

Press release

Amsterdam, 23 September 2019

Up to 80% carbon emission reduction from switch to (bio)LPG

LPG study underpins role of (bio)LPG as immediate solution to drive decarbonisation and reducing air pollution in Europe.

The World LPG Association (WLPGA) today launched its report, *“Supporting businesses in the energy transition: the role of LPG and bioLPG in Europe”*. The report demonstrates that in the agricultural, commercial and industrial sectors of Europe, switching from oil to LPG would drastically reduce the damage cost associated with carbon emission and air pollution by (~70-80%) compared to biomass and oil (66%). It also demonstrates that bioLPG as a clean burning fuel can play an important role in reducing air pollution in Europe and supporting Europe’s energy transition in the short and long term.

The WLPGA report, conducted by Ecuity Consulting LLP, focuses on the opportunities for fuel-switching and outlines the benefits of switching to (bio)LPG across three European economies – France, Italy and the United Kingdom (UK). Each economy is at different points in terms of their energy transition, mix of fuels in energy generation and their climate ambitions.

Driving decarbonisation

With this research, WLPGA aims to help drive decarbonisation in a time where there is a need for instant and effective solutions in line with the EU’s ambitious environmental policy targets, such as carbon neutrality by 2050. Increasingly customers, employees and supply chain partners are putting pressure on businesses to reduce their emissions and move away from the use of high-carbon fuels like oil.

The report shows industries and businesses how (bio)LPG is pivotal in becoming compliant with current and future environmental regulations. For example, research into the UK shows that the levelised cost of a typical rural pub using an LPG boiler is around 14% lower than an existing oil boiler. In the longer term, switching to a bioLPG-fueled system would generate a 30% lower levelised cost compared to a biomass boiler and around 13% for a typical in-situ electric heat pump.

Operational benefits

One of the key benefits for businesses that operate off the gas grid, is that this transition can be delivered cost-effectively and with minimal disruption. Many of these commercial and industrial companies use heating oil and coal to power their processes and provide heat to buildings. The reasons for this cost efficiency, among others, are the possibility of direct replacement, ease of use and transportation (even in remote areas).

A good example comes from France where the consumption of coal and oil account for 40% of the total final energy consumption and commercial buildings and industry are the largest consumers of energy. Here LPG can be used as a substitute to fuel oil across these sectors, especially where electrification is not (yet) an option. For old commercial buildings, economic analysis shows that the levelised cost of running a bioLPG boiler in an old building with poor thermal characteristics was €64.5/MWh, 4% less than an air-source heat pump and 17% lower than a biomass boiler.

A solution to cleaner air

Europe is facing severe air pollution problems and currently failing to meet set standards, making 'air quality' Europe's second biggest environmental challenge next to climate change. The research shows that for businesses that fuel their process, space heating and vehicles with oil or coal, switching to (bio)LPG can present an immediate win.

As well as lowering carbon emissions, LPG can improve local air quality since it is a clean burning fuel that emits 84% less nitrogen oxides than oil and emits almost no particulate matter when combusted. The researchers also found that switching from oil to LPG would drastically reduce the damage costs associated with carbon emission and air pollution. Research into benefits for Italy showed that in commercial and industrial boilers, LPG emits over 90% less PM than oil and over 99% less PM than coal.

BioLPG: a long-term renewable energy source

Developing a robust LPG market can provide a platform to sustainably transition to bioLPG, a chemically distinct yet renewable form of conventional LPG. BioLPG is increasingly coming to market across Europe as an immediate renewable replacement for LPG in growing volumes, with several of the largest companies having defined 100% renewable targets. BioLPG has a carbon intensity that is around 70-80% lower than oil and can be used in existing LPG appliances and storage units, allowing for a cost-effective pathway to decarbonisation for industrial and commercial businesses.

Download the report **"Supporting businesses in the energy transition: the role of LPG and bioLPG in Europe"** from the WLPGA website.

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