



Converting from oil to LPG

Oil Conversions Making the switch to LPG simple and easy

If you are using oil to heat your businesses, or using oil in an industrial process, you could benefit from converting to LPG (Liquefied Petroleum Gas). It's easy to make the switch and you could see a return on investment in as little as 2 years.

Any business that uses oil would be able to switch over to LPG. Your oil tank can be replaced with an LPG vessel, and whatever system you use for your heating and industrial process would be replaced.

Lower your spend on energy

The advantage of replacing oil with LPG is that LPG has a higher calorific value. This means that you get more energy from the same volume of LPG than you would oil, meaning you use less fuel.

Reduce your businesses energy consumption

LPG can help you save money in every part of your business, replacing your oil heating plant means less energy is used to heat your business.

Lower your CO₂ and Sulphur emissions

Another advantage of LPG is that it contains much less sulphur than oil does. It has a cleaner combustion which emits less CO₂ and toxic particles into the atmosphere,

and because of the cleaner combustion LPG boilers require less maintenance.

The overall 'carbon footprint' (the sum of its greenhouse gas emissions) of LPG is one of the cleanest fossil fuels available. LPG primarily emits water vapour (H₂O) and carbon dioxide (CO₂) during combustion and, in comparison with other fossil energy sources, contains only a few harmful health particles. By converting from oil to LPG, CO₂ emissions can be reduced by up to 20%.

15-20%
SAVINGS ON
ENERGY BILL



100%
DELIVERY SAFETY



20%
LESS CO₂ EMISSIONS

30-60%
LESS NO_x EMISSIONS

2-4
YEAR REFUND TIME FOR
TANK INSTALLATION



IN-HOUSE AVANTIGAS
TECHNICIANS AND ENGINEERS
TO OVERSEE YOUR CONVERSION





THE ECONOMIC BENEFITS OF LPG

LPG is a very cost-effective and efficient energy source. Its high calorific value means that when combusted, the majority of the fuel is converted to heat, unlike other fossil fuels that have lower calorific values and emit higher proportions of waste.

This means that you get more energy out of each fuel unit of LPG than you get with oil. Your business can save on energy spend by just converting to LPG, even if the price of a litre of oil and a kg of gas are roughly the same.

LPG boiler systems can be far more efficient than oil, and can also reduce your businesses overall energy consumption when used for heat or steam.

The economic savings from switching from oil to LPG typically range from 15-20% depending on your current consumption, the price of LPG, tank size, and the need for additional equipment.

When will you see a return on investment?

Each business is unique and there are many different factors that can affect the payback period when switching to LPG. We typically see a payback of between 2-4 years on any investment when switching to LPG.

Some of the factors to consider when

converting are:

- Δ Current fuel consumption
- Δ Current fuel price
- Δ CO₂ emission savings
- Δ Delivery times and frequency
- Δ Existing facilities
- Δ Location of tank
- Δ Above or underground tank
- Δ Tailor made appointments

Security and Safety

Fuel theft is extremely rare when using LPG compared to oil. As LPG is pressurised within the storage tanks, it is almost impossible to syphon off fuel. In comparison oil theft cost UK businesses and homes upwards of £30 million in 2018.



The economic savings from switching from oil to LPG are typically at:

15-20%



In most cases you will see a return on investment in

2-4 YEARS

ENVIRONMENTAL BENEFITS OF LPG

LPG is one of the most environmentally friendly fossil fuels. Containing very small amounts of sulphur and no pollutants such as lead and heavy metals.

During combustion LPG only emits water and CO₂ as waste. There is little risk of LPG contaminating soil or ground water, and has fewer adverse effects on the environment than oil.

Fewer harmful particles

Compared to other fossil fuels, such as oil and coal, LPG contains only a few harmful particles, such as sulphur. Less sulphur in the gas means less emissions of sulphur dioxide (SO₂) to the atmosphere. SO₂ contributes to climate change and weather phenomenon such as acid rain that damages plants and aquatic environments.

