

Written evidence submitted by Liquid Gas

Liquid Gas UK campaign to change flawed EPCs to prevent rural homeowners from being penalised

July 2020

Dear Environment Audit Committee Members,

I am writing to you about a serious concern we have with the methodology behind Energy Performance Certificates (EPCs), which if left unaddressed will increasingly penalise rural off-grid homeowners, going against the principle of a just transition.

By way of background, Liquid Gas UK is the trade association representing the LPG industry in the UK¹. LPG provides a heating solution for the almost two million homes off the gas grid in the UK and thousands of businesses from mobile caterers to rural manufacturers, B&Bs and farms who are reliant on off-grid fuel sources.

At this moment, **EPCs are currently more likely to encourage off-grid property owners to take up higher carbon heating solutions rather than invest in energy efficiency measures.** This unintended consequence is the exact opposite of what UK Government wants to see, especially with a Net Zero target enshrined in law.

The reasoning behind this is that while an EPC rating is positioned as a measure of energy efficiency, in reality, the rating is actually a measure of energy cost per m² which includes input fuel cost. By doing this, it is distorting when comparing various fuel types between similar properties and is particularly distorting where all fuel options are more expensive than natural gas.² **This means that an identical property, built to the exact same standards, will receive a much lower EPC rating if it happens to be situated outside the coverage of mains gas.**

The below table demonstrates the different EPC ratings for a property when only changing the fuel type and heating system:

Typical off-grid property features: sandstone/limestone as built (no insulation), pitched roof (250mm loft insulation in part), full secondary glazing, boiler and radiator – heating controls, programmer, thermostat and TRVs. Low energy lighting in all outlets.	
Mains gas boiler	60 (D)
LPG boiler	28 (F)
Oil boiler	47 (E)
Electric boiler	18 (G)
Electric high retention storage heater	42 (E)

The flawed EPC methodology drives off-grid homes away from low carbon technologies and onto higher carbon, cheaper energy sources to gain a higher EPC rating, especially in England and Wales due to Minimum Energy Efficiency Standards (MEES) for the private rental sector. We are aware of EPC assessors openly encouraging sticking with or switching to higher carbon fuels, such as oil, in order to get a better EPC rating – rather than promote lower carbon solutions such as LPG/bioLPG or heat pumps.

¹ Our member companies represent more than 99% of the total LPG distributed in the UK marketplace.

² Liquid Gas UK (then UKLPG), Response to Energy Performance Certificates in Buildings Call for Evidence (October 2018).

Revising a methodology that is at odds with the UK Government's policy aims

Removing the input fuel cost from the EPC methodology would ensure there is no disparity between identical properties on or off the gas grid, and importantly, drive investment in actual energy efficiency and low carbon heating.

This is a long-standing issue, but with EPCs moving to become a regulatory tool for domestic energy efficiency, the current methodology will bring the following consequences to the fore:

- **Homeowners will be mobilised towards higher carbon fuels** as they attempt to improve ratings by using the cheapest fuel available rather than improving building fabric. This 'fabric last' approach not only fails to deliver building standard improvements for residents, it also directly counters Government's wider decarbonisation objectives.
- **Homeowners and house builders will have to spend more money on off-grid homes, compared to an identical home on the gas grid.** This is unfairly and unjustly penalising homeowners and house builders in rural areas for no other reason than the fact they don't use natural gas.
- **Identical properties in terms of fabric situated on and off the gas grid will receive different EPC ratings.** Due to the way that EPCs are currently calculated, off-gas grid homeowners are disadvantaged against their grid-connected counterparts in their EPC rating. This means that off-gas grid homeowners will have to spend more money on building improvements to reach the same energy performance standard as those on the grid. For the private rented sector, this could in turn cause tenants' monthly rent rates to increase.
- **"Buy to let" mortgages could be refused** simply because a property does not have access to mains gas. This will result in a reduction in the supply of rental properties in rural areas and have a significant impact on local communities.
- **Flawed and unfair off-grid EPCs will devalue off-grid properties** as potential homeowners and landlords choose not to invest in rural locations due to the unfair policy penalties.
- **Makes reaching EPC Band C and above extortionate** and, in some cases, impossible.

The role of LPG and bioLPG in enabling Net Zero

Incentivising homeowners to use higher carbon fuels, when heating is under huge pressure to decarbonise, is clearly a paradoxical situation. In its current form, LPG is already the lowest carbon conventional fuel source available to homes and businesses off-grid. It offers up to 33% less CO₂ than coal and 20% less than oil, with very low levels of NO_x, SO_x and Particulate Matter³.

Industry is taking decarbonisation further with bioLPG, alternatively known as biopropane, which is a versatile, 'drop-in' renewable solution which can provide up to 90% emissions reduction.⁴ Already available on the market today, bioLPG is chemically indistinct from LPG and can be used as it is, just like conventional LPG. This means it can be 'dropped-in' to existing supply chains and can be used by consumers in their existing heating appliances,

³ UKLPG, Response to A Future Framework for Heat in Buildings (June 2018).

⁴ WLPGA, 'BioLPG: The Renewable Future' (2018), Page 52.

offering a seamless transition to Net Zero. As such, Government should be supporting LPG and bioLPG in standalone boiler systems, or as part of a hybrid heat pump system, as recommended by the Committee on Climate Change.

Our asks

No other European country includes input fuel cost as part of their methodology. By simply removing input fuel cost so EPCs are a true measure of a home's energy efficiency, we can end a system which encourages off-grid homes to use high-carbon fossil fuels like heating oil, over LPG or heat pumps. Left unaddressed, it could even cause havoc for homes switching to hydrogen, as it will likely be more expensive than natural gas and the flawed system could see millions of homes on the grid achieve a worse EPC rating overnight.

We have been calling on the UK Government to address this when it publishes its EPC Action Plan later this year and in its response to the long-awaited call for evidence on EPCs which concluded in October 2018.

It is vital that the EPC methodology is rectified, especially ahead of the Government launching its plans for increasing the energy efficiency of owner-occupied homes, also due in 2020. If England and Wales follow Scotland's move to enforce a minimum EPC standard to buy or sell a home, it's essential that we get this right.

Alongside this, we think the Government should recognise a role for LPG and bioLPG as part of a mix of technologies that can support the decarbonisation of off-grid homes. Electrification of heating systems should not solely be seen as the solution to decarbonisation and low carbon heat in the UK, especially in rural areas. It is important that regulations and policy reflect that different solutions will be required for different types of building stock and locations across the country.

Energy consultancy Ecuity has found that a mixed technology approach to installing heating technologies in off-grid homes will enable the UK to achieve its Net Zero target. It was found to be the most cost-effective approach, and ultimately saved £7bn in a levelised cost analysis across the whole of UK.⁵ We believe a mixed technology approach will best encourage consumers with different circumstances, earning capacities and building types to make environmentally sustainable choices.

Yours sincerely,

Sophia Haywood

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⁵ Ecuity Consulting & Liquid Gas UK, [A Practical Approach: Analysis of Off-Grid Heat Decarbonisation Pathways](#) (2019): The report analysed the feasibility and cost of a mixed technology approach compared to a fully electrified approach.