Fraser University, March 2009.

Petroleum Products Sector – NAICS 324110

Energy Sources in Terajoules per year (TJ/yr)

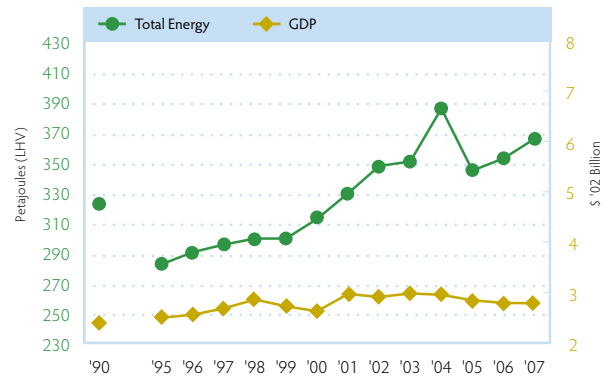


Data Sources

Review of Energy Consumption in Canadian Oil Refineries: 1990, 1994 to 2007. Prepared for the Canadian Petroleum Products Institute (CPPI) and Canadian Industry Program for Energy Conservation by John Nyboer.
 Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC).
Development of Energy Intensity Indicators for Canadian Industry 1990 – 2007. Simon Fraser University, March 2009.

Petroleum Products Sector – NAICS 324110

Total Energy and GDP (1990 – 2007)



Data Source

Review of Energy Consumption in Canadian Oil Refineries: 1990, 1994 to 2007. Prepared for the Canadian Petroleum Products Institute (CPPI) and Canadian Industry Program for Energy Conservation by John Nyboer.
 Canadian Industrial Energy End-Use Data and Analysis Centre (CIEEDAC).
Development of Energy Intensity Indicators for Canadian Industry 1990 – 2007. Simon Fraser University, March 2009.

PLASTICS

Profile // The Canadian plastics processing sector is characterized by many processes and applications that use an ever-increasing variety of raw materials. The major markets served by the plastics industry are packaging, construction and automotive. This sector includes more than 146,000 people employed by approximately 3,800 companies.



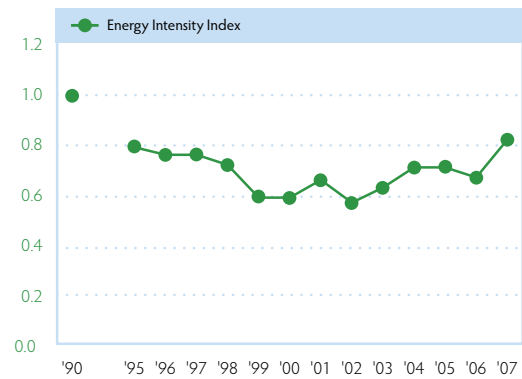
HIGHLIGHTS

- The increase in energy use by 19 percent in the plastics sector, coupled with a 3 percent decline in gross domestic product, caused the energy intensity in the plastic sector to increase by as much as 24 percent in 2007 over 2006.
- The source for the increased use of energy was from natural gas at 29 percent, and electricity at 15 percent.
- The plastics industry gross domestic product had been on an increasing trend since 1995; 2007 was the first year gross domestic product declined in this sector.

Plastics Sector – NAICS 3261

Energy Intensity Index (1990 – 2007)

Base Year 1990 = 1.00



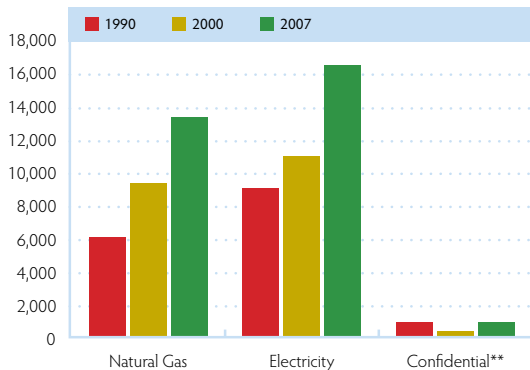
Note: The 2007 data is under review.

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 - 2007*. Ottawa. December 2008.
 Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Plastics Sector – NAICS 3261

Energy Sources in Terajoules per year (TJ/yr)



Note: The 2007 data is under review.

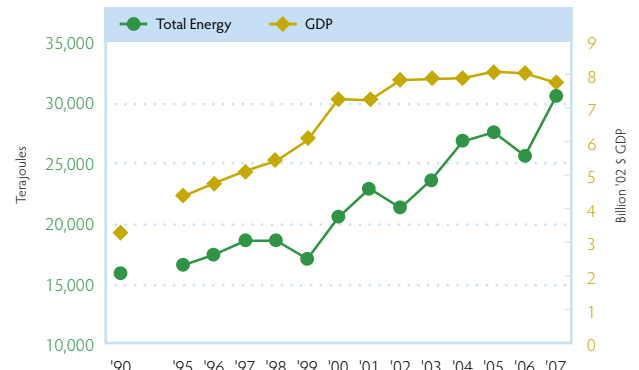
** Confidential includes: Heavy Fuel Oil (HFO), Middle Distillates (LFO), Propane (LPG) and Steam

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 - 2007*. Ottawa. December 2008.

Plastics Sector – NAICS 3261

Total Energy and Economic Output (1990 – 2007)



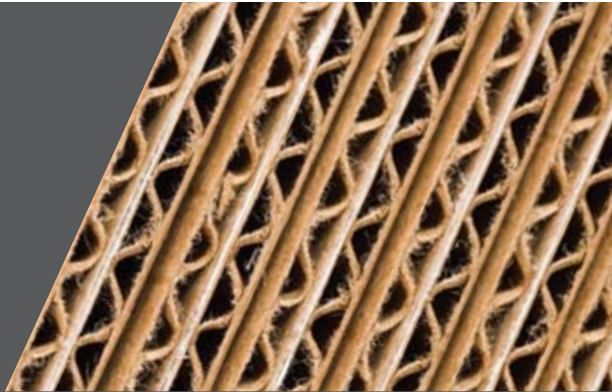
Note: The 2007 data is under review.

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 - 2007*. Ottawa. December 2008.
 Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

PULP & PAPER

Profile // Pulp and paper, a key component of the forest products industry, is a major contributor to Canada's economy. In addition to market pulp, the sector produces newsprint, specialty papers, paperboard, building board and other paper products. It is the largest industrial energy consumer, representing 23 percent of industrial energy consumption in Canada.

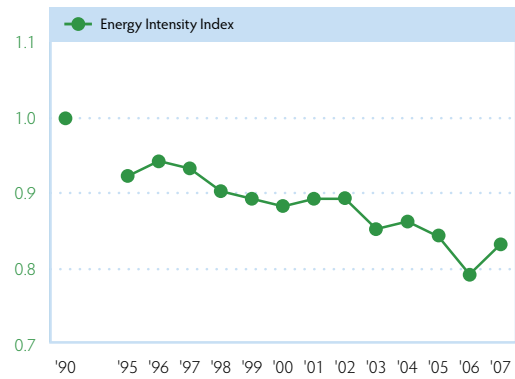


HIGHLIGHTS

- Improvements in energy intensity from previous years were lost in 2007 due to impacts of capacity curtailments throughout the sector. Poor market conditions forced companies to undertake partial, temporary, indefinite and permanent curtailments and closures. The non-permanent curtailments affect the energy intensity performance of the sector as some energy is required to maintain the facilities regardless of production levels actually achieved.

Pulp & Paper Sector – NAICS 3221

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

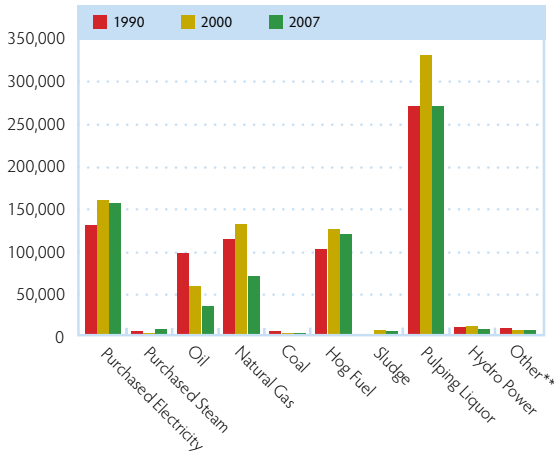


Data Source

Forest Products Association of Canada's *Energy Monitoring Report, 1990 – 2007*. December 2008.

Pulp & Paper Sector – NAICS 3221

Energy Sources in Terajoules per year (TJ/yr)



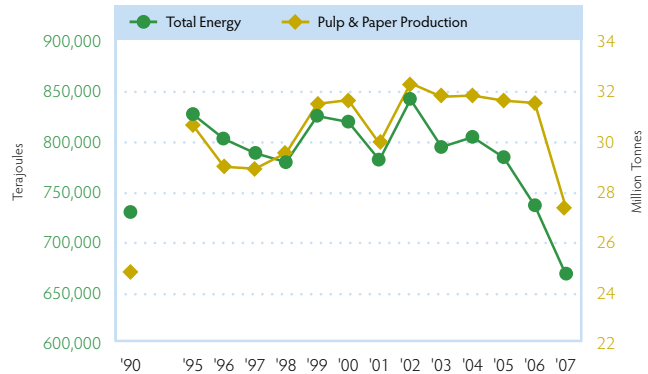
** Other includes distillates, diesel, LPG, other purchased energy and other self-generated energy

Data Sources

Forest Products Association of Canada's *Energy Monitoring Report, 1990 – 2007*. December 2008.

Pulp & Paper Sector – NAICS 3221

Total Energy and Physical Output (1990 – 2007)



Data Source

Forest Products Association of Canada's *Energy Monitoring Report, 1990 – 2007*. December 2008.

RUBBER

Profile // The rubber products industry is a major contributor to the Canadian economy. It represents approximately \$6 billion in shipments and employs approximately 25,700 people. The industry is also very active in international trade with imports of \$4.2 billion and exports of \$3.4 billion.

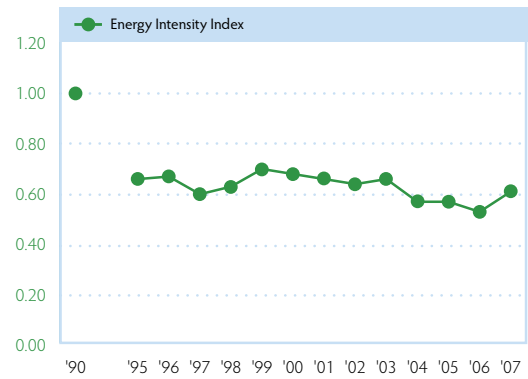


HIGHLIGHTS

- Increased use of electricity by the rubber sector by as much as 13 percent, coupled with a smaller decline in gross domestic product caused the energy intensity to increase by 16 percent in 2007 over 2006.
- Natural gas usage in the sector, on the other hand, declined almost 2 percent during the same time period. Over time, the use of natural gas in this sector has been on a declining trend since 2002, from a high of 6,001 TJ in 2002 to the current 3,782 TJ in 2007, a decrease of 37 percent over the last five years.
- In 2007, consumption of fuels other than electricity have decreased to 1990 levels.

Rubber Sector – NAICS 3262

Energy Intensity Index (1990 – 2007)
Base Year 1990 = 1.00

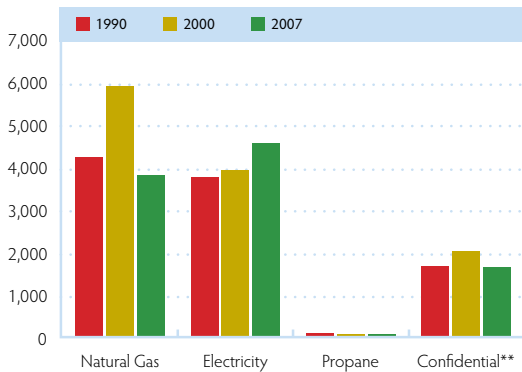


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa, December 2008.
Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Rubber Sector – NAICS 3262

Energy Sources in Terajoules per year (TJ/yr)



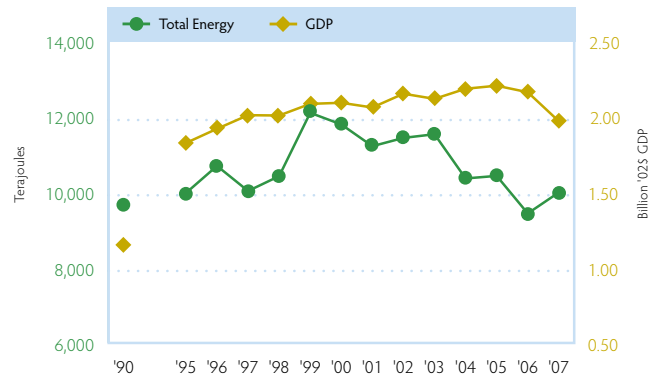
** Confidential includes: Heavy Fuel Oil (HFO) and Middle Distillates (LFO)

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa, December 2008.

Rubber Sector – NAICS 3262

Total Energy and Economic Output (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa, December 2008.
Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

STEEL

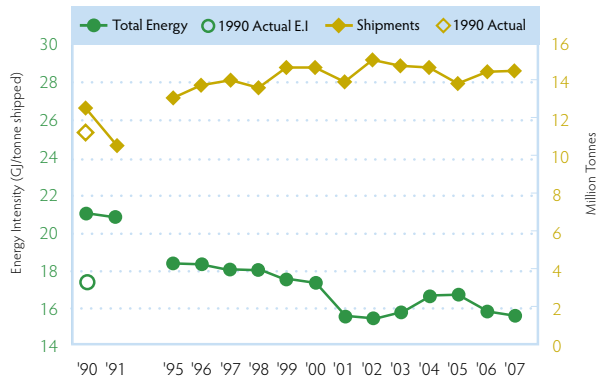
Profile // Canada's steel sector is one of the country's major industries. The industry employs more than 30,000 Canadians. The sector produces more than 15 million t of steel annually, supplying flat-rolled (sheet and plate), long (rebar and structural steel) and specialty and alloy (stainless and tool steels) products for major markets in the automotive, appliance, oil and gas, machinery, construction and packaging industries.



