Stronger
Greener
Safer
Smarter
Further

We produce the fuels that move Canada forward
We want Canadians to think more deeply about fuels.
Welcome to the Canadian Fuels Association. Formerly the Canadian Petroleum Products Institute, we have launched a new direction, with a sharper focus and a new name. We listened to stakeholders and responded to what we heard.

Our new name more accurately reflects what our members do and the value they deliver. Their business is providing Canadians with a reliable supply of dependable, fit-for-purpose, competitively priced fuels essential to a strong, sustainable Canadian economy.

Our new direction is much more than a name change. It’s about becoming more active in the public discourse around fuels and Canada’s fuels future. It’s about being more effective in engaging policy-makers about the connections between transportation fuels, mobility and prosperity, and the implications for public policy. It’s about being proactive in increasing consumers’ knowledge so they can make smart mobility and fuel-use choices.

Mobility of people and goods is an essential foundation of Canada’s prosperity and Canadians’ quality of life, and transportation fuels are critical enablers of mobility. Canadian Fuels members produce nearly all of the fuels that power Canada’s trucks, trains, ships, planes and automobiles. While the future fuel mix will be more diverse, Canadians will continue to rely on petroleum fuels for their mobility needs for many years to come.

FUEL 2012, our annual review, is part of our new vision to communicate more openly, more effectively and more often on critical issues related to transportation fuels. Since it’s our first annual review, we’ve stepped outside the norm a little, reporting on more than just our activities over the past year. This report provides a broader perspective on our organization, the vital role our members play in the continuing prosperity of Canadians, their commitment to the highest levels of safety and the environment, the work of the Association to shape public policy, and our engagement of consumers. We highlight key issues and review major accomplishments over the past several years.

Fuels policy is a growing focus of governments. As a country, we face important choices as we strive to ensure the security, convenience, quality and affordability of our transportation fuel supply, while at the same time addressing environmental impacts of fuels and fuel production. As Canada’s fuels leaders, we bring knowledge, expertise and practical insight to the policy-making process. We seek informed decision-making underpinned by rigorous due diligence. Key to that due diligence is a solid understanding of the vital role Canadian Fuels members play in Canada’s economic strength.

Canadian Fuels members produce the fuels that move Canada forward. We want Canadians to think more about that.

Gilles Courtemanche
Chair, Canadian Fuels Association
and Vice-President & General Manager,
Refining and Supply, Imperial Oil Limited

Peter Boag
President, Canadian Fuels Association
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The Canadian Fuels Association is an association of major companies that produce, distribute and market transportation fuels and other petroleum products in Canada. The sector operates through an infrastructure that employs close to 100,000 people. This includes 19 refineries in eight provinces, 16 of which are operated by Canadian Fuels Association members, as well as a complex network of 21 primary fuel distribution terminals, 50 regional terminals and 12,000 retail service stations.

Fuels snapshot

- Petroleum fuels supply 95 percent of Canada’s transportation fuel needs.
- 30 percent of the energy used in Canada powers transportation.
- A typical Canadian travelled between 11,000 and 20,000 kilometres in 2008, for a total of 325 billion kilometres.
- Canadians pump 75 billion litres of petroleum fuels annually—more than 200 million litres every day, or enough to fill 80 Olympic-size swimming pools.

Our members

Chevron  
**Esso**  
Imperial Oil  
Shell  
Suncor Energy  
Husky Energy  
North Atlantic  
Ultramar  
Parkland Fuel Corporation  
Bitumar  
NOVA Chemicals
Our members contribute to a Stronger economy
Nearly everything Canadians do—where we go, what we eat, what we buy, where we work—relies on us being able to get around. We are a society in which the movement of people and goods is essential.

While mobility is critical to nearly every economy in the world, it is especially important here in Canada. With our vast geography and dispersed population, we face extraordinary challenges in getting people and things from A to B.

