

**Committee on Climate Change**  
**Building a Zero Carbon Economy – Call for Evidence**  
UKLPG Submission, 6<sup>th</sup> December 2018

**Question 6 (Hard-to-reduce sectors): Previous CCC analysis has identified aviation, agriculture and industry as sectors where it will be particularly hard to reduce emissions to close to zero, potentially alongside some hard-to-treat buildings. Through both low-carbon technologies and behaviour change, how can emissions be reduced to close to zero in these sectors? What risks are there that broader technological developments or social trends act to increase emissions that are hard to eliminate?**

The UK's gas grid network extends to 84% of UK households, of the remaining 16%, 2 million properties are rural off-grid homes. 1.1m off-grid homes across Great Britain use heating oil and 170,000 households use coal and other solid fuels at their source of heat. It is well known that the age, style and fabric of the existing off-grid properties makes them hard to heat and difficult and expensive to treat with energy efficiency measures, but it is these high carbon heating systems that need to be urgently phased out if UK Government wants to meet its 2050 decarbonisation targets.

LPG is the low carbon alternative to conventional high carbon fossil fuels, available immediately it emits 33% less CO<sub>2</sub> than coal and 15-20% less CO<sub>2</sub> than heating oil. It is a clean burning smoke-free fuel that supports clean air quality and unlike many other off-grid fuels, it also contains low levels of nitrous oxides (NO<sub>x</sub>) and particulate matter (PM) making it suitable for both indoor and outdoor use. Oil on the other hand emits 10x more PM and coal 100x more PM, with a biomass stove also able to generate 4000x higher PM than an LPG appliance for the same thermal output.

Further to this, the LPG industry has begun its deployment of bioLPG which delivers a long term low carbon solution for off-grid heat. Available for use now, bioLPG is derived from production processes that use a variety of biological materials as feedstocks, including waste streams. It is chemically indistinct from LPG and hence can be 'dropped-in' to existing supply chains and appliances, making it an attractive, current alternative for the consumer.

In addition to domestic properties, there are tens of thousands of off-grid businesses who need access to high grade heat and due to their location are often limited to coal, oil or LPG. LPG is the lowest carbon conventional fuel available to these businesses, but in addition to the carbon savings that could be made from switching to LPG for heating, there are also savings available from industry process requirements, as LPG can replace any process heating requirement currently provided by coal or oil. Examples and case studies of how LPG technology has been deployed successfully so far and is delivering decarbonisation off-grid can be accessed [here](http://www.uklpg.org).

To reduce carbon and pollutant emissions from off-grid buildings, steps need to be taken now to reduce the use of coal and oil in the off-grid sector. Firstly, UKLPG urges Government to set an end date for the burning of high carbon fossil fuels in domestic buildings. If Government is committed to phasing out such fuels, it is important that this message is clear and consistent for all stakeholders, similar to their 2025 deadline to end the use of coal in power plants.



To aid this process, UKLPG also recommends an oil tank scrappage scheme to support domestic fuel switches. Heating oil infrastructure is owned by the customer, whereas the LPG industry maintains and owns LPG infrastructure on domestic properties. A Government backed oil tank scrappage scheme would help alleviate customer reluctance to move away from heating oil due to owned oil assets and valuable fuel remaining in the tank. It would also allow heating engineers and installers to actively promote alternative, cleaner heating systems to consumers.

In addition, Energy Performance Certificates (EPCs) must be tackled, as an unintended consequence of its flawed methodology is encouraging properties to switch from LPG to high carbon oil – a risk to off-grid decarbonisation and the Clean Growth Strategy. In reality, the EPC is a measure of energy cost per m<sup>2</sup> and is distorting the results when comparing various fuel types between similar properties, a problem for off-gas grid properties where all fuel options are more expensive than natural gas. If Government want properties to be more energy efficient and emit less carbon, EPCs must reflect this and not the cost of the input fuel.

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UKLPG is the trade association for the Liquefied Petroleum Gas (LPG) Industry in the UK, representing companies who are LPG producers, distributors, equipment and service providers, and vehicle convertors. Member companies cover 99% of the total LPG distributed in the UK.