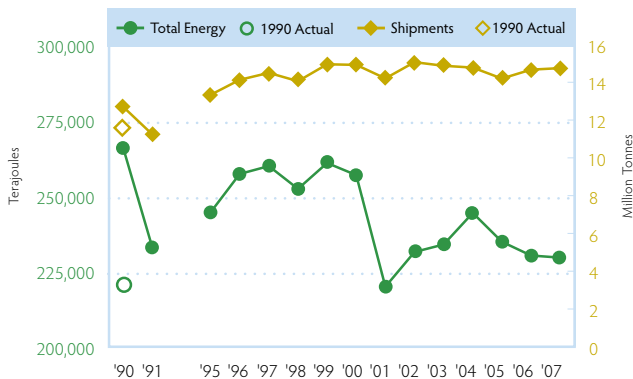
HIGHLIGHTS

- Steel industry output increased over 16 percent between 1990 and 2007.
- The energy intensity in the sector declined from 20.93 to 15.56, or 26 percent, during the same time period.
- In 2007, energy intensity improved over 2006 by approximately 1 percent, despite an increase in steel output (shipments) by the same percentage.

Steel Sector – NAICS 331100
Energy Intensity and Physical Output (1990 – 2007)



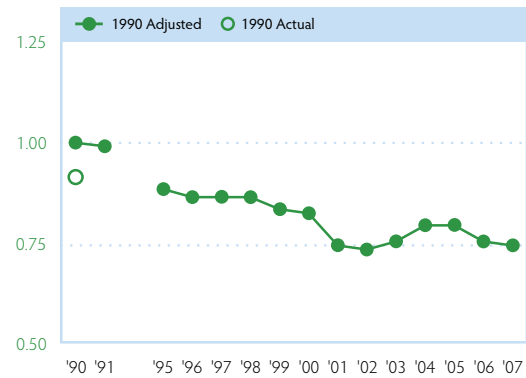
Steel Sector – NAICS 331100
Total Energy and Physical Output (1990 – 2007)



Data Sources

Energy - Coke 2006, 2007: Coal & Coke Statistics Catalogue 45-002-XPB
HFO 2006: Report on Energy Supply & Demand, Catalogue 57-003-XIB
All Others: CIEEDAC Energy Consumption and Energy Intensity Indicators NAICS 331100 accessed July 15, 2008.
Shipments - Primary iron & steel; Statistics Canada Catalogue 41-001-XIB
Steel, tubular products and steel wire: Statistics Canada, Cat. No.41-019-XIE.
1990 Adjustments for Energy & Shipments - A Review of Energy Consumption and related Data; Canadian Iron and Steel and Ferro-alloy Manufacturing Industries 1990 – 2006; Canadian Industrial Energy End-use Data and Analysis Centre (CIEEDAC) March 2008, Section 5.1 Table 5.1.

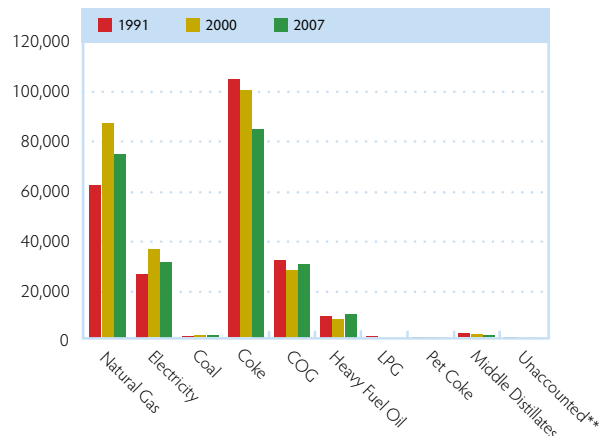
Steel Sector – NAICS 331100
Energy Intensity Index (1990 – 2007)
Base Year 1990 (adjusted) = 1.00



Data Sources

1990 Adjustments for Energy, Shipments & Intensity - A Review of Energy Consumption and related Data Canadian Iron and Steel and Ferro-alloy Manufacturing Industries 1990 – 2006; Canadian Industrial Energy End-use Data and Analysis Centre (CIEEDAC) March 2008, Section 5.1 Table 5.1.
Intensities 1991 – 2005 Canadian Industrial Energy End-use Data and Analysis Centre (CIEEDAC) NAICS 331100 accessed July 2008.
2006 Intensity - Coke 2006: Coal & Coke Statistics Catalogue 45-002-XPB
HFO 2006: Report on Energy Supply & Demand, Catalogue 57-003-XIB
All Others: CIEEDAC Energy Consumption and Energy Intensity Indicators NAICS 331100 accessed July 2008.
2007 Intensity - Coke 2007: Coal & Coke Statistics Catalogue 45-002-XPB
COG 2007: Report on Energy Supply & Demand, Catalogue 57-003-XIB
All Others: StatCan ICE, Feb 2008.

Steel Sector – NAICS 331100
Energy Sources in Terajoules per year (TJ/yr)



Data Sources

Energy - Coke 2006, 2007: Coal & Coke Statistics Catalogue 45-002-XPB
HFO 2006: Report on Energy Supply & Demand, Catalogue 57-003-XIB
All Others: StatCan ICE, Feb 2009; NAICCS 331100

TEXTILES

Profile // Canada's textile industry produces the fibres, yarns, fabrics and textile articles purchased by users and customers as diverse as the automotive manufacturing, clothing, construction, environmental protection, road building and retail sectors.

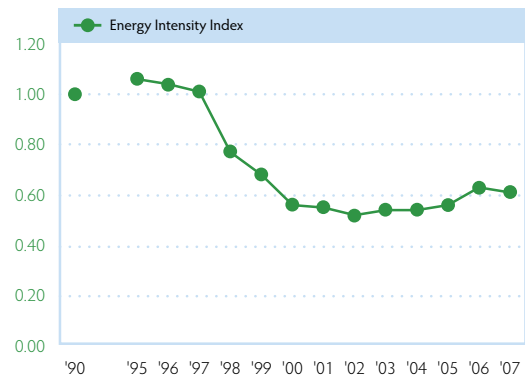
HIGHLIGHTS

- Textile sector energy consumption decreased in 2007, over the 2006 amount by 9 percent. Overall energy consumption in the sector has been on a continuous decline since 1995, from a high of 21,692 TJ to 9,733 TJ a decline of 55 percent in a dozen years.
- The energy intensity in the textile sector declined in 2007, by a modest 3 percent.
- Despite a sizeable decline in energy consumption, a drop in the gross domestic product of the textile sector by 5 percent, partially offset a larger improvement in the sector's energy intensity.
- Energy intensity in the textile sector is almost half what it was in 1995.

Textiles Sector – NAICS 313, 314*

Energy Intensity Index (1990 – 2007)

Base Year 1990=1.00

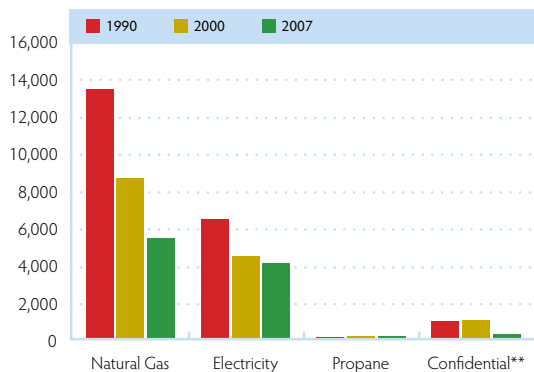


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008.
 Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Textiles Sector – NAICS 313, 314*

Energy Sources in Terajoules per year (TJ/yr)



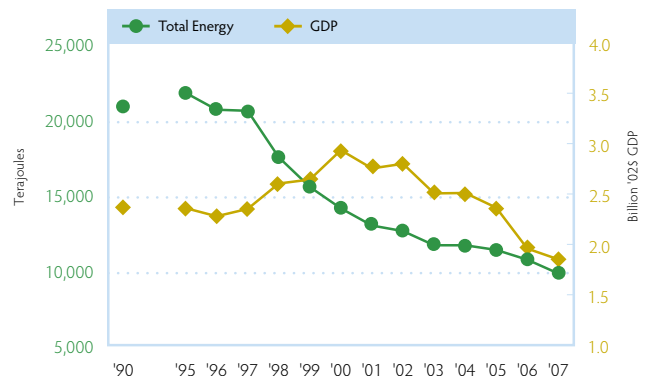
** Confidential includes: Heavy Fuel Oil (HFO), Middle Distillates (LFO) and Steam

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008.

Textiles Sector – NAICS 313, 314*

Total Energy and Economic Output (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008.
 Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

TRANSPORTATION EQUIPMENT MANUFACTURING

Profile // The Canadian transportation equipment manufacturing sector includes companies that manufacture aircraft, aircraft parts, automobiles, motor vehicle parts, trucks, buses, trailers, ships and railroad rolling stock.

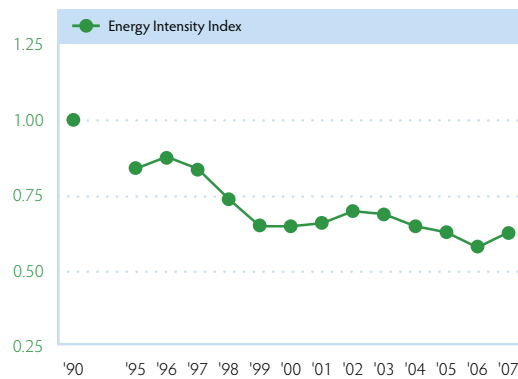


HIGHLIGHTS

- An 8 percent increase in energy consumption in 2007 caused a corresponding increase in energy intensity in the transportation equipment manufacturing sector, as the gross domestic product in the sector remained virtually unchanged. However, the low 2006 consumption could be related to favourable weather conditions, as space heating is a significant energy use in the Transportation sector. The 2007 consumption was 2.3% lower than it was in 2005, and the energy intensity remained unchanged.
- The predominant sources of energy use remain natural gas and electricity, at proportions of 52 percent and 41 percent respectively. Middle distillates, propane and steam make up the difference.

Transportation Sector – NAICS 336

Energy Intensity Index (1990 – 2007)
Base Year 1990=1.00

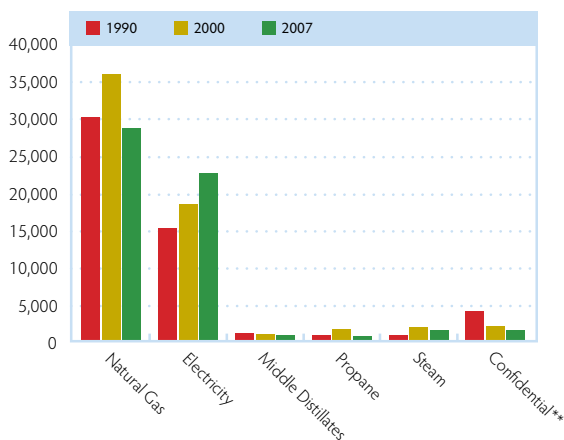


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 - 2007*. Ottawa. December 2008
Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Transportation Sector – NAICS 336

Energy Sources in Terajoules per year (TJ/yr)



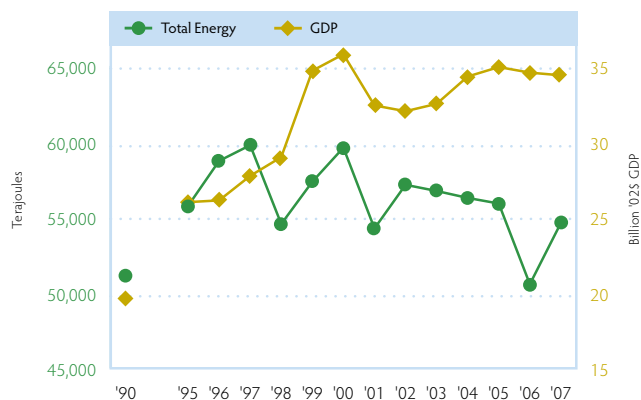
** Confidential includes: Coal, Coal Coke, Heavy Fuel Oil (HFO) and Wood

Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 - 2007*. Ottawa. December 2008.

Transportation Sector – NAICS 336

Total Energy and Economic Output (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 - 2007*. Ottawa. December 2008
Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

UPSTREAM OIL & GAS *

Profile // The upstream oil and gas sector includes the 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 bitumen upgrading. Products and services derived by downstream sectors from the output of this industry include heating and transportation fuels, building supplies and materials, clothing, and vital medicines. The exploration and production industry is represented by the Canadian Association of Petroleum Producers (CAPP) and the Small Explorers and Producers Association of Canada (SEPEC).

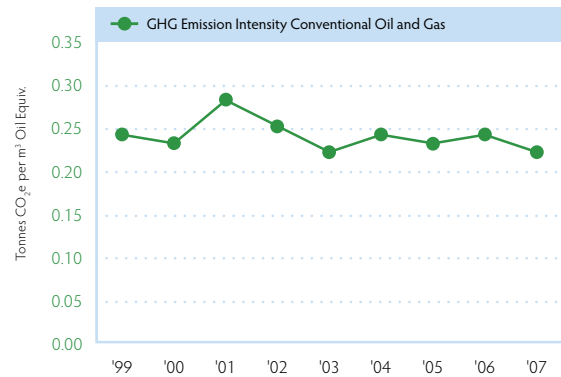


HIGHLIGHTS

- Analyses of trends from the CAPP Stewardship data on greenhouse gas (GHG) emissions intensity cannot be accomplished due to shifting mixes of production, variations in CAPP's coverage of total conventional oil and gas production, and an incomplete dataset on GHG emissions for 1999 – 2006. However, as of the 2007 reporting year, all CAPP members are required to report direct GHG emissions through the Stewardship program.

