



Propane is Safe!

Production, storage, transportation and use are subject to strict standards and regulations.

Propane is stored and used in sealed containers and fuel systems, and is only transferred from one container to another by trained personnel.

Propane tanks are 20 times more puncture proof than conventional gasoline tanks.

The Propane Training Institute, a division of the PGAC, offers over 30 propane-related courses and issues over 20,000 training certificates annually.

The LPG Emergency Response Corporation, a subsidiary of the PGAC, offers state-of-the-art emergency response capability, ensuring safe and timely response to incidents involving liquefied petroleum gas (LPG).

Propane is Everywhere!

Propane fuels the lives of Canadians in many ways:

...aerosol propellant, asphalt, barbecues, crop drying, dryers, fireplaces, forklifts, fryers, furnaces, generators, indoor lighting, petrochemical feedstock, pipeline testing equipment, pool heaters, refrigerators, school buses, service trucks, space heaters, steam cleaners, stoves, taxis, water heaters, weed control...

CANADIAN PROPANE INDUSTRY: AN OVERVIEW

Propane is one of Canada's best-kept secrets and the industry wants to change that. Driven by a unique combination of organizations, the industry makes a multi-billion-dollar impact on the Canadian economy each year. The industry is dominated by small and medium sized businesses that handle the wholesaling, retailing, marketing and transportation sides of the business. The largest industry players are some of Canada's best known energy companies, and they are concentrated on the production side of the business.

The Propane Gas Association of Canada (PGAC) represents Canadian industry members at the federal level. Two provincial associations exist, the Association québécoise du propane (AQP) and the Ontario Propane Association (OPA), to represent their respective provincial interests. All three Associations operate as voluntary, not-for-profit organizations. Volunteers provided by member companies perform the vast majority of the work carried out by the Associations through their many committees.

The propane industry has a role to play in the energy mix and is committed to maximizing its value to Canadians over the long term.

In 2008, the total economic value of propane in Canada, which includes direct impacts plus spin-off effects on the economy, was \$9.9 billion dollars. Nearly \$3.9 billion of that value was in direct economic activity.

Propane Direct Value in Canada

Extraction.....	\$400.5	million
Wholesale Transportation.....	\$156.2	million
Exploration	\$2,105.0	million
Sales Tax	\$155.7	million
Retail Margin.....	\$474.6	million
Transportation – Pipeline	\$168.6	million
Transportation – Rail.....	\$393.5	million
Total	\$3,854.1	million

Government revenue from the industry nationally was \$911 million in 2008, through taxes & royalties.

Canada has a well-developed propane infrastructure, with tremendous capacity to produce an abundant supply with high portability via truck, rail and pipeline across Canada, and into the U.S.

- Canada produced 11 billion litres of propane in 2008.
- 81% of Canada's supply was extracted from natural gas at hundreds of facilities across Canada; 12% was refined from crude oil at 16 refineries, and less than 1% was imported (an inventory adjustment accounts for 7%).
- 6.4 billion litres of Canadian supply (59%) was exported to the U.S.
- The other 4.5 billion litres was consumed within Canada, within every region, across many sectors, for a broad range of applications.



Clean Fleets!

Police Fleet

London, Ontario

In the early 80's they converted the fleet to propane. From 1983 to 1994, they tracked results and found:

Over \$2 million in fuel cost savings. Significantly reduced emissions. Enhanced engine life. Increased value on resale market. Notably, all vehicles were parked in an underground garage. And not a single incident was reported where propane created a health concern!

What is Propane?

It is a by-product of natural gas processing and crude oil refining. It is extracted and used as a gas, but stored and transported as a liquid under pressure.

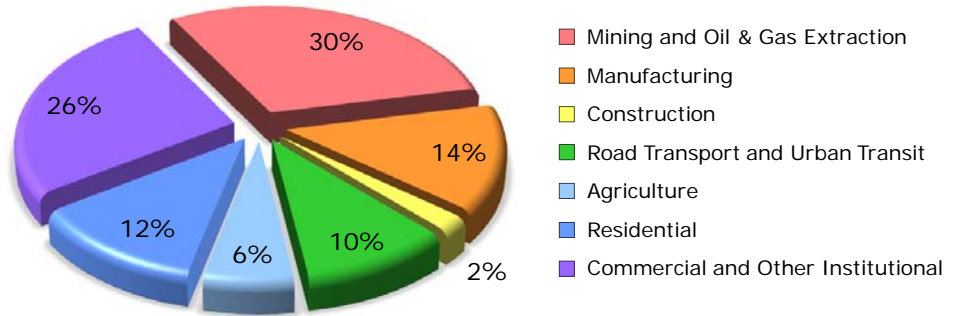
It is often called liquefied petroleum gas (LP Gas or LPG), a term to describe a family of light hydrocarbons called natural gas liquids (NGL). Other NGLs include butane and ethane.

Did You Know?

From 1999 to 2009 across Canada auto propane has cost 36% less than gasoline and 35% less than diesel (on average, per litre). To see how this translates to thousands in annual fuel costs savings, try the calculator at www.propaneconversion.ca.

A CLEAN ALTERNATIVE

Propane Use in Canada (it's not all BBQs and vehicles!)



Source: Purvin & Gertz—2009

LP Gas Environmental Performance

The Argonne National Laboratory (division of U.S. Dept. of Energy) performed a complete fuel-cycle analysis (Wells-to-Wheels) to quantify & qualify energy use and emissions. The study shows that compared to conventional energy supplies, LP gas, which includes propane, produces lower green house gas (GHG) emissions and air toxics in virtually every application it is used.

Transportation is the greatest single use of petroleum fuel in the world - that's why it's often singled out as primarily responsible for global warming.

With respect to vehicle fuels, while LP gas and diesel offer an equal GHG advantage over gasoline, LP Gas significantly outperforms diesel when it comes to the number of pollutants present in emissions and the amount of air toxics emitted.

Well-to-Pump (Upstream) Energy Efficiency

- LP Gas is, on average, the most energy efficient fuel produced during the well-to-pump stage.
- When it comes to energy supplied to appliances, electricity production efficiency is 42-60% less efficient than the production of LP Gas.

Well-to-Wheels (Downstream) GHG Emissions

- LP Gas vehicles emit up to 27% fewer GHGs than gasoline vehicles, saving 1kg of GHG emissions for every 36 km traveled.
- LP Gas vehicles emit about 50% fewer toxins and other smog producing emissions than regular gasoline engines.

Propane is a viable clean alternative for MANY applications