



CALOR



SHV ENERGY

Calor is proud to be part of the **SHV Energy** group, a family-owned organisation based in the Netherlands.

Employing 17,000 people globally, our forward-thinking approach enables us to supply low carbon energy solutions to our customers in 25 countries around the world.

Not only is SHV Energy the largest downstream provider of LPG in the world, it also shares bold sustainability ambitions that will help drive us towards a greener future.

Over the next 20 years, our goal is to ensure that the source and supply of our gas products becomes increasingly renewable - this means more bio-based products which have lower carbon emissions. BioLPG plays a big part in our sustainability goals for both Calor and SHV Energy. BioLPG not only reduces CO₂ emissions by up to 80%, it's also identical in use and performance as LPG, and so is an ideal solution for like-minded businesses looking to reduce their own carbon footprint.



Dr. Keith Simons, Principal Scientist, explains the science behind **BioLPG**

At Calor, we are sometimes asked what is the difference between LPG and BioLPG - and the simple answer is... there is no difference.

To further reassure the chemically-minded amongst us, we asked Dr. Keith Simons to expand:

“BioLPG is compliant with the current regulations and standards related to fossil LPG, being composed by propane (C₃H₈) from a biological and organic matrix (for that reason named biopropane), which results in significant net reductions of CO₂ being released into the atmosphere.

Biopropane is molecularly identical to the fossil equivalent. As such, it conforms to all standards associated with LPG supply and usage and has identical chemical, physical, energy and combustion-related properties, including, but not limited to, those listed in the panel below:

- Chemical formula
- Critical pressure
- Psat
- Specific volume
- Specific heat
- Flame propagation velocity
- Molecular weight
- Boiling point
- Liquid density
- Specific gravity
- Higher heating value
- Diffusion coefficient
- Critical temperature
- Melting point
- Gas density
- Energy content
- Lower heating value
- Burning rate



More recently, the standard EN 16942 to implement Directive 2014/94/EU has also been adopted to allow consumers to have confidence on the compatibility of their vehicles with the fuels placed on the market.”

And should you want to understand the origin of propane then you may want to read on...

“All propane (C₃H₈) gas molecules in existence have been derived from photosynthesis - the action of sunlight on atmospheric carbon dioxide (CO₂) and water (H₂O) to create biological matter. Fossilisation of this biological matter over 350 million years has created the hydrocarbon pool which has formed multiple sources for Liquid Petroleum Gas (LPG). As such fossil propane molecules have been sourced as a by-product of global petroleum refinery and natural gas extraction operations.

In BioLPG the propane molecules are still derived from the action of sunlight on atmospheric carbon dioxide (CO₂) and water (H₂O) to create biological matter (for example waste vegetable oils) which could be processed to make biopropane (C₃H₈).

As such BioLPG is derived from a renewable resource which results in significant net reductions of CO₂ released into the atmosphere.

Since 2018, SHV Energy has been augmenting fossil propane with biopropane into its European distribution network. **Biopropane (BioLPG) is molecularly identical to the fossil equivalent (both being ultimately derived from the same carbon dioxide and water molecules). As such it conforms to all standards associated with LPG supply and usage.”**

Dr Keith Simons
Principal Scientist,
SHV Energy

Interesting BioLPG facts...

The moment you convert from LPG, diesel or electric to BioLPG, you're not just filling up with a renewable and sustainable energy source – you're making instant carbon savings and other great improvements for your fleet.

Zero impact

BioLPG doesn't affect vehicle performance or fuel efficiency in any way – and it's still better for the environment.

Fit for purpose

BioLPG is approved by the International Sustainability and Carbon Certification Scheme.

Lower carbon emissions

20-32%

Dramatically cut your fleet's CO₂ levels using BioLPG compared to conventional LPG. This also helps you meet the required 20% saving in carbon emissions by 2020 under the UK's Carbon Reduction Commitment.

Remember that if you're already using LPG, there is no need for you to change your equipment or infrastructure.

Find out more

If you would like more information on BioLPG then please give Calor a call on **0800 085 5035** or visit calor.co.uk