Upstream Oil and Gas Sector – NAICS 211113

GHG Intensity Index (1990 – 2007)



Note: 2007 data represents 88 companies – comprising 92.70 percent of CAPP production

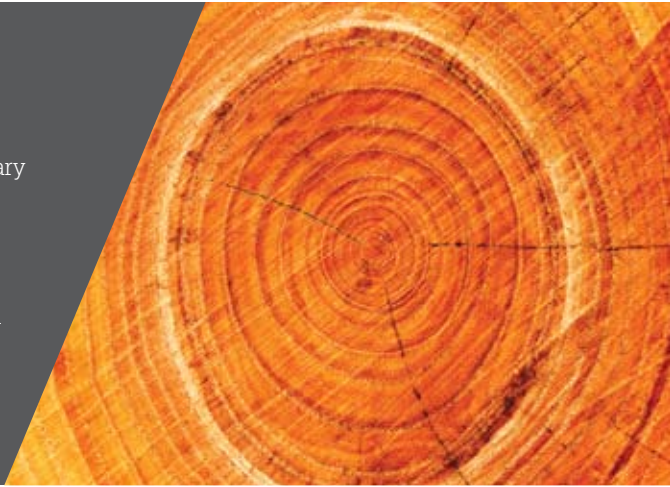
Data Sources

The CAPP Stewardship Report 2008 - Canadian Association of Petroleum Producers.

* This section deals with the conventional oil and gas sector. The oil sands sector is covered separately elsewhere in this report.

WOOD PRODUCTS

Profile // The wood products sector includes as many as 7,000 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, such as engineered wood products and assemblies. The secondary grouping includes a diverse range of facilities that make prefabricated buildings, windows and doors, flooring, mouldings, containers and pallets, other millwork, or a myriad of other products. The energy data presented here focus on the primary manufacturing grouping.



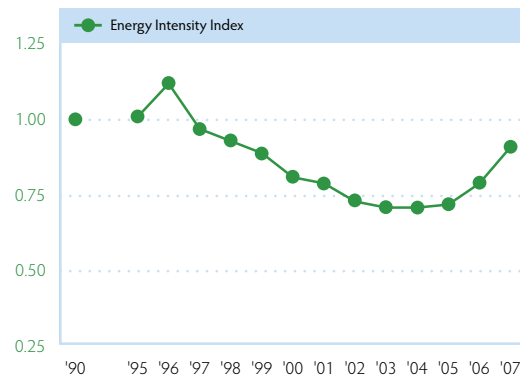
HIGHLIGHTS

- The collapse of the U.S. housing market has continued to have a devastating effect on the Canadian wood products sector. Overall operating rates have plummeted as companies undertake capacity curtailments. Partial, temporary, indefinite and permanent closures have occurred across the country. The non-permanent curtailments affect the energy intensity performance of the sector as some energy is required to maintain the facilities regardless of production levels actually achieved. This is illustrated in the erosion of some of the energy efficiency gains made in previous years.

Wood Products Sector – NAICS 321

Energy Intensity Index (1990 – 2007)

Base Year 1990=1.00

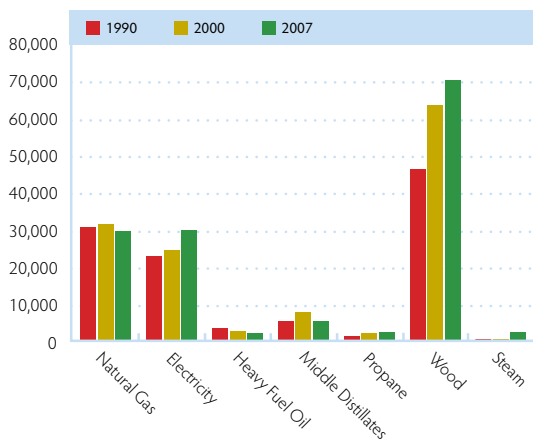


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008
 Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

Wood Products Sector – NAICS 321

Energy Sources in Terajoules per year (TJ/yr)

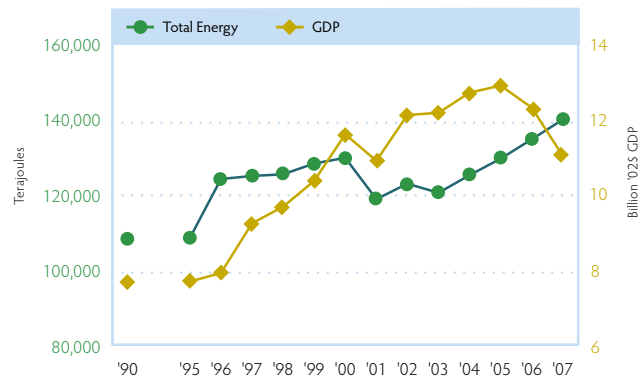


Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008.

Wood Products Sector – NAICS 321

Total Energy and Economic Output (1990 – 2007)



Data Sources

Energy Use - Statistics Canada, *Industrial Consumption of Energy Survey, 1990, 1995 – 2007*. Ottawa. December 2008
 Production - GDP - Informetrica Limited, *T1 Model and National Reference Forecast*, November 2008.

CIPEC EXECUTIVE BOARD

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Vice-President and CFO
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*National Fuel Quality and
 Environmental Planning*
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CIPEC Task Force Council Chair

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Senior Energy Specialist
 ArcelorMittal Dofasco

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Director, Sustainable Development, Health and Safety
 Aluminum Association of Canada

Brewers Sector Task Force

Ed Gregory
Manager, Research and Analysis
 Brewers Association of Canada

Cement Sector Task Force

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Environment Manager
 St Marys Cement Inc.

Bob Masterson
Senior Policy Advisor, Environment and Energy
 Cement Association of Canada

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 Canadian Chemical Producers' Association

Construction Sector Task Force

Bill Ferreira
Director, Government Relations & Public Affairs
 Canadian Construction Association

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Vice-President
 EEMAC Council, ElectroFederation

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Manager, Sustainable Electricity Program
 Canadian Electricity Association (CEA)

Fertilizer Sector Task Force

Graham Houze
Manager, Engineering and Environmental Services
 Dyno Nobel

Food and Beverage Sector Task Force

Doug Dittburner, CET
Chief Engineer and Energy Team Leader
 Toronto Brewery
 Molson Canada

Forestry Sector Task Force

Yves Provencher
Business Development
 FP Innovations – Feric

Foundry Sector Task Force

Judith Arbour
Executive Director
 Canadian Foundry Association

General Manufacturing Sector Task Force – Central

Rahumathulla Marikkar

General Manufacturing Sector Task Force – Atlantic

John Woods
Vice-President – Energy Development

Lime Sector Task Force

Christopher Martin
Regional Environmental Manager
 Carmeuse Lime Canada – Beachville Operation

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Paul Stothart
Vice-President, Economic Affairs
Mining Association of Canada

Oil Sands Sector Task Force

C. L. L. Kees-Versfeld
Energy Management Leader, Syncrude
Syncrude Canada Ltd.

Petroleum Refining Task Force

Gilles Morel
Director, Eastern Canada and National
Canadian Petroleum Products Institute

Pipelines Sector Task Force

Bill Tubbs
Climate Change Specialist
Spectra Energy Transmission

Plastics Sector Task Force

Dr. Graham Knowles
Consultant
Canadian Plastics Industry Association

Pulp and Paper Sector Task Force

Paul Lansbergen
Director, Taxation and Business Issues
Forest Products Association of Canada

Rubber Sector Task Force

Ralph Warner
Director of Operations
Rubber Association of Canada

Steel Sector Task Force

François Abdelnour, PEng
Manager, Energy
Ivaco Rolling Mills

Textiles Sector Task Force

Bruce Cochran
Director of Manufacturing
Lincoln Fabrics Ltd.

Transportation Equipment Manufacturing Sector Task Force

Zenon Petriw
Manager, Recycling and Energy
Magna International Inc.

Upstream Oil and Gas Sector Task Force

Krista Phillips
Policy Analyst, Environment, Health and Safety
Canadian Association of Petroleum Producers

Wood Products Sector Task Force

Paul Lansbergen
Director, Taxation and Business Issues
Forest Products Association of Canada

CIPEC Energy Managers Network

Neil Miller
Energy Advisor, Refining and Supply
Imperial Oil

CIPEC LEADER COMPANIES BY SECTOR

ALUMINUM

Alcan inc., *Montreal*
 Alcan Specialty Aluminas, *Brockville*
 Alcoa Canada Première fusion, *Montreal*
 Alcoa - Aluminerie de Baie-Comeau, *Baie-Comeau*
 Alcoa - Aluminerie Deschambault s.e.n.c, *Deschambault*
 Alcoa - Usine de tige de Bécancour, *Bécancour*
 Aluminerie de Bécancour inc., *Bécancour*
 Almag Aluminum Inc., *Brampton*
 Alsa Aluminum Canada Inc., *Bécancour*
 Alumicor Limited, *Toronto*
 Aluminerie Alouette inc., *Sept-Îles*
 Indalex Limited, *Port Coquitlam*
 Indalex Limitée, *Pointe-Claire*
 Indalloy, a division of Indalex Limited, *North York*
 Recyclage d'aluminium Québec inc., *Bécancour*

BREWERY

Big Rock Brewery Ltd., *Calgary*
 John Allen Brewing Company (The), *Halifax*
 Labatt Breweries of Canada, *Toronto, Edmonton, London, St. John's*
 La Brasserie Labatt, *LaSalle*
 Les Brasseurs du nord inc., *Blainville*
 Molson Canada, *Edmonton, Ontario, Montreal, Vancouver*
 Moosehead Breweries Limited, *St. John*
 Pacific Western Brewing Company, *Prince George*
 Sleeman Brewing and Malting Co. Ltd., *Guelph*
 Sleeman Maritimes Ltd., *Dartmouth*
 Steelback Brewery Inc., *Tiverton*
 Unibroue Inc., *Chambly*
 Westcan Malting Ltd., *Alix*

CEMENT

Advanced Precast Inc., *Bolton*
 Arriscraft International, *Saint-Étienne-des-Grès*
 ESSROC Canada Inc., *Picton*
 Gordon Shaw Concrete Products Ltd., *Windsor*
 International Erosion Control Systems, *West Lorne, Rodney*
 Lafarge Canada inc., *Montreal*
 Lehigh Inland Cement Limited, *Edmonton*
 Lehigh Northwest Cement Limited
 Pre-Con Inc., *Brampton*
 St. Lawrence Cement Inc., *Mississauga*
 Dufferin Concrete, *Concord*
 St. Marys Cement Corporation, *Bowmanville*

CHEMICALS

A. Schulman Canada Ltd., *St. Thomas*
 Abrex Paint & Chemical Ltd., *Oakville*
 Apotex Pharmachem Inc., *Brantford*
 Arclin Canada Ltd., *North Bay*
 Avmor Ltée, *Laval*
 Banner Pharmacaps (Canada) Ltd., *Olds*
 Bartek Ingredients Inc., *Stoney Creek*
 Becker Underwood, *Saskatoon*
 Benjamin Moore & Cie Limitée, *Montreal*
 Big Quill Resources Inc., *Wynyard*
 BioVectra dcl, *Charlottetown*
 BOC Gaz, *Magog*
 Brenntag Canada Inc., *Mississauga*
 Butcher Engineering Enterprises Limited (The), *Brampton*
 Celanese Canada inc., *Boucherville*
 Church & Dwight Canada, *Mount Royal*
 Colgate-Palmolive Canada Inc., *Mississauga*
 Collingwood Ethanol L.P. Ltd., *Collingwood, Toronto*
 Commercial Alcohol Inc., *Chatham, Tiverton, Varennes*
 Dominion Colour Corporation, *Ajax, Toronto*
 Dyno Nobel Nitrogen Inc., *Maitland, North Bay*
 Eka Chimie Canada Inc., *Magog, Valleyfield*

Eli Lilly Canada Inc., *Scarborough*
 Estée Lauder Cosmetics Ltd., *Scarborough*
 Evonik Degussa Canada Inc., *Brampton, Burlington, Gibbons*
 Fibrex Insulations Inc., *Sarnia*
 Fielding Chemicals Technologies Inc., *Mississauga*
 Galderma Production Canada Inc., *Baie d'Urfé*
 Grace Canada Inc., *Valleyfield*
 Hostmann-Steinberg Limited, *Brampton*
 Huntsman Corporation Canada Inc., *Guelph*
 ICI Canada Inc., *Concord*
 International Group (The), *Toronto*
 Jamieson Laboratories Ltd., *Windsor*
 Kronos Canada Inc., *Varenes*
 Les Emballages Knowlton Inc., *Knowlton*
 Nacan Products Limited, *Brampton*
 NOVA Chemicals Corporation, *Calgary, Corruna, Joffre, Moore Township, St. Clair River*
 Oakside Chemicals Limited, *London*
 Orica Canada Inc., *Brownsburg*
 Osmose-Pentox Inc., *Montreal*
 Oxy Vinyls Canada Inc., *Niagara Falls*
 Petro-Canada, *Oakville*
 Pharmascience inc., *Montreal*
 PolyOne Canada Inc., *Niagara Falls, Orangeville*
 PPG Canada inc., *Beauharnois*
 Procter & Gamble Inc., *Brockville*
 Prolab Technologies Inc., *Thetford Mines*
 Purdue Pharma, *Pickering*
 Reagens Canada Ltd., *Bradford*
 Rohm and Haas Canada Inc., *Scarborough*
 Saskatchewan Mineral, *Chaplin*
 Sifto Canada Corp., *Goderich, Unity*
 Tech Blend s.e.c., *Saint-Jean-sur-Richelieu*
 Tri-Tex Co. Inc., *Saint-Eustache*
 Trillium Health Care Products Inc., *Perth, Brockville, Prescott, Newmarket*
 Wyeth-Ayerst Canada Inc., *Saint-Laurent*