The members of the Canadian Fuels Association manufacture, distribute and sell the transportation fuels that power the ships, trains, planes, trucks, buses and automobiles that keep Canadians mobile and bring goods to market. These fuels are used to meet 95 percent of Canada’s transportation energy needs. We consume 75 billion litres of gasoline, diesel and aviation fuels per year, without which modern life and our high standard of living would be impossible.

As our economy grows, so too does our demand for transportation fuel. From 1990 to 2009 (the most recent year for which data is available), transportation energy use grew by 37 percent. Energy use for moving people grew by 19 percent; energy use for moving goods grew by 66 percent.

Providing such a quantity of fuel at the right time, in the right place and in the right amounts is a complex organizational feat made possible by an efficient refining, distribution and sales system developed over 100 years. Our members manage that complexity every day to bring to market safe, convenient, competitively priced fuels that deliver on a demanding set of expectations for vehicle and environmental performance.

Transportation energy use in Canada (2009), Natural Resources Canada

Mobility is essential to our economy because it moves both people and goods.
Canadian fuel producers generate $2.5-billion in annual GDP and employ 17,500 Canadians in highly skilled, high-wage jobs. Their distribution networks include fuel pipelines, distribution terminals and bulk plants, as well as the ships, trains and trucks that move fuel throughout the country from major urban centres to remote communities. More than 12,000 retail outlets employ 82,000 Canadians, serving customers in every corner of Canada.

Canadians are among the highest per capita users of transportation fuels in the world; transportation accounts for 30 percent of total Canadian energy consumption—second only to our industrial sector. Transportation fuels not only make it possible to commute to work, get the kids to school, take the trip to the market, and visit with family and friends, they also make it possible to ship billions of dollars of goods between cities and regions, across the country, to and from the United States, and to virtually every region of the world.

With the utmost diligence, intelligence and care, Canadian Fuels Association members manage the job of providing the reliable, high-quality fuels essential to a strong and sustainable economy. We are acutely aware of the vital role we play in the prosperity and well-being of Canadians, today and tomorrow.

Without transportation fuels, our high standard of living would be impossible.

**Energy use in economic sectors, 2009**

- **30%** Transportation
- **17%** Residential
- **14%** Commercial
- **2%** Agriculture

**Canadian transportation energy use and GDP**

- As Canada’s economy grows, so does the demand for transportation energy.

Source: Natural Resources Canada
I want students to understand that petroleum is the lifeblood of our current standard of living. The 150-year old observations of British economist William Stanley Jevons are today uniquely applicable to petroleum fuels. Jevons said that with coal “almost any feat is possible or easy” while “without it we are thrown back in the laborious poverty of earlier times.”

Critics of carbon fuels have labeled our reliance on them as an addiction. Shouldn’t we try to move away from our dependence on petroleum fuels?

Our reliance on these fuels is like our reliance on healthy food. Petroleum transportation fuels benefit humanity in countless ways. As with all human endeavours, our use of petroleum fuels is not perfect. However, human ingenuity has long delivered significant efficiency and sustainability improvements over time and promises further progress in the future.

What happens if the supply of petroleum starts to wane?

With recent advances in shale oil and oil sands, we will have the petroleum we need for a century or two. Peak oil theorists have consistently been proven wrong.

What about alternatives to petroleum fuels? Can’t we just switch to other, greener fuels?

There are no magic alternatives to petroleum fuels. Biofuels have challenges because they generally use farm crops, which should be used as food, not fuel. Some don’t work well in cold weather. Electricity will remain a niche application in transportation until a radically new battery design comes along. All I’m saying is that we’re not there yet with respect to alternative fuels and we should not rush into an uncertain future. The risk to our standard of living is just too strong.
Our industry is getting **Greener** every year
The Canadian Fuels Association understands that Canadians care about the environment. Canadians will be glad to learn that we care about it too.

