



How Large is your Carbon Footprint?

We learn in elementary school science classes that a limited amount of greenhouse gases are beneficial to our environment. Without these gases as protection from harmful radiation, the Earth would not be able to survive. However, as humans continue to gradually emit excessive amounts of greenhouse gases into the atmosphere, global warming and climate change become increasingly more prevalent and problematic. This year, here in California, we've experienced massive wild fires due to extreme heat conditions. While we are warming up, some Southern states have experienced hurricanes and floods that destroy families and livelihoods and the Northeast experienced some of the heaviest snowstorms on record in the months of January and February. All of these changes in our weather can, in part, be contributed to the amount of greenhouse gases we emit into the atmosphere every year.

According to the Environmental Protection Agency (EPA), global greenhouse gas emissions from human activity increased 35 percent from 1990 to 2010. Our main contributors to this increase are electricity generation and transportation. A recent study produced by the EPA stated that electricity and transportation each contribute 30 percent and 26 percent respectively to greenhouse gas emissions. As our population worldwide increases, it only makes sense to conclude that there are more drivers on the roads and more homes that require light and heat and our annual greenhouse gas emissions will continue to increase year after year if we do not make a change.

A different comparison study performed by the Propane Education and Research Council (PERC) concluded that propane, as both an alternative fuel for fleet vehicles AND as an alternative gas for home heating, is a way to contribute to

lessening your carbon footprint. It is a goal of the propane industry to continue working toward a product that will emit next to zero emissions, ensuring a stable environment for years to come. Arro Autogas is a leader in the movement to supply fleet vehicles, buses, and grounds keeping equipment with a reliable, sustainable fuel that will assist in giving your community a cleaner quality of air.

But, before we discuss propane as a viable energy source, we must first recognize that there is no fuel or energy source that emits zero emissions into our atmosphere. When we are evaluating greenhouse gas emissions from energy use, we must keep in mind that emissions don't only occur when the energy is being consumed but also during the extraction, processing, and transporting of the energy product. The PERC study's authors are quoted saying, "The fuel life cycle begins where the raw feedstock is extracted from the well or mine and ends where the fuel is consumed to power a vehicle, appliance, or other technology." This is why we can't look at any energy product (including electricity!) as a zero emission product. When electricity is produced, the combustion of fossil fuels used to generate the electricity creates greenhouse gas emissions that are often five times greater than the gases created by propane extraction. **The amount of greenhouse gases propane emits throughout its life-cycle is significantly less than gasoline, diesel, and electricity per unit.**

We've combined some of the data collected by the PERC study in a quick snapshot of the annual greenhouse gases emitted into our atmosphere by certain appliances and vehicles. Take a look at how propane appliances in your home affect our atmosphere versus electric; also shown are the effects of diesel and gasoline when used to power vehicles and machinery compared to using propane: [Annual Life-Cycle Greenhouse Emissions](#)

It's interesting to see a large margin between the harmful gases emitted by propane versus electric heating appliances. As the Propane Council study suggests, propane powered water heaters and space heaters are much more energy efficient than their electric counterparts. To read up on other benefits to investing in propane power for your home including how these appliances

positively impact your pocketbook, check out the Propane Education and Research Council's [Build with Propane](#) page.

Here at Arro Autogas, powering your fleet vehicles with this energy efficient and environmentally friendly fuel is our priority. As we can see from the Propane Council study, propane emits less greenhouse gases than gasoline in all four motor vehicle fuel uses researched. Similarly, when compared to diesel, propane is cleaner in most applications. Despite diesel showing slightly lower greenhouse gas emissions when used to run school buses, the study does not factor in the harmful carcinogens that can cause asthma in young children. These black clouds of smoke are not present when running a school bus on propane.

Using propane to run your fleet can not only save greenhouse emissions though, it can also increase the efficiency of your fleet and lower your cost of ownership. Propane powered fleet vehicles do not require the additional fluids, filters, and repairs that diesel or gasoline vehicles do. Additionally, they provide comparable torque, towing, and horsepower. This keeps your fleet running more efficiently than ever before!

Often, the bottom line is the deciding factor when purchasing a new school bus or fleet vehicle. Propane consistently costs less than both diesel and gasoline per gallon, giving you a return on your investment almost instantly. Money saved in fuel costs can then be implemented elsewhere in the form of adding staff members, honoring your current staff members, providing additional supplies, and purchasing additional propane powered fleet vehicles. From forklifts to commercial lawnmowers, school buses and F-250s, almost any fleet vehicle can run on propane. To find out more about how your fleet can convert to propane or how you can earn funding to purchase new propane powered fleet vehicles, contact Arro Autogas today!

Propane Education and Research Council provides extensive information regarding specific fleet vehicles and the benefits to each, to view these informative sites [Click Here!](#)