CONSTRUCTION

AnMar Mechanical & Electrical Contractors Ltd., *Lively*
 ATCO Structures Inc., *Calgary, Spruce Grove*
 Basin Contracting Limited, *Enfield*
 Floating Pipeline Company Incorporated (The)
Halifax, Saint John
 Lockerbie & Hole Industrial Inc., *Edmonton*
 M J Roofing & Supply Ltd., *Winnipeg*
 Mira Timber Frame Ltd., *Stoney Plain*
 Moran Mining & Tunnelling Ltd., *Lively*
 Northland Building Supplies Ltd., *Edmonton*
 Production Paint Stripping Ltd., *Toronto*
 Whitemud Iron Works, *Edmonton*

DAIRY

Agrilait Cooperative agricole, *Saint-Guillaume*
 Agropur Coopérative, *Beauceville*
 Amalgamated Dairies Limited, *Summerside*
 ADL O'Leary, *Summerside*
 ADL St. Eleanors, *Summerside*
 West Royalty, *Charlottetown*
 O'Leary and Perfection Foods, *Summerside*
 Atwood Cheese Company, *Atwood*
 Avalon Dairy Ltd., *Vancouver*
 Baskin - Robbins Ice Cream, *Peterborough*
 Entreprise Le Mouton Blanc, *La Pocatière*
 Farmers Co-Operative Dairy Limited, *Halifax*
 Foothills Creamery Ltd., *Calgary, Edmonton*
 Hewitt's Dairy Limited, *Hagersville*
 Kerry Québec, *Sainte-Claire*
 La Fromagerie Polyethnique inc., *Saint-Robert*
 Laiterie Chagnon Ltée, *Waterloo*
 Laiterie Charlevoix Inc., *Baie-Saint-Paul*
 Lone Pine Cheese Ltd., *Didsbury*
 Neilson Dairy Ltd., *Georgetown, Halton Hills, Ottawa*
 Nutrinor (Laiterie Alma), *Saint-Bruno*
 Parmalat Dairy & Bakery Inc., *Etobicoke*
 Pine River Cheese & Butter Co-operative, *Ripley*
 Roman Cheese Products Limited, *Niagara Falls*
 S.C.A. de L'île-aux-Grues, *L'île-aux-Grues*
 Salerno Dairy Products Ltd., *Hamilton*

Saputo Inc., *Montreal (H.O.)*
 Saputo Foods Limited, *Brampton*
 Saputo Cheese, G.P., *Saint-Léonard*
 Saputo Foods Limited, *Tavistock*
 Silani Sweet Cheese Ltd., *Schomberg*

ELECTRICAL & ELECTRONICS

ABB Inc., *Lachine, Quebec, Saint-Laurent, Varennes*
 ABB Bomem Inc., *Quebec*
 Alstom Hydro Canada inc., *Sorel-Tracy*
 ASCO Valve Canada, *Brantford*
 Best Theratronics Ltd., *Ottawa*
 BreconRidge Corporation, *Ottawa*
 Broan-NuTone Canada, *Mississauga*
 Candor Industries Inc., *Toronto*
 Century Circuits Inc., *Scarborough*
 Circuits GRM Enr., *Ville Saint-Laurent*
 Crest Circuits Inc., *Markham*
 Cogent Power Inc., *Burlington*
 DALSA Semiconducteur Inc., *Bromont*
 DRS Technologies Canada Ltd., *Carleton Place*
 Electrolux Canada Corp., *L'Assomption*
 Energizer Canada Inc., *Walkerton*
 EPM Global Services Inc., *Markham*
 Ferraz Shawmut Canada Inc., *Toronto*
 General Electric Canada, *Peterborough*
 General Dynamics Canada, *Ottawa, Calgary*
 GGI International, *Lachine*
 IBM Canada Ltd., *Markham*
 Ideal Industries (Canada) Corp., *Ajax*
 Master Flo Technology Inc., *Hawkesbury, North Vancouver*
 MDS Nordion Inc., *Kanata*
 Milplex Circuit (Canada) Inc., *Scarborough*
 Nortel, *Brampton*
 Osram Sylvania Ltd., *Mississauga*
 Osram Sylvania ltée, *Drummondville*
 PC World, *Scarborough*
 Pivotal Power Inc., *Bedford*
 Powersmiths International Corp., *Brampton*
 Prysmian Systèmes et Câbles, *Saint-Jean-sur-Richelieu*
 Purfics ES Inc., *London*
 Rheintmetall Canada Inc., *Saint-Jean-sur-Richelieu*
 Rockwell Automation Canada Inc., *Cambridge*
 S&C Electric Canada Limited, *Toronto*

Southwire Canada, *Stouffville*
 Surette Battery Company Limited, *Springhill*
 Tyco Thermal Controls (Canada) Ltd., *Trenton*
 Vansco Electronics Ltd., *Winnipeg*

ELECTRICITY GENERATION

Ontario Power Generation, *Toronto*

FERTILIZER

Agrium Inc., *Redwater*
 Mosaic Potash Belle Plaine, *Belle Plaine*
 Mosaic Potash Colonsay, *Colonsay*
 Mosaic Potash Esterhazy, *Esterhazy*
 Simplot Canada (II) Limited, *Portage La Prairie*

FOOD & BEVERAGE

A. Harvey & Company Limited, *St. John's*
 Argentia Freezers, *Dunville*
 Abattoir Louis Lafrance & Fils Ltée,
Saint-Séverin de Proulxville
 Abattoir Saint-Germain inc, *Saint-Germain-de-Grantham*
 ACA Co-operative Limited, *Kentville*
 Eastern Protein Foods Limited, *Kentville*
 AgEnergy Co-operative Inc., *Guelph*
 Agri-Marché Inc., *Saint-Isidore*
 Alberta Processing Co., *Calgary*
 Aliments Ouimet-Cordon Bleu Inc., *Anjou*
 Aliments Reinhart Foods Limited/Ltée, *Stayner*
 Aliments Ultima Foods inc., *Granby*
 Andrés Wines Ltd., *Grimbsy*
 Aljane Greenhouses Ltd., *Pitt Meadows*
 Alkema Greenhouses Ltd., *Grimbsy*
 Andrew Hendriks and Sons Greenhouses, *Beamsville*
 Freeman Herbs, *Beamsville*
 Andrew's Greenhouses Inc., *Ruthven*
 Antonio Bajar Greenhouses Limited, *Newmarket*
 Atrahan Transformation Inc., *Yamachiche*
 Balfour Greenhouses Ltd., *Fenwick*
 Beta Brands Limited, *London*
 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, Strathroy, Tecumseh*
 Border Line Feeders Inc., *Ceylon*

Breakwater Fisheries Limited, *Cottlesville*
 Brookdale Treeland Nurseries, *Niagara-on-the-Lake*
 Browning Harvey Limited, *St. John's, Corner Brook, Grand Falls-Windsor*
 Bunge Canada, *Montreal*
 Burnbrae Farms Limited, *Lyn, Brockville, Calgary, Mississauga, Pandora, Winnipeg*
 Ferme Saint-Zotique, Saint-Zotique
 Les Oeufs Beco, Upton
 Island Egg, Westholme
 Maple Lyn Foods Ltd., Strathroy
 C & M Seeds, *Palmerston*
 Cadbury Adams Canada Inc., *Toronto*
 Café Vittoria Inc., *Sherbrooke*
 Campbell Company of Canada, *Listowel*
 Canbra Foods Ltd., *Lethbridge*
 Canada Bread Company Ltd., *Calgary, Concord, Etobicoke, Hamilton, North Bay, Scarborough, Toronto*
 Multi-Marques Inc., Laval
 Cantor Bakery, *Montreal*
 Canyon Creek Soup Company Ltd., *Edmonton*
 Cargill Animal Nutrition, *Camrose, Lethbridge*
 Cargill Foods, *High River, Toronto*
 Cargill Limited, *Winnipeg, Sarnia*
 Cargill Aghorizons, *Melbourne, Princeton, Shetland, Staples, Strathroy, Talbotville, Brandon, Dauphin, Elm Creek, Winnipeg, Canora, Nicklen Siding, North Battleford, Rosetown, Yorkton, Albright, Edmonton, Lethbridge, Rycroft, Vegreville*
 Cargill Meat Solutions, *Guelph*
 Casco Inc., *Etobicoke, Cardinal, London, Port Colborne*
 Cavendish Farms, *New Annan*
 Cedar Field Greenhouses Ltd., *Freelton*
 Cedarline Greenhouses, *Dresden*
 Champion Feed Services Ltd., *Barrhead*
 Champion Petfoods Ltd., *Morinville*
 Clearwater Seafoods Limited Partnership, *Bedford*
 Clearwater Lysters Ltd., Arichat, Clark's Harbour
 Continental Seafoods, Shelburne
 Grand Bank Seafoods, Grand Bank
 Highland Fisheries, Glace Bay
 Pierce Fisheries, Lockeport
 St. Anthony Seafoods Limited, Partnership, St. Anthony
 Coca-Cola Bottling Company, *Toronto, Calgary*
 Cold Springs Farm Limited, *Thamesford*
 Colonial Florists Ltd., *St. Catharines*
 Conestoga Meat Packers Ltd., *Breslau*
 Connors Bros., *Blacks Harbour*
 Continental Mushroom Corporation (1989) Ltd., *Metcalfe*
 CosMic Plants Inc., *Beamsville*
 County Grower Greenhouse, *Medicine Hat*
 Crowley Farms Norwood Ltd., *Norwood*
 Cuddy Food Products, *London*
 Dallaire Spécialités Inc., *Rouyn-Noranda*
 Diarytown Products Ltd., *Sussex*
 Diageo Canada Inc., *Gimli*
 Domric International Ltd., *Ruthven*
 Don Chapman Farms Ltd./Lakeview Vegetable Processing Inc., *Queensville*
 Dykstra Greenhouses, *St. Catharines*
 E.D. Smith and Sons LP, *Seaforth*
 E.D. Smith and Sons LP, *Winoma*
 East Side Acres, *Leamington*
 Effem Inc., *Bolton, Newmarket*
 Exceldor Coopérative Avicole, *Saint-Anselme*
 Export Packers Foods Limited, *Paris*
 Family Muffins & Desserts Inc., *Sherwood Park*
 Family Tradition Foods (Tecumseh) Inc., *Tecumseh*
 Fancy Pokket Corporation, *Moncton*
 Federated Co-operatives Limited, *Saskatoon*
 Ferme Daichemin s.e.n.c, *Saint-Damase, Saint-Pie*
 Ferme Gilles et Francine Lahaie enr., *Saint-Michel-de-Napierreville*
 Ferme Hum-An-Son, *Saint-Malachie*
 Ferme La Rouquine inc., *Chicoutimi*
 Fernlea Flowers Limited, *Delhi*
 Fleischmann's Yeast, *Calgary*
 Flora Park Inc., *Sherrington*
 Foothills Creamery Ltd., *Calgary, Edmonton*
 Lone Pine Cheese Ltd., Didsbury
 Freybe Gourmet Foods Ltd., *Langley*
 Frito Lay Canada, *Mississauga, Cambridge, Lethbridge, Lévis, New Minas, Pointe-Claire, Taber*
 Funster Natural Foods Inc., *London*
 Furlani's Food Corporation, *Mississauga*
 G.E. Barbour Inc., *Sussex*
 Ganong Bros. Limited, *St. Stephen*
 Gencor Foods Inc., *Kitchener*
 General Mills Canada Corporation, *Midland, Saint-Hubert, Winnipeg*

