



Canadian Propane Association
Association canadienne du propane

Renewable Propane

Ready for Canada's low-carbon future

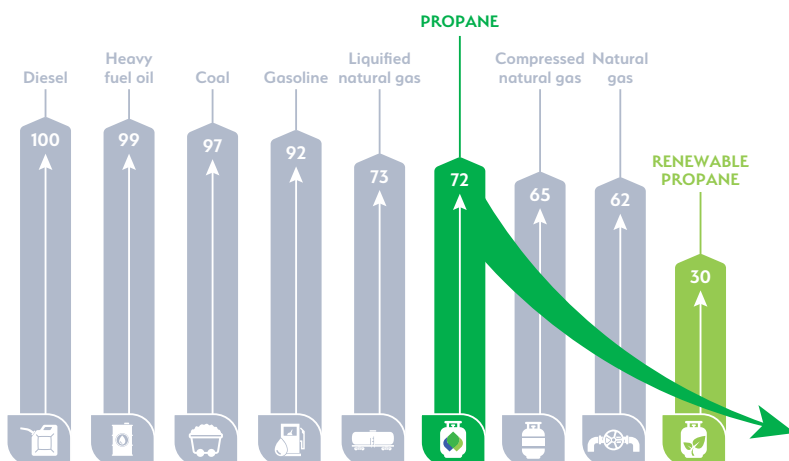
Renewable propane is the same as conventional propane – reliable, portable, versatile and clean – but with even lower carbon emissions when compared with other energy sources.

Renewable propane, derived from renewable feedstocks, is commonly produced as a byproduct of renewable diesel and sustainable aviation fuel made from plant and vegetable oils, animal fats, or used cooking oil.

Renewable propane shares an identical molecular structure with conventional propane (C_3H_8), offering all the same benefits of dependability, ease of transport and energy efficiency. It can be used alone or in blends with other renewable sources such as DME (dimethyl ether) or conventional propane.

DME is a colourless gas chemically similar to propane and like propane, it is easy to handle and store in liquid form. **RenewableDME** is produced from renewable feedstocks, such as agricultural and municipal waste, renewable power and CO_2 , substantially reducing carbon emissions by up to 85%.

Renewable propane and feedstocks



Lifecycle Emission Intensities for Canadian Energy

Canadian propane has a low emission intensity compared to other fuels: 72 gCO₂e/MJ. Renewable propane lifecycle emissions are typically less than half of conventional propane and in certain conditions, they can be even less.



The Renewable Propane Advantage

Price and efficiency matters: As renewable propane is a 'drop-in' fuel, propane infrastructure is already prepared for the future, no retrofitting or new equipment is required. Consumers can easily switch to renewable propane and enjoy the benefits of a lower-carbon energy source **without incurring any additional costs.**

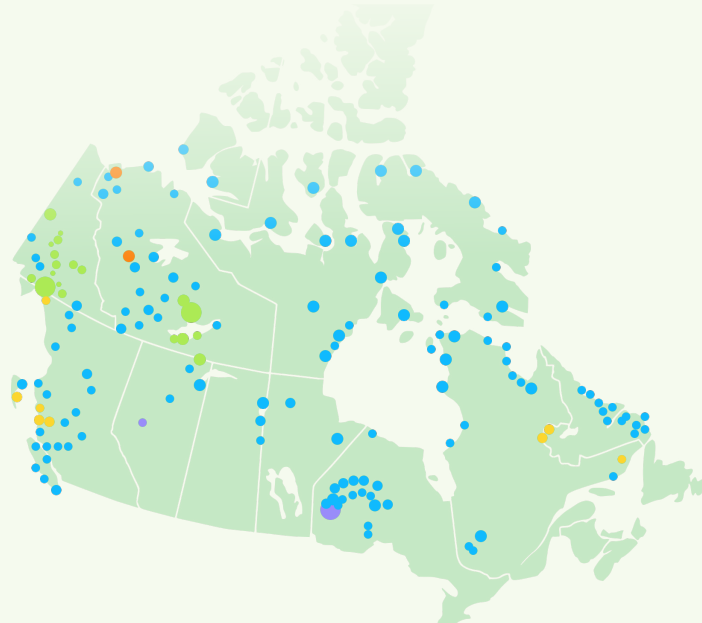
Strategic advantages over other renewable fuel options and electrification: Storability, portability, and versatility for many **end-use applications** from heat to transport including the possibility of being a low GHG non-HFC refrigerant for refrigerators.

Ideal pairing with electric heat pumps: Heat pumps need a primary heat source from a conventional fuel source – renewable propane is ideal due to its high efficiency and **long-term storage capacity.** It can also be used as a non-HFC refrigerant for heat pumps to provide air conditioning.

Canada's Remote Communities Overview

- Diesel
- Hydro
- Natural Gas
- Prov./ terr. grid
- North America Grid

Source: Natural Resources Canada



Cost-effective energy solution for off-grid

About 200,000 people live in rural and remote regions across Canada. Hybrid energy systems combining solar or wind power with propane provide reliable, low-emission energy for off-grid buildings, facilities and communities.



Support local development and waste capture

Producing renewable propane is a smart way to use small, distant sources of biogas like those from farms and waste. It helps local growth, and it also collects and uses waste gases such as methane and carbon dioxide.



Low-cost production

Renewable propane production costs per unit of energy are relatively low, making it a good option for many uses and providing a significant opportunity to reduce carbon emissions in Canada at a low cost, especially in remote and rural areas.

Is renewable propane available now?

Yes. A small amount of renewable propane is available in Canada. It is currently being produced on a wider scale in the U.S. and Europe. The push for cleaner liquid fuels such as sustainable aviation fuel and renewable diesel fuel will lead to a sharp increase in renewable propane production.