The transportation fuels industry has worked hard to improve its environmental performance, investing billions of dollars in new equipment and processes. We have evolved our operations to produce transportation fuels that are much cleaner than they were just a decade ago. We have invested heavily to improve energy efficiency, emissions performance and water use at our facilities.

While there is always more work to be done, we have taken our environmental responsibilities seriously for decades. In the past 10 years alone, our members have invested more than $8-billion to improve the environmental performance of fuels and the facilities that produce them.

Cleaner air is an industry-wide priority

Today’s transportation fuels are the product of years of continuous improvement by our industry to enhance vehicle performance and reduce the amount of emissions produced by fuels as well as the toxicity of unburned fuel. A recent Environment Canada study confirmed the high quality and strong environmental performance of today’s petroleum fuels.1

Our industry has invested $5-billion to reduce sulphur levels in gasoline by more than 90 percent, and in diesel by 97 percent since 2005. Combined with new vehicle technology, this reduces smog-forming emissions of a 2005 vehicle (or newer) by 90 percent over a 1993 model. As a result of these improvements, Environment Canada predicts that by 2030, total Canadian on-road vehicle emissions for nitrous oxide, sulphur dioxide and particulate matter (PM$_{2.5}$) will drop by 79 percent, 69 percent and 57 percent, respectively, compared to 2005.

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Environment Canada predicts that by 2030, vehicle emissions for nitrous oxide will drop by 79 percent, for sulphur dioxide by 69 percent and for particulate matter (PM$_{2.5}$) by 57 percent.

Source: Environment Canada
As Canadian Fuels Association members have improved the environmental performance of fuels, they have also made impressive improvements in the amount of atmospheric emissions from refineries. Since 1998, sulphur oxide emissions are down 53 percent, nitrous oxide emissions have decreased by 23 percent and volatile organic compound emissions are down 69 percent. Refinery emissions of benzene are down 89 percent since 1993, contributing to a 71 percent drop in benzene air concentrations between 1995 and 2008, as measured by Environment Canada.2

![Average Mean Ambient Benzene Levels](chart)

Benzene concentrations in the air dropped by 71 percent between 1995 and 2008.

Source: Benzene in Canadian Gasoline: Effect of Benzene in Gasoline Regulations, 2009 Annual Report, Environment Canada

**Responding to the challenge of climate change**

The refining sector accounts for two percent of Canada’s total GHG emissions. Canadian Fuels Association refiners have been able to meet growing demand for fuels while reducing GHG emissions by making better use of energy and improving the efficiency of the refining process. Between 1990 and 2010, total CO₂ emissions from refineries decreased by 20 percent, total energy consumption decreased by 15 percent and energy efficiency improved by seven percent.

Does the industry need to do more? Absolutely. Our members are committed to continuously improve the quality and environmental performance of transportation fuels as well as improve the environmental performance of refineries.

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2 Canada-Wide Standard for Benzene 2010 Final Report, Canadian Council of Ministers of the Environment, January 2012
Less water, cleaner effluents

Canadian Fuels Association members are continually looking for ways to improve their water stewardship by using less water and by protecting the quality of the water they return to the ecosystem. Our members’ refineries have decreased their water use by 13 percent since 2005. Since 1992, environmental upgrades have resulted in water effluents with lower concentrations of five regulated substances: oil and grease, sulphide, ammonia nitrogen, phenol and total suspended solids. Today, our members’ refineries discharge water effluents at only two to 33 percent of the levels allowed by federal regulations.

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<th>Canadian Fuels Association Members’ Refinery Water Usage</th>
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<td><strong>Cubic Metres (m³)</strong></td>
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Our members’ refineries have decreased their water use by 13 percent since 2005.

In the spirit of continuous improvement, in 2012 Canadian Fuels Association members operating in the province of Alberta produced a provincial Conservation, Efficiency and Productivity (CEP) plan for improving water use. The plan provides an array of tools and mechanisms that will enable implementation and monitoring of CEP-related activities.