- George Sant & Sons Greenhouses, *Kleinburg*
 Green Mountain Gardens, *Stoney Creek*
 Greenfield Gardens (Niagara) Inc., *Fenwick*
 Greenwood Mushroom Farm, *Ashburn, Greenwood*
 Griffith Laboratories Ltd., *Toronto*
 Gull Valley Greenhouses, *Blackfalds*
 H.J. Heinz Company of Canada Ltd., *Leamington*
 Heritage Frozen Foods Ltd., *Edmonton*
 Hershey Canada Inc.
 Hillside Hothouse Ltd., *Ruthven*
 Hiram Walker & Sons Limited
 Homeland Grain Inc., *Burgessville*
 HSF Foods Ltd., *Centreville*
 Hubberts Industries, *Brampton*
 Humpty Dumpty Snack Foods Inc., *Summerside*
 Ice River Springs Water Co. Inc., *Feversham*
 Icewater Seafoods Inc., *Arnold's Cove*
 Imperial Tobacco Canada Ltd, *Montreal*
 Inovata Foods Corp., *Edmonton*
 Jadee Meat Products Ltd., *Beamsville*
 Jeffery's Greenhouses Plant II Limited, *Jordan Station*
 Jolly Farmer Products Inc., *Northampton*
 JTI-Macdonald Corp., *Montreal*
 Kraft Canada Inc., *Ville Mont-Royal, Biscuiterie Montréal*
 East York Bakery, *Toronto*
 Kuyvenhoven Greenhouses Inc., *Brampton, Halton Hills*
 La Coop Fédérée, *Montreal, Joliette, Saint-Romuald*
 La Corporation d'aliments Ronzoni du Canada, *Montreal*
 La Fromagerie Polyethnique inc., *Saint-Robert*
 La Rocca Creative Cakes, *Thornhill*
 Laprise Farms Ltd., *Pain Court*
 Lassonde Beverages Canada, *Toronto*
 Leahy Orchards Inc., *Franklin, Saint-Antoine Abbé*
 Legacy Cold Storage Ltd., *Chilliwack*
 Legal Alfalfa Products Ltd., *Legal*
 Les Aliments Dainty Foods, *Windsor*
 Les Aliments Dare Limitée, *Sainte-Martine*
 Les Cuisines Gaspésiennes Ltée, *Matane*
 Les Distilleries Schenley Inc., *Salaberry-de-Valleyfield*
 Les Jardiniers du chef, *Blainville*
 Les Luzernes Belcan du Lac St-Jean Inc.,
Hébertville Station
 Les Oeufs-Bec-O inc., *Upton*
 Les Oeufs d'Or, *Val d'Or*
 Les Productions Horticules Demers Inc., *St-Nicolas*
 Les produits Zinda Canada Inc., *Candiac*
 Les Serres Daniel Lemieux Inc., *Saint-Rémi*
 Les Serres Florinove, *Saint-Paulin*
 Les Serres Gola, *Mont Saint-Grégoire*
 Les Serres Granby Inc., *Granby*
 Les Serres Maedler (1989) inc., *Nyon*
 Les Serres R. Bergeron Inc., *Saint-Apollinaire*
 Les Serres Riel inc., *Saint-Rémi*
 Les Serres Sagami (2000) Inc., *Chicoutimi, Sainte-Sophie*
 Les Serres Nouvelles Cultures Inc., *Sainte-Sophie*
 Les Serres Serge Dupuis, *Saint-Élie-de-Caxton*
 Les Serres Saint-Benoît-du-Lac inc., *Austin*
 Les Viandes du Breton Inc., *Rivière-du-Loup*
 Lilydale Cooperative Ltd., *Edmonton*
 Lucerne Foods, *Calgary*
 Lyo-San Inc., *Lachute*
 Madelimer Inc., *Grande-Entrée*
 Maison des Futailles, *Saint-Hyacinthe*
 Maple Leaf Foods Inc.
 Canada Bread Company Ltd.
 Multi-Markets Inc., *Laval*
 Garden Province Meats Inc.
 Hub Meats, *Moncton*
 Landmark Feed Inc.
 Larsen Packers Limited
 Maple Leaf Consumer Foods
 Maple Leaf Fresh Foods
 Maple Leaf Poultry
 Rothsay
 Shur-Gain
 Maple Lodge Farms Ltd, *Norval*
 Marsan Foods Limited, *Toronto*
 Mastronardi Estate Winery, *Kingsville*
 McCain Foods (Canada), *Calgary*
 Menu Foods, *Streetsville*
 Meyers Fruit Farms and Greenhouses, *Niagara-on-the-Lake*
 Midwest Food Products Inc., *Carberry*
 Minor Bros. Farm Supply Ltd, *Dunnville*
 Mitchell's Gourmet Foods Inc, *Saskatoon*
 Montréal Pita Inc., *Montreal*
 Mother Parkers Tea & Coffee Inc., *Ajax, Mississauga*
 Mt. Lehman Greenhouses (1999) Ltd., *Mt. Lehman*
 Nadeau Poultry Farm Ltd., *Saint-François-de-Madawaska*
 Nanticoke Greenhouses Limited, *Simcoe*

Nature Fresh Farms, *Leamington*
 NESCO Meats Inc., *Melfort*
 Nestlé Canada Inc., *London*
 Nestlé Purina PetCare, *Mississauga*
 Nestlé Waters Canada, *Guelph*
 Noël Wilson & Fils S.N.C., *Saint-Rémi*
 Norfolk Greenhouses Inc., *Courtland*
 Norman Jobin Farms, *Maidstone*
 Northern Alberta Processing Co., *Edmonton*
 Northumberland Co-operative Limited, *Miramichi*
 Nunavut Development Corporation, *Rankin Inlet*
 Oakrun Farm Bakery Ltd, *Ancaster*
 Ocean Legacy, *L'Étang*
 Ocean Nutrition Canada Ltd., *Dartmouth*
 Okanagan North Growers Cooperative, *Winfield*
 Old Dutch Foods Ltd., *Winnipeg*
 Olymel, *Red Deer*
 Omstead Foods Limited, *Wheatley*
 OrangeLine Farms Limited, *Leamington*
 Otter Valley Foods Inc., *Tillsonburg*
 Oxford Frozen Foods Limited, *Oxford*
 Hillaton Foods, *Port Williams*
 P. Ravensbergen & Sons. Ltd., *Smithville*
 Palmerston Grain, *Palmerston*
 Pelee Hydroponics, *Leamington*
 Pepe's Mexican Foods Inc., *Etobicoke*
 Pepsi-Cola Canada Beverages, *Mississauga*
 PepsiCo Foods of Canada Inc., *Peterborough, Trenton*
 Pernod Ricard Canada, *Windsor*
 Poinsettia Plantation (The), *Bothwell*
 Prairie Mushrooms (1992) Ltd., *Sherwood Park*
 Principality Foods Ltd., *Edmonton*
 Production Serres Yargeau Inc., *Sherbrooke*
 Pyramid Farms Ltd., *Leamington*
 Quality Fast Foods, *Edmonton*
 Quark Farms Ltd., *Mossbank*
 Regal Greenhouses Inc., *Virgil*
 Rekker Gardens Ltd, *Bowmanville*
 Rich Products of Canada Limited, *Fort Erie*
 Rol-land Farm Limited, *Campbellville*
 Ronzoni Foods of Canada, *Montreal*
 Rosa Flora Limited, *Dunnville*
 Rothmans, Benson & Hedges Inc., *North York*
 Sakai Spice (Canada) Corporation, *Lethbridge*
 Scotian Halibut Limited, *Clarks Harbour,*
 Lower Woods Harbour
 Schenck Farms & Greenhouses Co. Limited, *St.*
 Catharines
 Schneider Foods, *Ayr, Kitchener, Mississauga,*
 Port Perry, Toronto
 Schuurman Greenhouses Ltd., *Branchton*
 Sepallo Operations LP, *Barrhead*
 Sepp's Gourmet Foods Ltd, *Delta, Richmond Hill*
 Sifto Canada Corp., *Goderich*
 Soil Less Growing Systems Inc., *Calgary*
 St. David's Hydroponics Ltd., *Niagara-on-the-Lake,*
 Beamsville, St. Davids
 Stag's Hollow Winery and Vineyard Ltd., *Okanagan Falls*
 Stratus Vineyards Limited, *Niagara-on-the-Lake*
 Streef Produce Ltd., *Princeton*
 Sucre Lantic Limitée, *Montreal*
 Sun Valley Foods Canada, *London*
 Sunny Crunch Foods Ltd., *Markham*
 Sunrise Bakery Ltd., *Edmonton*
 Sunrise Farms Limited, *Kingsville, Leamington*
 Sunrise Greenhouses Ltd., *Vineland Station*
 Sun-Rype Products Ltd., *Kelowna*
 SunSelect Produce (Delta) Inc, *Aldergrove, Delta*
 Sunshine Peaks, *Leamington*
 Sunterra Meats Ltd., *Innisfail*
 Sunwold Farms Ltd., *Acme*
 Largie Farm, *Dutton*
 Peterborough Farms, *Indian River*
 Supraliment s.e.c., *Trois-Rivières*
 SYSCO Food Services of *Calgary, Kelowna, Toronto*
 Target Marine Products Ltd, *Sechelt*
 Thomson Meats Ltd., *Melfort*
 Townline/Processing Ltd., *Wellington*
 Transfeeder Inc., *Olds*
 Trevisanatto's Greenhouses, *Thunder Bay*
 Trochu Meat Processors, *Trochu*
 Trophy Foods Inc., *Calgary*
 Unifeed & Premix, *Lethbridge*
 Unilever Canada, *Rexdale, Brampton*
 Valleyview Gardens, *Scarborough, Markham*
 Van Geest Bros. Limited, *Grimsby, St. Catharines*
 Van Noort Florists, *Niagara-on-the-Lake*
 Vandermeer Nursery Ltd., *Ajax*
 VanZanten Greenhouses, *Fenwick*

Veri Hydroponics Inc., *Exeter*
 Versacold Corporation, *Vancouver*
 Viandes Kamouraska Inc., *Saint-Pascal*
 Vincor International Inc., *Niagara Falls*
 Virgil Greenhouses Ltd., *Niagara-on-the-Lake*
 Vitoeuf Inc., *Saint-Hyacinthe*
 Voogt Greenhouses Inc., *Niagara-on-the-Lake*
 Voortman Cookies Ltd., *Burlington*
 W.J. O'Neil & Sons Ltd., *Maidstone*
 W. Martens Greenhouses Inc., *Leamington*
 Waldan Gardens, *Wainfleet*
 Waterloo Flowers Limited, *Breslau*
 Weesjes Greenhouses Ltd., *St. Thomas*
 Westglen Milling Ltd., *Barhead*
 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*
 Pete's Mexican Foods Inc., *Etobicoke*
 Weston Fruit Cake Co., *Cobourg*
 Ready Bake Foods Inc., *Mississauga*
 Sir Bagel, *Concord*
 Willow Spring Hydroponics, *Bothwell*
 Willy's Greenhouses Ltd, *Niagara-on-the-Lake*
 Willy Haeck et Fils Inc., *Saint-Rémi*
 Witzke's Greenhouses Ltd., *Courtrice*

FOUNDRY

Ancast Industries Ltd, *Winnipeg*
 Bibby-Ste-Croix, *Sainte-Croix*
 Breyer Casting Technologies Inc., *Brampton*
 Canadian Specialty Castings Incorporated, *Niagara Falls*
 Century Pacific Foundry Ltd., *Surrey*
 Crowe Foundry Limited, *Cambridge*
 Deloro Stellite Inc., *Belleville*
 Elkem Métal Canada Inc, *Chicoutimi*
 ESCO Limited, *Port Coquitlam, Port Hope*
 Gamma Foundries Limited, *Richmond Hill*
 Grenville Castings Limited, *Merrickville, Perth, Smith Falls*
 M.A. Steel Foundry Ltd., *Calgary*
 Magotteaux Ltée, *Magog*
 Mueller Canada, *Saint-Jérôme*

Norcast Castings Company Ltd., *Mont-Joli*
 Ramsden Industries Limited, *London*
 Supreme Tooling Group, *Toronto*
 Unison Engine Components, *Orillia*
 Vehcom Manufacturing, *Guelph*
 Wabi Iron & Steel Corporation, *New Liskeard*
 Wabtec Foundry-Div. of Watec Canada Inc., *Wallaceburg*

GENERAL MANUFACTURING

2527-4572 Québec Inc (Les Serres Bergeron),
Notre-Dame-du-Laus, Notre-Dame-de-la-Salette
 30852030 Québec Inc (Serres Maryvon), *L'Ascension*
 3M Canada Inc., *London, Brockville, Etobicoke, Morden, Perth*
 A1 Label Inc, *Toronto*
 ABCO Industries Limited, *Lunenburg*
 Aberfoyle Metal Treaters Ltd, *Guelph*
 Acuity Innovative Solutions, *Richmond Hill*
 Acadian Platers Company Limited, *Etobicoke*
 Accuride Canada Inc., *London*
 Active Burgess Mould & Design, *Windsor*
 Advanced Ag and Industrial Ltd., *Biggar*
 Airex Industries Inc., *Montreal, Drummondville*
 Alcan Packaging Canada Limited, *Weston*
 Aluminum Surface Technologies, *Burlington*
 American Color Graphics Inc., *Stevensville*
 Anchor Lamina Inc., *Cambridge, Mississauga, Windsor*
 Anchor Lamina Inc., *Reliance Fabrications, Tilbury*
 Art Design International Inc., *Saint-Hubert*
 Artopex Plus Inc., *Granby, Laval*
 Arva Industries Inc., *St. Thomas*
 Associated Tube Industries, *Markham*
 Automatic Coating Limited, *Scarborough*
 BabCock & WilCox Canada Ltd., *Cambridge*
 Baron Metal Industries Inc, *Woodbridge*
 BASF The Chemical Company, *Georgetown*
 Batteries Power (Iberville) Ltée, *Saint-Jean-sur-Richelieu*
 B.C. Instruments, *Schomberg, Barrie*
 Bentofix Technologies Inc., *Barrie*
 Bernard Breton Inc., *Saint-Narcisse-de-Beaurivage*
 Best Color Press Limited, *Vancouver*
 Blount Canada Ltd., *Guelph*
 Borden Cold Storage Limited, *Kitchener*
 Bourgault Industries Ltd., *Saint-Brieux*
 Braam's Custom Cabinets, *St. Thomas*