Unlike coal and oil, LPG also does not release soot particles during combustion. According to research published by the WLPGA (World LPG Association), soot from coal and oil (black carbon) contributes to 16% of global warming. Soot has a larger impact than CO₂ in the atmosphere and reducing soot particles is key to reducing climate change, as reducing soot emissions will have an

immediate affect.

LPG bridging the gap to a Renewable future

Solar, wind, and hydrogen are growing in popularity and becoming more feasible and apparent. LPG can be an appropriate supplement to renewable energy.

LPG already serves as a backup energy for many renewable energy systems, as it requires no connection to a grid network, and can be stored on site until needed.

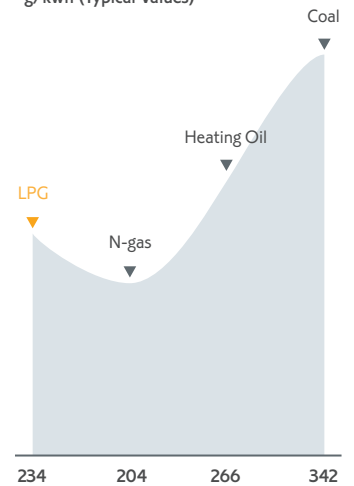
At the same time, researchers and the industry are working to make LPG even cleaner.

All fossil fuels emit CO₂ by combustion, however since LPG contains fewer carbon atoms per unit compared to oil, LPG contributes less to the greenhouse effect than any other fossil energy source. Research is also underway to make the production and use of LPG even greener and cleaner for the environment.

Lower calorific value (Typical values)

LPG	12,8 kWh/kg
N-gas	11 kWh/Nm3
Heating oil	10 kWh/l
Coal	7 kWh/kg

CO₂-Emissions g/kwh (Typical Values)



BIOLPG

CO₂ compensation via certificates

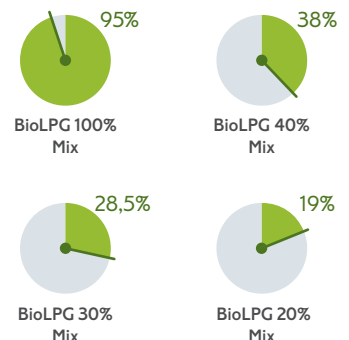
BioLPG is a by-product of the production of bio-diesel (HVO), extracted from recyclable raw materials such as food scraps and vegetable oils.

In the production of BioLPG, CO₂ emissions are reduced by up to 95% compared to the production of traditional LPG. These CO₂ savings are then certificated and can be used to offset other businesses who use traditional LPG

BioLPG is a greener alternative for companies that will contribute to climate change on a global level. The certificates' share of BioLPG can range from 20-100% the higher the BioLPG share the higher CO₂ saving.

In the UK, the certificate share of BioLPG ranges from 20% to 100%

The reduction of CO₂ emissions for BioLPG is found exclusively in the manufacturing process and remains at the refinery:



What is LPG?

LPG is also called liquid gas or bottled gas, whether stored in bottles or in tanks. LPG is a refined oil product that is extracted by refining crude oil and or natural gas, and the international name is Liquefied Petroleum Gas (LPG).

Applications

LPG is used in many different heating applications and industrial processes. It is a general replacement from oil when more than 8000 litres are used eg:

- △ Housing associations
- △ Building / construction / road
- △ Hotel / restaurant
- △ Care Homes
- △ Agriculture
- △ Industry
- △ Schools
- △ Hospitals
- △ Public Sector
- △ Transportation

What does LPG look like?

When LPG is under pressure, in a tank or bottle, it is in a liquid state and is clear similar to water. When LPG is used or released from pressure it takes a gaseous form.

By keeping the gas under pressure and in a liquid form, it allows larger amounts of LPG to be stored and transported, meaning less space is needed for the same energy requirements when in a gaseous state.

Does it smell?

Pure LPG is odourless. However for safety reasons, a odourant is added to all our LPG giving the characteristic "gas" smell. This means that leaks can be detected quickly and easily.