**Returning surplus sites to productive use**

When our members idle one of their sites, they remove the infrastructure and secure, evaluate and monitor the site until it has been thoroughly cleaned in a process called remediation. These sites range from decommissioned refineries to surplus gas stations. As an example, one of our members’ former fuel storage facilities on Toronto’s waterfront was assessed and remediated. The 50-acre site is now home to Pinewood Toronto...
Studios. In 2009 and 2010, Canadian Fuels Association members remediated more than 300 sites across Canada and made a further 128 available for safe and efficient use until remediation takes place.

**Giving used oil a second life**

Our members have worked with provincial governments in western Canada and Quebec to establish programs that collect, process and recycle waste oil products. More than 200 companies across Canada participate in such recycling programs, which recover used oil, oil filters and containers and completely recycle them. Containers are decontaminated and reprocessed as composite materials used in agriculture and construction. Filters are processed and compressed until they contain less than three percent oil—at which point they are no longer considered hazardous waste—and then shipped to smelters. Waste oil is re-refined or recycled for other uses.

These recycling programs have proven remarkably effective: in 2011, Quebec recovered 88 percent of its used oil, 85 percent of its filters and 95 percent of its oil containers. B.C. recovered 73 percent of its oil, 87 percent of its oil filters and 87 percent of its oil containers. Results like these demonstrate that consumers, industry and government are willing and able to share a responsibility for managing used oil products in an environmentally responsible way.

**Acting locally, thinking globally**

The Canadian Fuels Association works with its peers around the world to improve the industry’s environmental performance. We accomplish this through our membership in the International Petroleum Industry Environmental Conservation Association (IPIECA). IPIECA uses guidance documents and workshops to promote good environmental practices. These materials are widely used as reference manuals and are a valuable source of global industry thinking and key trends. Over several years, IPIECA has produced more than 50 good-practice guidance documents and reports. Recent subjects include Refinery Air Emissions Management (2012), Global (2011) and Local (2012) Water Tools, and Sustainability Reporting (2011).
Safer operations are a constant priority.
Canadian Fuels Association members place a high priority on protecting the health and safety of employees, contractors and neighbours. We conduct our business with a dedication to safe and sustainable operations that goes beyond company boundaries and extends into the communities where we operate. In fact, we have developed an excellent safety record operating alongside Canadian communities for more than a century.

Safe refineries, safe communities

The safety record for the 16 refineries operated by Canadian Fuels Association members is among the highest for all Canadian manufacturers. As a result of our members’ efforts to tightly manage their facilities, systems and processes to prevent incidents—as well as train employees to be vigilant about safety issues—our safety record continually improves. Five elements form the basis of our safety management efforts: safe work culture, integrated planning and operations, sharing resources in emergencies, continuous improvement in all our safety-related activities, and a commitment to leadership and consultation among the communities that are our neighbours.

Our efforts are working. Between 2005 and 2011, total recordable injuries were down by 76 percent, while incidents where employees could not continue to work due to an accident or injury dropped by 93 percent.

Our refineries are among the safest manufacturing operations in Canada.
Safe fuel transport

In the 1990s, Canadian Fuels’ predecessor implemented the Driver Certification Program to ensure that fuels are handled safely as they are being transported by truck from terminals to customers and retail sites. The program sets standards for the safe handling and transportation of petroleum products. Drivers’ access to terminal loading facilities is restricted to those who have completed the requirements of the Driver Certification Program.

Safe retail sites

Our members’ retail sites view employee and customer safety as paramount in their business operations. Retailers maintain robust safety and security policies, procedures and practices, which include providing all employees with safety training. Retailers evaluate such processes continually to ensure they reflect the best and most current knowledge about customer and worker safety.
Our members also share what they know, including best practices and employee training materials. The goal is to encourage greater safety for all fuel retailers, including independent retailers who operate under Canadian Fuels Association member brands, and their customers. The Canadian Fuels Association publication *Work Safe* also provides essential guidelines for retail site safety.