Brampton Engineering Inc., *Brampton*
Building Products of Canada Corp., *Ville LaSalle, Edmonton, Pont-Rouge*
Canada Mold Technology, *Woodstock*
CanCoil Thermal Corporation, *Kingston*
Cambridge Brass Inc., *Cambridge*
Canwood Furniture Inc., *Penticton*
Carrière Union Ltée, *Quebec City*
Casavant Frères s.e.c., *Saint-Hyacinthe*
CCL Container Aerosol Division, *Penetanguishene*
Cello Products Inc., *Cambridge*
Centerline (Windsor) Limited, *Windsor*
Centre du Comptoir Sag-Lac Inc., *Alma*
CertainTeed Gypsum Canada Inc, *Mississauga*
Chandelles Tradition Ltée, *Laval*
ChromeShield Co., *Windsor*
Climatizer Insulation Inc., *Etobicoke*
CMP Advanced Mechanical Solutions (Ottawa) Ltd
CMP Solutions Mécaniques Avancée Ltée, *Châteauguay*
CNH Canada Ltd., *Saskatoon*
Colonial Tool Group Inc., *Windsor*
Colourific Coatings Ltd., *Mississauga*
Columbia Industries Limited, *Sparwood*
Comp-Tech Mfg. Inc., *North York*
Compagnies du Groupe DATA (Les), *Granby*
Conference Cup Ltd, *London*
Control Skateboards Inc, *Saint-Nicolas*
Cosella-Dorcken Products Inc., *Beamsville*
Crown Metal Packaging Canada LP, *Concord, Ville Saint-Laurent*
CUMI Canada Inc., *Summerside*
Curtiss-Wright Flow Control, Indal Technologies, *Mississauga*
Data Group of Companies (The), *Brampton, Drummondville, Brockville*
Davis Wire Industries Ltd., *Delta*
Dawn Canadian Labels Inc., *Markham*
Descor Industries Inc., *Markham*
DEW Engineering and Development Limited, *Miramichi, Ottawa*
Dipaolo CNC Retrofit Ltd., *Mississauga*
Dixie Electric Ltd., *Concord*
Durable Release Coaters Limited, *Brampton*
Dura-Chrome Limited, *Wallaceburg*
Dutch Industries Ltd., *Pilot Butte, Regina*
EHC Global, *Oshawa*
EJC Mining Equipment Inc., *Burlington*
Emballages Alcan Lachine, *Lachine*
Emerson Process Mgmt., *Edmonton*
Engauge Controls Inc., *Lakeshore*
Enstel Manufacturing Inc., *Concord*
Envirogard Products Ltd., *Richmond Hill*
Ezeflow Inc., *Granby*
Fabrication S Houle inc., *Saint-Germain-de-Grantham*
Fantech Limited, *Bouctouche*
Fileco Inc., Division of Teknion Furniture Systems, *Concord*
Floform Industries Ltd., *Winnipeg, Regina, Saskatoon, Edmonton*
Franke Kindred Canada Limited, *Midland*
Futuretek-Bathurst Tool Inc., *Oakville*
Garant, *Saint-François*
Garland Commercial Ranges Limited, *Mississauga*
Garrtech Inc, *Stoney Creek*
Genfoot Inc., *Montreal*
George A. Wright & Son General Services Inc., *Kingston*
Georgia-Pacific Canada, Inc., *Thorold*
Global Wood Concepts Ltd., *North York*
Greif Bros. Canada Inc., *Oakville, Stoney Creek*
Groupe Altech 2003 Inc., *Pointe-Claire*
Gunnar Manufacturing Inc., *Calgary*
Hallink RSB Inc., *Cambridge*
Hartmann Canada Inc., *Brantford*
Hendrickson Spring, *Stratford*
Henkel Canada Corporation, Consumer Adhesives, *Brampton*
Heritage Memorials Limited, *Windsor*
Hercules SLR Inc., *Dartmouth*
Hilroy, A Division of MeadWestvaCo Canada LP, *Toronto*
Hitachi Canadian Industries Ltd., *Saskatoon*
Hood Packaging Corporation, *Calgary*
Horst Welding Ltd., *Listowel*
Hurteau & Associés Inc. (Fruits & Passion), *Candiac*
Hydroform Solutions, *Brampton*
Ibis Products Limited, *Scarborough*
Imprimerie Interweb Inc., *Boucherville*
Imprimeries TransContinental S.E.N.C., *Boucherville*
Independent Mirror Industries Inc., *Toronto*
Industrie Bodco Inc., *Saint-François-Xavier*
Industries Graphiques Cameo Crafts Limitée, *Montreal*

Integria Inc., *Saint-Laurent*
 Interface Flooring Systems (Canada) Inc., *Belleville*
 J. A. Wilson Display Ltd., *Mississauga*
 Jay Ge Electroplating Ltd., *Laval*
 Jervis B. Webb Company of Canada Ltd., *Hamilton*
 John Gavel Custom Manufacturing Ltd, *Emo*
 Jones Packaging Inc., *London*
 JTL Integrated Machine Ltd., *Port Colborne*
 Juliana Manufacturing Ltd., *Winnipeg*
 KelCoatings Limited, *London*
 KI Pembroke LP, *Pembroke*
 KIK Custom Products, *Etobicoke*
 Kobay Tool & Stampings Inc., *Scarborough*
 Korex Canada , *Toronto*
 Korex Don Valley ULC, *Toronto*
 Kwalita Labels Inc., *Richmond Hill*
 KWH Pipe (Canada) Ltd., *Huntsville, Saskatoon*
 La compagnie américaine de fer et métaux inc, *Montreal*
 Larsen & D'Amico Manufacturing Ltd., *Edmonton*
 Lee Valley Tools Ltd., *Ottawa, Carp*
 Les Distributions Option Kit Inc., *Quebec*
 Les industries Peinteck Inc., *Chesterville*
 Les Production Ranger (1988) Inc., *Granby*
 Les Technologies Fibrox Ltée, *Thetford Mines*
 Lincoln Electric Canada, *Toronto*
 L'Oréal Canada Inc., *Ville Saint-Laurent*
 Lofthouse Manufacturing Ltd., *Burk's Falls*
 Lowe-Martin Group (The), *Ottawa, Mississauga*
 Ludlow Technical Products Canada, Ltd., *Gananoque*
 Maclean Engineering & Marketing Co. Limited, *Collingwood*
 Magnum Signs Inc., *Kent Bridge*
 Maksteel Service Centre, *Mississauga*
 Manor Tool & Die Ltd., *Oldcastle*
 Manufacturier TechCraft Inc., *Laval*
 Marcel Depratto Inc, *Saint-Louis-de-Richelieu*
 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*
 Metal World Incorporated, *Torbay*
 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*
 Meuble Idéal Ltée, *Saint-Charles-de-Bellechase*
 Meubles Canadel Inc., *Louiseville*
 Miralis inc., *Saint-Anaclet-de-Lessard*
 MLT International, *Saint Pie*
 Mobilier MEO Ltée, *La Durantaye*
 Momentum, *Newmarket*
 Mondo America Inc., *Laval*
 Montebello Packaging, *Hawkesbury*
 Multy Industries Inc., *North York*
 Nexans Canada Inc., *Montreal-East*
 Nord Gear Limited, *Brampton*
 North American Decal, *Markham*
 Norwest Precision Limited, *Weston*
 Nutech Brands Inc., *London*
 Oberthur Jeux et Technologies Inc., *Montreal*
 OCM Manufacturing, *Ottawa*
 Oetiker Limited, *Alliston*
 O-I Canada Corporation, *Montreal*
 Olympic Tool & Die Inc., *Mississauga*
 Owens Corning Canada Inc., *Toronto*
 Padinox Inc., *Charlottetown, Winsloe*
 Paisley Brick & Tile Co. Ltd., *Paisley*
 Patt Technologies Inc., *Saint-Eustache*
 Pavage U.C.P. Inc., *Charlesbourg*
 Pavex Ltée, *Jonquière*
 Pididi Design Associates Limited, *Mississauga*
 Pinnacle Finishing, *Chatham*
 Pinnacle Mold Inc., *Tecumseh*
 Placage Chromex Inc., *Sainte-Foy*
 Placer Dome Canada Limited, *Vancouver*
 Polycote Inc., *Concord*
 Polyainers Inc., *Toronto*
 Pomatek Inc., *Delson*
 Poutrelles Delta Inc., *Sainte-Marie*
 PowerComm Inc., *Edmonton, Grande Prairie, Hardisty, Lloydminster, Nisku, Olds, Provost*
 Prémoulé Countertops, *Saint-Augustin-de-Desmaures*
 Prestige Glass International, *Elliot Lake*

- PrintWest Communications Ltd., *Regina, Saskatoon*
 PRO-ECO Limited, *Oakville*
 Procter & Gamble Inc., *Brockville*
 Quebecor World Islington, *Etobicoke*
 Quebecor World Aurora, *Aurora*
 Quebecor World Concord, *Concord*
 Quebecor World Dartmouth, *Dartmouth*
 Quebecor World Edmonton, *Edmonton*
 Quebecor World LaSalle, *LaSalle*
 Quebecor World Richmond Hill, *Richmond Hill*
 Quebecor World Web Press Graphics, *Port Coquitlam*
 Quick Build Technologies, *Sherwood Park*
 Ready Rivet & Fastener Ltd., *Kitchener*
 Reko International Group Inc., *Oldcastle*
 Reko Tool & Mould (1987) Inc., *Oldcastle*
 Reko Automation & Machine Tool, *Tecumseh*
 Concorde Machine Tool, *Tecumseh*
 Resco Canada Inc., *Grenville-sur-la-Rouge*
 RLD Industries Ltd, *Ottawa*
 Royal Dynamics Co., *Woodbridge*
 Royal Machine Manufacturing Co., *Woodbridge*
 Royal Window Coverings (Canada) Inc, *Boisbriand*
 Royalbond Co., *Woodbridge*
 Russel Metals Inc., *Burlington, Calgary*
 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*
 Sabre Machnie Tool Inc., *Oldcastle*
 Saint-Gobain Ceramic Materials Canada Inc., *Niagara Falls*
 Samuel Strapping Systems, *Scarborough*
 Sandvik Materials Technology Canada, *Arnrior*
 Sandvik Tamrock Canada Inc., *Lively*
 Sani Métal Ltée, *Quebec*
 Scapa Tapes North America, *Renfrew*
 Shorewood Packaging Corp., *Brockville, Scarborough*
 Siemens Milltronics Process Instruments Inc.,
Peterborough
 Simmons Canada Inc., *Brampton*
 Snap-on Tools of Canada Ltd., *Newmarket*
 Société Laurentide Inc., *Shawinigan*
 Sonaca NMF Canada, *Mirabel*
 Soprema Inc., *Drummondville*
 Spartek Systems, *Sylvan Lake*
 Specialty Porcelain Products Inc., *Burlington*
 Sportspal Products, *North Bay*
 Stanley Canada Corporation, *Smiths Falls*
 Steelcase Canada Ltd., *Markham*
 Stepan Canada Inc., *Longford Mills*
 Suntech Heat Treating Ltd., *Brampton*
 Superior Radiant Products Ltd., *Stoney Creek*
 Techform Products Limited, *Penetanguishene*
 Teknion Furniture Systems, *Toronto*
 Teknion Roy & Breton Inc., *Saint-Romauld*
 RBlogistek, *Saint-Romuald*
 RBTek, *Saint-Romuald*
 Roy & Breton, *Saint-Vallier*
 Teknion Concept, *Lévis*
 Teknion Québec, *Montmagny*
 Timken Canada LP, *St. Thomas*
 Times Fiber Canada Limited, *Renfrew*
 Tri-Graphic Printing (Ottawa) Ltd., *Ottawa*
 Thermetco Inc., *Montreal*
 TransContinental Interweb Toronto, *Mississauga*
 TransContinental Gagné, *Louiseville*
 TransContinental RBW Graphics, *Owen Sound*
 TransContinental Printing 2005 G.P., *Saskatoon*
 Trenergy Inc., *St. Catharines*
 Tube-Fab Ltd., *Mississauga, Charlottetown*
 Ultramet Industries Inc., *Breslau*
 Uni-Fab, *Oldcastle*
 Unifiller Systems Inc., *Delta*
 Unique Tool & Gauge Inc., *Windsor*
 Unitrak Corporation Limited, *Port Hope*
 USNR, *Plessisville*
 VA TECH Ferranti-Packard Transformers Ltd., *Hamilton*
 Van Wyck Packaging Ltd., *Owen Sound*
 Vannatter Group Inc., *Wallaceburg*
 Velcro Canada Inc., *Brampton*
 Vesta Marble & Granite Ltd., *Ottawa*
 V.N. Custom Metal Inc., *North York*
 VicWest Steel, *Oakville*
 Wabash Alloys Mississauga, *Mississauga*
 Waiward Steel Fabricators Ltd., *Edmonton*
 Walsh Brothers Welding, *Mitchell*

Welland Forge, *Welland*
 Welsh Industrial Manufacturing Inc., *Stoney Creek*
 Wescam Inc., *Burlington*
 Wheeltronic Ltd., *Mississauga*
 Windham Harvest Specialties Limited, *Simcoe*
 Woodman Machine Products Ltd., *Kingston*
 ZENON Environmental Inc., *Oakville*

LIME

Carmeuse Beachville (Canada) Limited, *Blind River*
 Carmeuse Lime (Canada) Limited, *Dundas, Ingersoll*
 Chemical Lime Company of Canada Inc., *Langley*
 Graymont (NB) Inc., *Havelock*
 Graymont (QC) Inc., *Bedford*
 Graymont Western Canada Inc., *Calgary*

MINING

Barrick Gold Corporation, *Rouyn-Noranda*
 BHP Billiton Diamonds Inc., *Yellowknife*
 Canadian Salt Company Limited (The), *Pugwash*
 Construction DJL Inc., *Boucherville, Carignan*
 Continental, division de Construction DJL Inc.,
Boucherville, Shawinigan
 Pavages Beau-Bassin, division de Construction DJL Inc.,
New Richmond, Cascapédia
 De Beers Canada Inc., *Toronto, Yellowknife, Timmins*
 Demix Agrégats, *Varennes*
 Douglas Barwick Inc., *Brockville*
 Echo Bay Mines Ltd., *Edmonton*
 Foseco Canada Inc., *Guelph*
 Hillsborough Resources Limited, *Campbell River*
 Iron Ore Company of Canada, *Labrador*
 Johnson Matthey Limited, *Brampton*
 Les Tourbières Berger Ltée, *Saint-Modeste*
 Luzenac Incorporated, *Timmins*
 P. Baillargeon Ltée, *Saint-Jean-sur-Richelieu*
 Premier Horticulture Ltée, *Rivière-du-Loup*
 Teck Cominco Limited, *Vancouver, Trail*
 Vale Inco, *Toronto, Copper Cliff, Mississauga,*
Port Colborne, Thompson
 Williams Operating Corporation, *Marathon*
 Xstrata Canada Corporation, *Toronto*
 Xstrata Coal Canada Donkin, *Glance Bay*
 Xstrata Copper Canada, CCR Refinery, *Montreal, Kidd*
Creek, Timmins, Horne, Rouyn-Noranda

Xstrata Nickel Canada, Sudbury Operations, *Falconbridge*
 Fraser Morgan, *Sudbury*
 Fraser Mine, *Sudbury*
 Montcalm, *Timmins*
 Nickel Rim, *Sudbury*
 Raglan, *Nunavik Territory*
 Sudbury Mines, *Sudbury*
 Xstrata Zinc Canada, Brunswick Mine, *Bathurst*
 Brunswick Smelter, *Belledune*
 Fonderie General, *Lachine*
 Noranda-Matagami, *Matagami*
 CEZ Refinery

