



[Drivers & Vehicles](#) | [Highways](#) | [Road Safety](#) | [Trucks & Buses](#) | [Travel](#) | [Publications](#) |

[HOME](#) > [Trucks and Buses](#) > [Programs](#) > [GCVP](#) > Technologies

Text size [+](#) [-](#)

[Search](#)  |

Table of Contents

1. [Home](#)
2. [Introduction to the GCVP](#)
3. [Greenhouse Gases and Climate Change](#)
4. **[Environment-Friendly Green Technologies](#)**
5. [Government links](#)
6. [Industry links](#)
7. [News release](#)

Program Links

- [Green Commercial Vehicle Program \(GCVP\) Guide](#)
- [GCVP Dedicated Alternative Fuel Vehicle Application Form](#)
- [Guide to Dedicated Alternative Fuel Vehicle Application](#)
- [GCVP Anti-Idling Device Application Form](#)
- [Guide to Anti-Idling Device Application Form](#)

Contact Us

By mail

Green Commercial Vehicle Grant Program (GCVP)
Ministry of Transportation
30th Floor
777 Bay St
Toronto, ON M7A 2J8

Business Hours: 8:30 a.m. to 4:30 p.m.
Monday to Friday

By email

gcvp@ontario.ca

By phone

416-585-7285
1-866-767-0638

Green Commercial Vehicle Program

Environment-Friendly Green Technologies



1. **Hybrid Electric Vehicle (HEV)** combines a conventional propulsion system with an on-board rechargeable energy storage system to achieve better fuel economy than a conventional vehicle. Unlike an electric vehicle, an HEV is not solely dependent on a charging unit, although the different propulsion power systems may have common subsystems or components. For more information on hybrid and battery-electric vehicles, please visit [Electric Mobility Canada](#) and Natural Resources Canada's [Battery-electric and Hybrid Vehicles](#); the latter provides definitions of battery-electric and hybrid vehicles.
2. **Natural Gas (NG)** is a higher-octane fuel than gasoline. This translates into greater performance and higher fuel efficiency, especially when matched to a dedicated NG-fuelled vehicle. In cold weather, NG vehicles typically start better than a gasoline vehicle since the fuel is already in a vaporous state. Several manufacturers offer vehicles that run on natural gas. Conventional gasoline vehicles can also be converted to natural gas. Visit [Canadian Natural Gas Vehicle Alliance](#) and Natural Resources Canada's [Natural Gas](#), for information.
3. **Propane** is a three-carbon alkane, normally a gas, but compressible to a liquid that is transportable. The fuel liquefied petroleum gas (LPG or LP-gas) can be a mixture of propane along with small amounts of propylene, butane, and butylene. Gasoline engine can be readily converted to run solely on propane (dedicated conversion) or have the ability to switch between propane and gasoline (dual-fuel conversion). Propane gas conversion involves the installation of a conversion kit that includes the fuel controller, valves, actuators, electronics and software needed to convert a vehicle to propane operation, and a propane tank. Visit the [Propane Gas Association of Canada](#) and Natural Resources Canada's [Propane](#) to access information on the [availability of propane](#).

4. An **Auxiliary Power Unit (APU)** is a device permanently dedicated to the vehicle on which it is installed that provides electrical, mechanical, or thermal energy to the primary engine, truck cab, and/or sleeper berth or any other commercial vehicle's cab, as an alternative to idling the primary engine. It has its own power source. An APU must be able to support at least three different functions (such as providing power to a cab heater, cab cooler, engine block heater, other auxiliary devices such as lights, computer, etc.) concurrently for eight consecutive hours or more (dependent on jurisdictional requirements of where the vehicle is operating) while the main engine is shut off. APUs are used in place of truck idling; it may draw fuel as does the engine, but would use considerably less fuel than if the engine was idling.

5. A **Cab Heater** or **Cab Cooler** provides heat and/or air conditioning to the truck interior/cab sleeper for eight consecutive hours or more (dependent on jurisdictional requirements of where the vehicle is operating) with the main vehicle engine shut off. It can be powered through a number of means - diesel fuel, batteries, an APU, etc.

6. **Fully Electric Trucks** are commercial vehicles powered by batteries and electric motors that are emissions free but whose range and top speed are more limited than conventional trucks. FETs can recharge their batteries after several hours and reclaim electric energy during stop-start urban operations through regenerative braking. Visit Pure Energy Systems which has a directory of Electric Truck providers.

7. **Hydrogen Generating Units** are devices installed on vehicles that generate hydrogen and oxygen gases through electrolysis and introduce those gases to the air intake to be mixed with any fuel source, resulting in more horsepower and torque, providing for a more complete and efficient burn of the fuel and less waste heat.