Reducing the incidence of fuel theft at retail sites is a current focus of our work at the Canadian Fuels Association. Fuel theft puts customers and retail employees at risk. Our members are working closely with other stakeholders, police forces and Crime Stoppers to build awareness about the risks of fuel theft and ensure appropriate law enforcement.

The Canadian Fuels Association publication *Work Safe* provides essential guidelines for retail site safety.
We enable **Smarter** choices about fuel policy
The Canadian Fuels Association represents the industry that supplies 95 percent of Canada’s transportation fuels; as such, we are uniquely positioned as experts on the complex issues surrounding Canada’s transportation fuels future. For years, our members have been active in a number of policy areas and public outreach activities, providing expertise, information and analysis that support informed decision-making. We are committed to engaging openly and honestly with decision-makers and the public.

As Canada’s fuel leaders, our goal is a policy environment that enables decisions based on solid evidence—and that provides decision-makers with a full understanding of policy options and their implications, including unintended consequences.

**We engage governments**

The Canadian Fuels Association engages all levels of government—federal, provincial and municipal—with a focus on environment, health and safety policy and regulation. This engagement occurs in many forms: we participate in ongoing informal consultations, appear at Parliamentary and legislative committees, submit written responses to regulatory proposals and respond to other formal requests for input. Wherever possible, we are proactive in seeking a “convergence of interests” where the policy objectives of government can be achieved without affecting Canadians’ access to a secure, reliable and competitively priced supply of fit-for-purpose fuels.

Our members operate in an increasingly challenging competitive landscape; regulatory simplicity and efficiency are critical if they are to sustain their competitiveness. Therefore, when we engage with government, our objective is to enable policy and regulations that are:

- cost-effective and backed by rigorous and credible economic impact analyses
- based on facts and sound science to deliver real health and environmental benefits
- outcome driven, to provide fuel producers with the flexibility they need to develop and implement the most cost-effective options and processes to meet regulatory requirements
- harmonized across jurisdictions to avoid duplication and not impose higher costs on Canadian fuel producers than those imposed on their competitors

*Regulatory simplicity and efficiency are critical for sustaining competitiveness.*
We provide content and context

Conference Board of Canada report

While the Canadian Fuels Association is an expert source of information for policy-makers and Canadians, we appreciate the limitations of our knowledge and research capability. Therefore, we often seek independent, outside expertise to supplement what we know. For example, in 2011 we commissioned the Conference Board of Canada to analyze and report on the economic performance and business trends affecting Canada’s petroleum refining sector. Their report clearly and objectively confirmed the significant contribution fuel producers make to the economy and highlighted key competitiveness challenges facing the industry.

The Conference Board found that the petroleum refining sector contributes $2.5-billion to Canada’s GDP, is one of the most capital intensive sectors in the Canadian economy and creates highly skilled jobs that pay wages and salaries well above the Canadian average. The report concluded that flat North American demand for fuels, competitive pressures from producers in overseas and developing economies, and domestic pressures arising from tightening environmental standards were among the key challenges that Canadian refiners face. The report also concluded that the “squeeze” between flat demand and competing sources of supply creates some uncertainty about future economic benefits to Canada from the industry. These conclusions underscore the importance of ensuring our decision-makers carefully consider the impacts on Canadian competitiveness of the policies they develop and implement.