OIL SANDS

Suncor Energy Inc. - Suncor Group
 Syncrude Canada Ltd. (Oil Sands)

PETROLEUM PRODUCTS

Bitumar Inc., *Hamilton, Montreal*
 Canadian Tire Petroleum, *Toronto*
 Chevron Canada Limited, *Vancouver, Burnaby*
 Chevron Canada Resources, *Calgary*
 Husky Energy Inc., *Calgary*
 Husky Oil Operations Ltd., *Rainbow Lake*
 IKO Industries Ltd., *Brampton, Hawkesbury*
 Imperial Oil Limited, *Calgary*
 Irving Oil Limited, *Saint John*
 Parkland Refining Ltd., *Bowden*
 Pound-Maker Agventures Ltd., *Lanigan*
 Safety-Kleen Canada Inc., *Breslau*
 Shell Canada Limited, *Calgary*
 Ultramar Ltd., *Montreal*

PLASTICS

ABC Group Inc, *Toronto*
 ABC Air Management Systems Inc, *Rexdale, Ronson*
 ABC Flexible Engineered Product Inc, *Etobicoke*
 ABC Plastic Moulding, *Brydon, Orlando*
 MSB Plastics Manufacturing Ltd., *Etobicoke*
 PDI Plastics Inc, *Etobicoke*
 Polybottle Group Limited, *Edmonton, Vancouver*
 Salflex Polymers Ltd, *Weston*
 Salga Associates, *Concord*
 ADS Group Composites Inc., *Thetford Mines*
 Advanced Panel Products Ltd, *Nisku*

AMCOR PET Packaging, *Moncton*
 American Biltrite (Canada) Ltée, *Sherbrooke*
 Amhil Enterprises, *Burlington*
 Armstrong World Industries Canada Ltd, *Montreal*
 Associated Packaging Enterprises Canada Inc.,
Cambridge
 Atlantic Packaging Products Ltd.
 BainUltra inc, *Saint-Nicolas*
 Blue Falls Manufacturing Ltd., *Coleman, Thorsby*
 Camoplast Inc., *Richmond*
 Canplas Industries Ltd., *Barrie*
 Cascades Inopak, *Drummondville*
 CKF Inc., *Etobicoke, Hansport, Langley, Rexdale*
 Clorox Company of Canada Ltd. (The), *Brampton,*
Orangeville
 D & V Plastics Inc., *Acton*
 DDM Plastics, *Tillsonburg*
 Domfoam International inc, *Saint-Léonard*
 Downeast Plastics Ltd., *Cap-Pelé*
 Dura-Tech Industrial & Marine Limited, *Dartmouth*
 DynaPlas Ltd., *Scarborough*
 Emballage St-Jean Ltée, *Saint-Jean-sur-Richelieu*
 Emballages Poliplastic Inc., *Granby*
 Fabrene Inc., *North Bay*
 Fenplast, *Delson*
 Flexahopper Plastics Ltd., *Lethbridge*
 Formica Canada Inc., *Saint-Jean-sur-Richelieu*
 FRP Systems Ltd., *Thunder Bay*
 Greif Bros. Canada Inc., *Belleville*
 GSW Building Products, *Barrie*
 High-Q Design Ltd., *Edmonton*
 Horizon Plastics Company Ltd., *Cobourg*
 Husky Injection Molding Systems Ltd., *Bolton*
 Hymopack Ltd., *Etobicoke*
 Les industries de moulage Polytech Inc., *Granby*
 Imaflex Inc., *Montreal*
 Injection Technologies Inc., *Windsor*
 IPEX Inc., *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*
 Lefko Produits de Plastiques inc, *Magog*
 Les industries de moulage Polymax, *Granby*
 Matrix Packaging Inc., *Mississauga*
 Mold-Masters Limited, *Georgetown*
 Neocon International, *Dartmouth*
 Newdon Industries Ltd., *Fergus*
 Newell Rubbermaid, *Calgary, Mississauga*
 Nigon Technologies Ltd., *MacTier*
 Nu-Co Plastics, *Blenheim*
 Par-Pak Ltd., *Brampton*
 Plastiflex Canada Inc., *Orangeville*
 Plastiques GPR inc., *Saint-Félix-de-Valois*
 PM Plastics, *Windsor*
 Polybrite, *Richmond Hill*
 Polywheels Manufacturing Ltd., *Oakville*
 Reid Canada Inc., *Mississauga*
 Reinforced Plastic Systems, *Mahone Bay, Minto*
 Richards Packaging Inc., *Etobicoke*
 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*
 Montreal 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*
 Roytec Vinyl, *Woodbridge*
 Thermoplast, *Laval*
 Ultimate Plastics Co., *Woodbridge*
 SABIC Specialty Extrusion Canada, *Long Sault*
 Silgan Plastics Canada Inc., *Mississauga*
 Soniplastics, *Boucherville*
 Tarkett Inc., *Farnham*
 Truefoam Limited, *Dartmouth*
 Vifan Canada Inc., *Montreal*

Vulsay Industries Ltd., *Brampton*
 W. Ralston (Canada) Inc., *Brampton*
 Winpak Heat Seal Inc., *Vaudreuil-Dorion*
 Winpak Portion Packaging Ltd., *Toronto*

PULP & PAPER

AbitibiBowater Inc., *Montreal, Alma, Amos, Baie-Comeau, Beaupré, Brooklyn, Bridgewater, Clermont, Dolbeau-Mistassini, Fort Frances, Girardville, Grand Falls-Windsor, Grand-Mère, Iroquois Falls, Jonquière, Maniwaki, Mistassini, Price, Saint-Félicien, Saint-Raymond, Thorold*
 Alberta-Pacific Forest Industries Inc., *Boyle*
 Atlantic Packaging Products Ltd., *Agincourt, Brampton, Don Mills, Ingersoll, Mississauga, Scarborough, Whitby*
 British Confectionery Company Limited, *Mount Pearl*
 Canfor Pulp Limited Partnership, *Intercontinental, Prince George, Northwood*
 Cariboo Pulp and Paper Company Limited, *Quesnel*
 Caraustar Industrial & Consumer Products Group, *Kingston*
 Cascades Inc., *Kingsey Falls*
 Cascades Boxboard Group, *Montreal, East Angus, Jonquière, Toronto, Mississauga*
 Cascades Fine Paper Group, *Saint-Jerôme, Breakeyville, Saint-Jerôme*
 Converting Center, *Saint-Jérôme*
 Cascades Tissue Group, *Candiac, Kingsey Falls, Lachute*
 Cascades Speciality Products Group, *Kingsey Falls*
 Cascades Enviropac, *Berthierville*
 Cascades Lupel, *Cap-de-la-Madelaine*
 Cascades Multi-Pro, *Drummondville*
 Cascades East Angus, *East Angus*
 Cascades Papier Kingsey Falls, *Kingsey Falls*
 Cascades Conversion inc., *Kingsey Falls*
 Daishowa-Marubeni International Ltd., *Peace River*
 Domtar Inc., *Montreal, Dryden, Espanola, Lebel-sur-Quévillon, Ottawa, Terrebonne, Windsor*
 Emballages Mitchel-Lincoln Ltée, *Saint-Laurent, Drummondville*
 Emballages Festival Inc., *Montreal*
 Emballages Smurfit-Stone Canada inc., *La Tuque*
 Smurfit-Stone, *Pontiac*
 F.F. Soucy Inc., *Rivière-du-Loup*
 Greif Bros. Canada Inc., *LaSalle, Niagara Falls*

Interlake Papers, *St. Catharines*
 Irving Forest Services Limited, *St. John*
 Irving Papers Inc., *St. John*
 Irving Tissue Corporation, *Dieppe*
 Irving Tissue Inc., *Dieppe*
 Kord Products Inc., *Brampton*
 Kruger Inc., *Montreal, Trois-Rivières*
 Division de Papiers Journal, *Sherbrooke*
 Atelier de desencrage, *Sherbrooke*
 Longue-Rive Planing and Drying Mill, *Longue-Rive*
 Kruger Products-Quebec, *Gatineau, Crabtree, Sherbrooke*
 Kruger Products-British Columbia, *New Westminster*
 Kruger Products-Alberta, *Calgary*
 Krupack Packaging, *LaSalle, Brampton, Montreal*
 Kruger Wayagamack inc., *Trois-Rivières*
 Corner Brook Pulp & Paper Limited, *Corner Brook*
 Les Cartons Northrich Inc., *Granby*
 Marathon Pulp Inc., *Marathon*
 Maritime Paper Products Limited, *Dartmouth*
 Master Packaging Inc, *Dieppe*
 Neenah Paper Company of Canada, *Terrace Bay*
 NewPage Port Hawkesbury Limited, *Port Hawkesbury*
 Norampac Inc., *Saint-Bruno, Burnaby, Cabano, Calgary, Drummondville, Moncton, Vaughn*
 Norampac Lithotech, *Scarborough*
 Norampac Inc. OCD, *Mississauga*
 Norampac Inc. SPB, *Montreal*
 NorskeCanada, *Campbell River*
 Paper Source Converting Mill Corp.
 Papiers Scott Limitée, *Crabtree, Gatineau, Lennoxville*
 Papiers Stadacona, *Quebec*
 Peterboro Cardboards Limited, *Peterborough*
 Pope & Talbot Ltd., *Nanaimo*
 Rosmar Litho Inc., *Baie D'Urfé*
 SAC Drummond Inc., *Saint-Germain-de-Grantham*
 Sonoco Canada Corporation, *Trois-Rivières*
 St. Marys Paper Ltd., *Sault Ste. Marie*
 Tembec Paper Group, *Spruce Falls Operations*
 Tolko Industries Ltd., *Armstrong, Heffley Creek, High Level, High Prairie, Kelowna, Lumby, Meadow Lake, Merritt, Quesnel, Slave Lake, The Pas, Vernon, Williams Lake*
 UPM-Kymmene Miramichi Inc., *Miramichi*
 Weldwood of Canada Limited, *Vancouver*

West Fraser Timber Co. Ltd.

Eurocan Pulp and Paper Co., Kitimat

Hinton Pulp, *Hinton*

Quesnel River Pulp Co., *Quesnel*

Slave Lake Pulp Corporation, *Slave Lake*

Zellstoff Celgar Limited Partnership, *Catelgar*

RUBBER

AirBoss Rubber Compounding, *Kitchener*

Brenntag Canada inc, *Mississauga*

Compagnie Henry Canada Inc., *Lachine*

Fuller Industrial Corporation, *Lively*

GDX Canada Inc., *Welland*

Goodyear Canada Inc., *Napanee*

Hamilton Kent, *Toronto*

Lanxess Inc., *Sarnia*

Michelin North America (Canada) Inc., *New Glasgow*

NRI Industries Inc., *Toronto*

Soucy Techno Inc., *Forest Rock*

Technologies Veyance Canada Inc.,
Saint-Alphonse de Granby

Waterville TG Inc., *Waterville*

STEEL

Abraham Steel & Services Ltd., *Woodbridge*

Algoma Steel Inc., *Sault Ste. Marie*

AltaSteel Ltd., *Edmonton*

ArcelorMittal Mines Canada, *Hamilton*

ArcelorMittal Tubular Products, *Woodstock*

Gerdau Ameristeel, *Cambridge*

Gerdau Ameristeel, *Whitby*

Gerdau Ameristeel, *Manitoba*

Infasco, *Marieville*

Ivaco Rolling Mills LP, *L'Orignal*

Laurel Steel, *Burlington*

Mittal Canada Hamilton Inc., *Hamilton*

Mittal Canada Lachine Inc., *Lachine*

Namasco Limited, *Calgary*

Nelson Steel, *Nanticoke, Stoney Creek*

Ontario Chromium Plating Inc., *Oakville*

Peninsula Alloy Inc., *Stevensville, Fort Erie*

OIT – Fer et Titane Inc., *Tracy*

Samuel Plates Sales, *Stoney Creek*

Spencer Steel Ltd., *Ilderton*

TEXTILES

Accessoires d'ameublement Aérés AHF Ltée,
Ville Saint-Laurent

Albany International Canada Inc., *Perth*

Albarrie Canada Limited, *Barrie*

American & Efirid Canada Inc., *Montreal*

Annabel Canada Inc., *Drummondville*

Avanti Apparel Inc., *Plessisville*

AYK Socks Inc., *Saint-Leonard*

Barrday Inc., *Cambridge*

Beaulieu Canada Inc, *Acton Vale*

Bennett Fleet (Quebec) Inc., *Ville-Vanier*

Bridgeline Ropes Inc, *Deseronto*

C.S. Brooks Canada Inc., *Magog*

Cambridge Towel Corporation (The), *Cambridge*

Canadian General-Tower Limited, *Cambridge*

Calko (Canada) Inc., *Montreal*

Cansew Inc., *Saint-Michel*

Collingwood Fabrics Inc., *Collingwood*

Colorama Dyeing and Finishing Inc., *Hawkesbury*

Consoltex Inc., *Saint-Laurent, Cowansville*

Délavage National inc, *Asbestos*

Dentex, *Montreal*

Di-tech Inc., *Montreal*

Doubletex Inc., *Montreal*

Fibres Armtex Inc., *Magog*

Geo. Sheard Fabrics (1994) Ltd., *Coaticook*

Hafner Inc., *Sherbrooke*

J.L. de Ball Canada Inc., *Granby*

Jack Spratt Mfg inc., *Montreal*

Kraus Carpet Mills Limited, *Waterloo*

Strudex Fibres Limited, *Waterloo*

Lac-Mac Limited, *London*

Lainages Victor Ltée, *Saint-Victor*

Lanart Rug Inc., *Saint-Jean-sur-Richelieu*

Les Produits Belt-Tech Inc., *Granby*

Les Tricots Confort Absolu Inc, *Montreal*

Lincoln Fabrics Ltd., *St. Catharines*

Manufacturier de bas de nylon Doris Ltée, *Montreal*

Marimac Group (The), *Montreal, Iroquois*

Modern Dyers, *Hamilton*

Mondor Ltée, *Saint-Jean-sur-Richelieu*

Montreal Woollens (Canada) Ltd, *Cambridge*

Morbern Inc., *Cornwall*

PGI-DIFCO Performance Fabrics Inc., *Magog*
 Prescott Finishing Inc., *Prescott*
 Spinrite Inc., *Listowel*
 St. Lawrence Corporation, *Iroquois*
 Stanfield's Limited, *Truro*
 Stedfast Inc., *Granby*
 Télió & Cie, *Montreal*
 Textiles Monterey (1996) Inc., *Drummondville*
 Vitafoam Products Canada Ltd., *Downsview*
 VOA Colfab Inc., *Collingwood*
 Waterloo Textiles Limited, *Cambridge*
 Web Offset Publications Limited, *Pickering*

