

Propane 101

Propane Powers Canada

Versatile, efficient, and affordable, millions of Canadians rely on propane at home, at work, on the road, and on the farm. Readily accessible, propane can go just about anywhere.

A low-emission energy source, propane is a cleaner alternative to heating oil, gasoline and diesel that can address energy challenges now and in the future with renewable propane.

Propane provides **energy choice**

Propane can provide a cleaner option in many Indigenous, rural and remote communities, serving as an ideal and dependable source of primary or backup energy.

Propane's reliability and portability also make it the preferred energy of choice for first responders, enabling them to restore essential services and deliver vital support.



What is Propane?

Propane (C_3H_8) is a colorless, odorless hydrocarbon gas.

Produced predominantly in Western Canada, it is primarily a byproduct of domestic natural gas processing – over 93% – the remaining is produced from petroleum refining. Propane becomes a liquid under moderate pressure and is stored and transported as a compressed liquefied gas.

Properties of Propane:

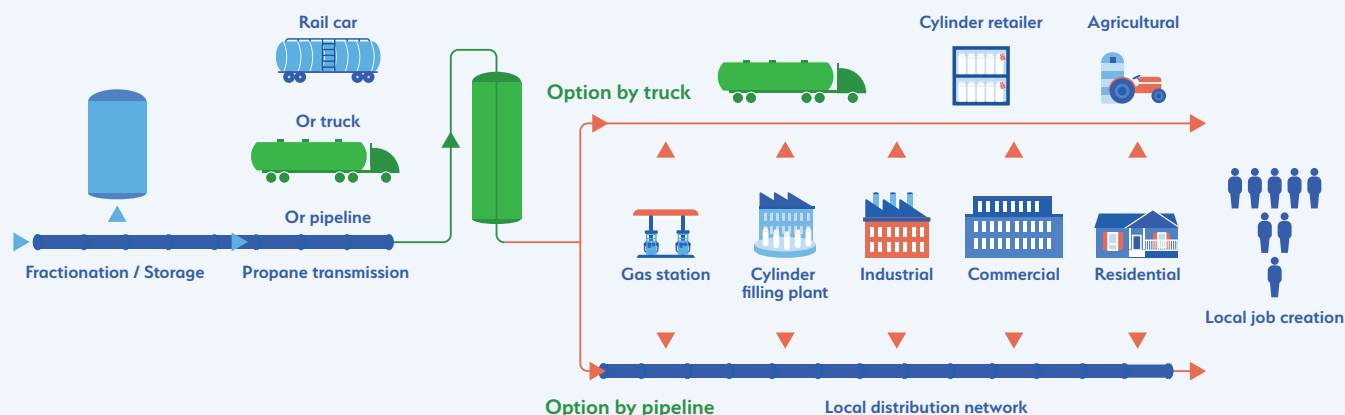
- **Compact:** Propane is 270 times more compact as a liquid than as a gas, making it economical to store and transport as a liquid.
- **Portable and versatile:** Propane is easily transported and can be used in numerous applications, including heating, cooking, transportation, and power generation.
- **Non-toxic and safe:** Propane is not harmful to human health when handled properly or the environment in the unlikely event of a spill.



Common Uses of Propane:

- **Residential heating:** Propane is widely used for space and water heating, and cooking in homes and buildings that are not connected to natural gas pipelines.
- **Commercial and industrial applications:** Propane is used for heating, cooling, power generation, forklifts, backup power, and in numerous industrial processes.
- **Transportation:** Propane powers vehicles, including fleets such as school buses, trucks, forklifts, and automobiles.
- **Agricultural applications:** Propane is used for crop drying, greenhouse heating, irrigation pumps, and powering farm equipment.
- **Petrochemical feedstock:** Propane is an important building block for essential Canadian products.

The propane process



Extensive Supply Chain

Propane is produced, stored, transported, and distributed across a broad supply chain.

It is stored in underground storage caverns or transported to bulk distribution terminals via pipeline, railroad, barge, truck, or tanker ship.

Propane marketers fill their trucks at the terminals and distribute propane to millions of Canadian homes and businesses.

Canada uses about 50% of the propane it produces, the remainder is shipped to international markets.

Propane is transported to and used in every corner of the country.



Environmental Considerations

- **Lower emissions:** Propane combustion emits fewer greenhouse gases, particulate matter, and smog-producing pollutants compared to many other fossil fuels.
- **Energy efficiency:** Propane appliances are highly efficient, reducing overall energy consumption.
- **Renewable propane:** Biopropane, made from renewable sources such as biomass, offers even lower carbon emissions and enhanced sustainability.

Highly regulated and safe

The storage, transportation, handling, and use of propane are regulated by a variety of acts and regulations within federal, provincial, and territorial jurisdictions. CPA members commit to the **Reliable Propane Fiable®** principles to continuously improve health and safety within their organization.