Fuels for Life—a fresh perspective

In March 2012, we produced a report entitled Fuels for Life to provide Canadians with a balanced analysis on Canada’s future transportation fuels choices. Acknowledging that Canada’s future fuels mix will be more diverse, Fuels for Life examines environmental and economic issues—benefits and compromises—that underpin petroleum-based fuels as well as biofuels, natural gas and electricity. Available online at the Canadian Fuels Association website, Fuels for Life is essential reading, not only for industry stakeholders or policy-makers, but also for all consumers interested in making informed decisions about the fuels that keep them moving.
The straight goods on gas prices

Few subjects create as much interest and generate as many questions as gasoline prices. Canadian Fuels has added a new “Pump prices” link on our website to provide Canadians with answers about how it all works. Visitors are now one click away from an in-depth, independent monthly analysis of crude, wholesale and retail gasoline price trends and the factors that drive those trends. The analysis is undertaken by the Kent Group, which we commissioned in early 2012 to prepare the Monthly Report of Petroleum Pricing in Canada. Consumers can also subscribe to a monthly email associated with the report.

We stimulate dialogue

All Canadians have a stake in Canada’s fuels future. Stimulating and strengthening stakeholder and public dialogue on the subject of fuels and related policy is a priority for the Canadian Fuels Association. We seek a broad, authentic and ongoing discussion about how to balance the many issues and factors that decision-makers and Canadians must consider in making rational choices for Canada’s transportation fuels future.

In March 2012, Canadian Fuels joined with the Macdonald-Laurier Institute—recently named one of the top five new think tanks in the world—to bring together key stakeholders for a discussion about the economics of Canada’s transportation system and the fuels that power it. The linkages between fuel choice, energy costs, and Canada’s economic health, and the implications for public policy, were key points of discussion between representatives of the fuels industry, consumer groups, government and environmental stakeholders. Central to the discussions was the question: How do we balance a need to improve the environmental performance of the transport sector with an equally important need to maintain (or even improve on) reliable, accessible and competitively priced fuels? This conference, titled Moving Canada Ahead, will serve as a model for future Canadian Fuels activities aimed at stimulating dialogue.
We help you travel **Further** on every tank
Today, petroleum fuels supply nearly all of Canada’s transportation needs. While the future fuel mix will be more diverse, Canadians will continue to rely on petroleum fuels for their mobility needs for many years to come.

Canadian Fuels Association members are committed to developing fuels with a smaller environmental footprint. We are also committed to help Canadians get more mileage from every tank. Better mileage minimizes the environmental impacts of transportation and, at the same time, reduces fuel costs for individuals and businesses.

Canadian Fuels Association members are involved in a variety of initiatives aimed at promoting and facilitating more efficient and more environmentally sustainable use of transportation fuels.

We promote fuel efficiency in collaboration with our partners

Canadian Fuels Association members actively engage environmental groups and other stakeholders to promote the efficient and sustainable use of fuels. One member supported a team that set a world record for fuel-efficiency by driving across Canada on less than five tanks of gasoline. Members fund organizations that operate older-vehicle and motorized equipment “retirement” programs. They also provide print and online resources that communicate the benefits of vehicle fuel efficiency as well as strategies to reduce fuel consumption. Helping Canadians make more efficient use of transportation fuels is an area of increasing focus for the Canadian Fuels Association. Our members are active on the front lines across a growing spectrum of such efforts.

A QUEST to lower mobility emissions

The Canadian Fuels Association and its members are supporters of Quality Urban Energy Systems of Tomorrow (QUEST), a not-for-profit organization that researches and teaches Canadians and policy-makers about integrated community energy systems (ICES). With ICES, communities are planned, and land and energy are utilized in ways that make energy use, including for transportation, optimally efficient. A community that embraces ICES, for example, converts its waste to energy, builds homes that produce as much energy as they consume, and embraces efficient new standards for land-use and transportation planning.
Canadian Fuels Association members endorse the following fuel-saving tips:

- Plan your route
- Use the cruise control feature
- Use your air conditioner sparingly
- Check tire pressure regularly
- Keep your car properly maintained
- Don’t speed—avoid “jackrabbit” starts and stops
- Avoid idling
- Avoid excessive weight in your vehicle
For more information, please visit our website

canadianfuels.ca

If you would like to comment, contact info@canadianfuels.ca
We’ll take you there