TRANSPORTATION EQUIPMENT

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

ABC Group Inc., *Toronto*

ABC Climate Control Systems Inc, *Toronto*

ABC Group Exterior Systems, *Toronto*

ABC Group Interior Systems, *Toronto*

ABC Group Product Development, *Toronto*

ABC Metal Products Inc., *Toronto*

LCF Manufacturing Ltd., *Rexdale*

LCF Manufacturing Ltd., *Weston*

Aalbers Tool & Mold Inc., *Oldcastle*

Alcoa Wheel Products Collingwood, *Collingwood*

Anton Mfg., *Concord*

ArvinMeritor Canada, *Tilbury*

B&W Heat Treating Canada ULC, *Kitchener*

Blau Autotec Inc., *Brampton*

Bombardier Aerospace, *Downsview*

Bombardier Produits Récréatifs, *Valcourt*

Bovern Enterprises Inc., *Markham*

Burlington Technologies Inc, *Burlington*

Cami Automotive Inc., *Ingersoll*

Chalmers Suspensions International Inc., *Mississauga*

Chemin de fer Canadien Pacifique, *Montreal*

Citerne Almac International Inc., *Lanoraie*

CSI Gear Corporation, *Mississauga*

DaimlerChrysler Canada Inc., *Windsor, Brampton, Mississauga*

Daimler Trucks North America, *St. Thomas*

Dana Canada Corporation, *Brantford, Burlington, Cambridge, Oakville*

Dortec Industries, *Newmarket*

Dresden Industrial, *Rodney, Stratford*

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

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

Edscha of Canada L.P., *Niagara Falls*

F & P Mfg., Inc., *Tottenham*

Faurecia Automotive Seating, *Bradford*

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

GATX Rail Canada, *Côteau-du-Lac, Moose Jaw, Red Deer, Rivière-des-Prairies, Sarnia, Montreal*

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

Glueckler Metal Inc., *Barrie*

Halla Climate Control Canada Inc, *Belleville*

Héroux Devtek Inc., *Longueuil, Scarborough*

Kingsville Stamping Ltd., *Kingsville*

Hitachi Construction Truck Manufacturing Ltd., *Guelph*

Honda of Canada Mfg., *Alliston*

Honeywell Limited, *Stratford*

Iafrate Machine Works Ltd., *Thorold*

International Truck and Engine Corporation Canada, *Chatham*

Jefferson Elora Corporation (JEC), *Elora*

Johnson Controls LP, *Lakeshore, London, Milton, Mississauga, Orangeville, Tillsonburg, Whitby*

Lear Corporation, *Mississauga*

Leggett & Platt London, *London*

Schukra of North America, *Lakeshore*

Litens Automotive Partnership, *Woodbridge*

Mancor Canada Inc., *Oakville*

Massiv Die-Form, *Brampton*

Meritor Suspension Systems Company, *Chatham, Milton*

Métal Marquis inc., *La Sarre*

Modatek Systems, *Milton*

Montupet Ltée, *Rivière-Beaudette*

National Steel Car Limited, *Hamilton*

Nemak of Canada, *Windsor*

Neptunus Yachts Inc., *St. Catharines*

Niagara Piston Inc., *Beamsville*

Northstar Aerospace (Canada) Inc., *Milton*

NTN Bearing Mfg. Canada, *Mississauga*

Omron Dualtec Automotive Electronics Inc., *Oakville*

Ontario Drive & Gear Limited, *New Hamburg*

Orenda Aerospace Corporation, *Mississauga*

Orion Bus Industries Inc., *Mississauga*

Pilkington Glass of Canada, *Collingwood*
 Platinum Tool Technologies Inc., *Oldcastle*
 Portec Produits Ferroviaires Ltée, *Saint-Jean-sur-Richelieu*
 Pratt & Whitney Canada Inc., *Longueuil, Enfield, Saint-Hubert*
 Presstran Industries, *St. Thomas*
 Prévost Car Inc., *Sainte-Claire*
 Prince Metal Products Ltd, *Windsor*
 Procor Limited, *Oakville, Edmonton, Joffre, Regina, Sarnia*
 Remtec Inc., *Chambly*
 Rockwell Automation Canada Inc., *Stratford*
 Rollstamp Mfg., division of Decoma International Inc., *Concord*
 Russel Metals Inc., *Mississauga*
 Siemens VDO Automotive Inc., *Tilbury, Windsor*
 Simcoe Parts Service Inc., *Alliston*
 Stackpole Limited, *Mississauga*
 Standard Aero Ltd., *Winnipeg*
 STT Technologies Inc., *Concord*
 Sydney Coal Railway Inc., *Sydney*
 Tool-Plas Systems Inc., *Oldcastle*
 Toral Cast Integrated Technologies, *Concord*
 Toyota Motor Manufacturing Canada Inc., *Cambridge*
 TRW Automotive, *St. Catharines, Woodstock*
 TS Tech Canada Inc., *Newmarket*
 UBE Automotive North America Sarnia Plant, Inc., *Sarnia*
 Unison Engine Components, *Orillia*
 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, *Kitchner*
 Ventra Plastics Peterborough, *Peterborough*
 Ventra Plastics Windsor, *Windsor*
 Volvo Cars of Canada Ltd., *Toronto*
 Wallaceburg Preferred Partners, *Wallaceburg*
 Woodbridge Foam Corporation, *Mississauga*
 ZF Heavy Duty Steering Inc., *St. Thomas*

UPSTREAM OIL & GAS

AltaGas Services Inc., *Wabasca*
 Baytex Energy Ltd., *Taber*
 BP Canada Energy Company, *Calgary, Edson, Grande Prairie, Rocky Mountain House*
 Chevron Canada Limited, *Vancouver, Burnaby, Calgary*
 Connacher Oil and Gas Ltd., *Calgary*
 ConocoPhillips Canada, *Calgary, Deep Basin, Wembley, Rimbey/O'biere, Southern Plains, Big Valley, Jenner, Morrin, Vulcan, Kaybob/Edson, Edson, Northern Plains, Foothills, Mackenzie Delta, Atlantic French Corridor*
 Crescent Point Energy Trust, *Calgary, Sounding Lake*
 Devon Canada Corporation, *Calgary, Central, Deep Basin, Foothills, Lloydminster, Peace River, Fairview, Northern Plains, Fort McMurray, NE British Columbia/NW Alberta, Fort St. John*
 Duke Energy Transmissin Gas, *Calgary, Chetwynd, Fort Nelson, Hope, Mile 117, Mile 126, Pink Mountain, Taylor, Vancouver*
 EnCana Corporation, *Calgary*
 Enbridge Pipelines Inc., *Calgary, Edmonton*
 Floating Pipeline Company (The), *Halifax, Saint John*
 Keyspan Energy Canada, *Rocky Mountain House*
 Newalta Corporation, *Abbotsford, Airdrie, Amelia, Brooks, Calgary, Cranbrook, Drayton Valley, Drumheller, Eckville, Edmonton, Elkpoint, Fort St. John, Gordondale, Grande Prairie, Halbrite, Hays, Hughenden, Nisky, Nilton Junction, Nanaimo, North Vancouver, Pigeon Lake, Prince George, Raymond, Red Earth, Redwater, Regina, Richmond, Sparwood, Stauffer, Stettler, Surrey, Taber, Valleyview, West Stoddart, Willesden Green, Winfield, Zama*
 Nexen Canada Ltd., *Calgary*
 Northrock Resources Ltd., *Calgary, Niton Junction*
 Paramount Resources Ltd., *Calgary*
 Pengrowth Corporation, *Calgary*
 Penn West Petroleum Ltd., *Minnehik Buck Lake*
 Rider Resources Ltd., *Calgary*
 Talisman Energy Inc., *Calgary, Carlyle, Chauvin (AB), Chauvin (SK), Chetwynd, Edson, Grande Prairie, Lac La Biche, Shaunavon, Turner Valley, Warburg, Windsor*
 Taurus Exploration Ltd., *Consort, Veteran*

WOOD PRODUCTS

Alberta-Pacific Forest Industries Inc., *Boyle*
 Canfor Corporation, *Vancouver*
 Canadian Forest Products Ltd., *Bear Lake*
 Coldstream Lumber, *Vernon*
 Columbia Forest Products, *Saint-Casimir*
 Commonwealth Plywood Co. Ltd., *Sainte-Thérèse*
 Coyle & Greer Awards Canada Ltd., *Mossley*
 Dava Inc., *Tring Junction*
 Domtar Inc., *Big River, Ear Falls, Elk Lake, Kamloops, Lebel-sur-Quévillon, Ostrom, Matagami, Nairn Centre, Prince Albert, Sainte-Marie, Sault Ste-Marie, Timmins, Val-d'Or Sawmill, Val-d'Or Sullivan Mill, Waswanipi, White River*
 Entreprises Interco inc., *Saint-Germain-de-Grantham*
 Erie Flooring and Wood Products, *West Lorne*
 Finewood Flooring & Lumber Limited, *Baddeck*
 Fiready Inc., *Clair*
 George Guenzler & Sons Inc., *Kitchener*
 Grant Forest Products Inc., *Earlton*
 Granules L.G. Inc., *Saint-Félicien*
 Greif Bros. Canada Inc., *Maple Grove*
 Groupe Lebel (2004) Inc., *Rivière-du-Loup, Cacouna*
 Bois Traitel Ltée, *Saint-Joseph de Kamouraska*
 Groupe Savoie Inc., *Saint-Quentin*
 Harring Doors Ltd, *London*
 Industries Maibec Inc., *Saint-Pamphile*
 Interforest Ltd., *Durham*
 J.D. Irving, Limited, *Deersdale, Saint John*
 K&C Silviculture Ltd., *Red Deer, Oliver*
 Loger Toys Ltd., *Brantford*
 Louisiana Pacific Canada Ltd., *East River*
 Madawaska Doors Inc., *Bolton*
 MacTara Limited, *Upper Musquodoboit*
 Marcel Lauzon Inc., *East Hereford*
 Marwood Ltd., *Tracyville*
 MDF La Baie Inc., *La Baie*
 Nexfor Fraser Papers, *Plaster Rock*
 Papiers Fraser inc., *Pâtes Thurso*
 North Atlantic Lumber Inc., *Glenwood*
 Palliser Lumber Sales Ltd., *Crossfield*
 Planchers Mercier Inc., *Montmagny*
 Poutres et Poteaux Val-Morin Inc.,
 Sainte-Agathe-des-Monts

Rip-O-Bec Inc., *Saint-Appollinaire*
 Riverside Forest Products Limited, *Armstrong*
 Roland Boulanger & Cie Ltée, *Warwick*
 Scierie Girard Inc., *Shipshaw*
 Tembec Inc., *Témiscaming*
 Tembec Industries Inc., *Chapleau*
 West Fraser Timber Co. Ltd., *Vancouver*
 Alberta Plywood Ltd., *Edmonton, Slave Lake*
 Blue Ridge Lumber, *Whitecourt*
 Chetwynd Forest Industries, *Chetwynd*
 Fraser Lake Sawmills, *Fraser Lake*
 Hinton Wood Products, *Hinton*
 Houston Forest Products, *Houston*
 Northstar Lumber, *Quesnel*
 100 Mile Lumber, *100 Mile House*
 Pacific Inland Resources, *Smithers*
 Quesnel Laminators, *Quesnel*
 Quesnel Plywood, *Quesnel*
 Quesnel Sawmill, *Quesnel*
 Ranger Board, *Whitecourt*
 Skeena Sawmills, *Terrace*
 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*

CIPEC TRADE ASSOCIATIONS

Aerospace Industries Association of Canada
Alberta Food Processors Association
Aluminium Association of Canada
Atlantic Dairy Council
Automotive Parts Manufacturers' Association
Baking Association of Canada
Brewers Association of Canada
Canadian Association of Metal Finishers
Canadian Association of Petroleum Producers
Canadian Chamber of Commerce
Canadian Chemical Producers' Association
Canadian Construction Association
Canadian Council of Grocery Distributors
Canadian Electricity Association
Canadian Energy Pipeline Association
Canadian Fertilizer Institute
Canadian Foundry Association
Canadian Gas Association
Canadian Healthcare Engineering Society
Canadian Lime Institute
Canadian Manufacturers & Exporters
 Alberta Division
 British Columbia Division
 Manitoba Division
 New Brunswick Division
 Newfoundland Division
 Nova Scotia Division
 Ontario Division
 Prince Edward Island Division

Canadian Meat Council
Canadian Petroleum Products Institute
Canadian Plastics Industry Association
Canadian Steel Environmental Committee
(Canadian Steel Producers Association)
Canadian Textiles Institute
Canadian Vehicle Manufacturers' Association
Cement Association of Canada
Council of Forest Industries
Electro-Federation Canada
Fisheries Council of Canada
Food and Consumer Products Manufacturers of
Canada
Forest Engineering Research Institute of Canada
Forest Products Association of Canada
Forintek Canada Corporation
Mining Association of Canada
NAIMA Canada
Ontario Agri Business Association
Ontario Food Processors Association
Packaging Association of Canada
Québec Forest Industry Council
Rubber Association of Canada
Small Explorers and Producers Association of
Canada
Wine Council of Ontario

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