In safe hands

LPG is a very safe fuel to use, any risk will come from improper maintenance or damage to LPG equipment.

While gas emissions and leaks are rare, in the event of a leak, the LPG becomes gaseous and is quickly mixed with the air. We also add an odour tracer to our LPG so any leaks can be quickly found. LPG is always stored in pressure-tested, airtight containers which are subject to statutory inspection. The transport and refuelling of LPG takes place with specially designed and regulated vehicles.

Responsibilities and precautions

AvantiGas provides maintenance and inspections to any tank and its equipment. This is in accordance to any regulatory requirements and AvantiGas' own safety procedures.

Our goal is to help to make it as easy and safe as possible for your business to make the switch to LPG.

Safety and inspections

AvantiGas is responsible for inspections of the tanks we supply to you under a standing charge. Customers who own the tank can purchase a service agreement, so AvantiGas will perform any relevant safety checks.

TYPES OF LPG



Gas Bottles (Cylinders)

For occasional use or process and application, these small gas cylinders can be delivered directly to your site.



Bulk LPG

For use with heating or process systems where a high energy demand is needed. A drop in fuel and perfect replacement for oil.



BioLPG

Mix of BioLPG / propane via certificate. Produced from residues from raw materials such as vegetable oils and animal fats.



Butane Mix

Gas with 95% iso-butane. Typical for special productions (e.g. propellant, extrusion).



Dedicated Solutions

AvantiGas assess the individual needs of every customer, your consumption levels ,the extent of installation, and many other unique needs are assessed before we offer a solution. We tailor any solution individually in collaboration with clients on a case-by-case basis.

Your supply and delivery agreement

With AvantiGas as supplier you can choose how you want the LPG delivered. You can

choose automatic refill, regular deliveries, or you can order LPG manually when it suits you best.

Automatic deliveries and forecasting

AvantiGas' automatic delivery and forecasting service uses your consumption rate along with peak times in your business and weather conditions to schedule deliveries when your business needs it the most.

In-house engineering and technical team

We have a dedicated in house engineering and technical team to perform installation, commissioning, and any maintenance or checks.

We will also perform all regulatory inspections and any required tank testing or inspection at regular intervals.

Installation Options



Above ground tank

A free standing gas tank is ideal where there is plenty of space. This can replace your old oil tank. The tanks are available in sizes from 1.6 m3 upwards.



Tank array

For businesses with a high level of fuel consumption, multiple tanks can be installed on-site and linked, reducing the risk of low levels and increasing supply stock.



Underground Ttnk

A buried gas tank is an alternative to traditional above ground tank. With only the cover visible it is good solution where aesthetics play a crucial role. The tank is tested to ensure it meets all safety and environmental standards.

Step by step

What you need to make the switch

AvantiGas serves and advises companies throughout the whole of the UK. We know that it is important that there is no interruption in daily operations or production within your business.

That's why we make it easy for you when you have made the decision to switch from oil to LPG. Together, we make the conversion as fast and smooth as possible.

This is what the process looks like step by step

- 1** When contacting AvantiGas, we will schedule an initial meeting to understand the key needs of your businesses and the benefits of switching to LPG.
- 2** We will conduct a site survey and inspection of your current system to determine your consumption and the best location for your tank
We will also advise on the next steps for undertaking any civil works and upgrading any oil boilers or equipment.
- 3** You will receive a comprehensive offer from AvantiGas with a detailed review of the calculations and offers.
- 4** The contract is signed. After that, the work will start immediately.
- 5** Your LPG solution may already be running approx. 8 weeks after the contract is signed. In this time your tanks will be manufactured and tested.
- 6** Our engineers will install the new AvantiGas LPG tanks and commission your system. If your new boiler or process equipment is ready we will make the external connections and your first fill will be made.
- 7** When the installation is complete, you will start to receive your regular delivery and enjoy the benefits of a greener and more efficient energy source.

Get in Touch

If you are ready to make the switch to LPG or would like some more information get in touch and talk with one of our LPG specialists.

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