

Introduction

1. Calor welcomes this opportunity to contribute to the Climate Change, Environment, and Infrastructure Committee's thinking in relation to the decarbonisation.
2. Calor is the UK's largest supplier of Liquid Petroleum Gas (a heating fuel used by many off-gas grid, rural properties) and BioLPG (a 'green gas' and our lower carbon renewable, direct alternative to LPG), and we will soon be bringing our newest green gas, rDME, to market.

Response

3. We welcome the Committee's decision to consider the decarbonisation of the private housing sector in isolation. This approach is welcome given that this sector contains the largest number of homes, with 900,000 properties in Wales falling into this category, making the sector the most complex and challenging to influence.
4. Upon its publication in November 2021, we welcomed the Welsh Government's Net Zero Wales Carbon Budget 2 (NZW-CB2) emphasis on securing a just transition to a greener Wales. At Calor, we want to ensure that Wales' off-grid rural energy users are not forgotten about or left behind as we decarbonise heat in rural homes and businesses, and do not face additional cost or burden compared to homes on the gas grid.
5. Whilst the pledged support to optimise the thermal and energy efficiency of properties whose households are experiencing fuel poverty is welcome, the NZW-CB2 lacks ambition and detail around how it intends to support the sector not experiencing fuel poverty, which was also a clear gap in the UK Government's Heat and Buildings Strategy (HABS). We would urge the Welsh Government to address this gap in policy in its upcoming heat strategy, set to be published in 2023.
6. Whilst those households fortunate enough to not currently be in fuel poverty, the costs facing households in the 'able-to-pay' sector are significant, even with a near-term expansion in access to private financing for retrofit. This financial barrier is a clear blocker for Wales achieving its net zero ambitions at the pace required.
7. A study commissioned by Calor has found that up to 44% of off-gas grid homes are hard-to-treat and will require affordable decarbonisation options, such as BioLPG boilers, or hybrid heat pumps. A deep retrofit of all rural, off grid homes to facilitate full electrification would entail high upfront costs and considerable time commitments from consumers, meaning many consumers would be unwilling or unable to commit to such improvements. A typical oil heated period-home would cost £31,000 to carry out a deep retrofit for electrification



and heat pump installation, with over 15 days for the works to be carried out. In 2021, Calor commissioned a Rural Attitudes Tracker, conducted by YouGov, which found that only 4% of rural off-gas grid consumers would consider paying more than £5000 on a renewable heating system. This underlines the significant gap between what consumers are willing to pay for decarbonising their homes, even if they are in a position to afford this financially. The £5k on offer under the Boiler Upgrade Scheme does not address this shortfall. While Calor supports efforts to move Welsh homes onto lower carbon heating, the BUS is not technology neutral as it support only heat pumps and biomass boilers. As a minimum would hope to see the UK government expanding BUS support to include hybrids, when partnered with a low carbon gas such as BioLPG or rDME and we would hope the Welsh government would support this expansion of supported technologies.

8. To ensure the delivery of net zero for off-grid 'able-to-pay' households is aligned with the Welsh Government's just transition principles, we would urge the Welsh Government to adopt a mixed technology approach, including BioLPG and hybrid heat pumps, when determining which fuels are suitable to supply new and old housing stock in Wales. The recognition of BioLPG in future heat policy – and the support of it in government schemes – would help drive demand and provide certainty to the sector to further invest in domestic supplies of BioLPG.
9. Our low carbon BioLPG is already available in the UK (representing about 8% of our total sales) and we are devoting significant research and development to bring more BioLPG into the UK. As a drop-in solution, homeowners currently using LPG do not need to change or alter their heating systems to use BioLPG, and BioLPG offers a much more straightforward and cost-effective transition for many homes currently heated by highly polluting heating oil.
10. The need for consumers to have affordable heating options is essential. Therefore, policies and regulations should not be on a restricted suite of technologies, but on delivering outcomes and providing the greatest choice to meet the varied needs of different property types.
11. For example, for off-gas grid homes in rural areas the typical route to decarbonisation is different. These properties are typically larger, older, less energy efficient and situated in remote areas which may have limited electricity grid capacity. This makes electrification more difficult and expensive, and heat networks are typically unfeasible. The consumption of high carbon fossil fuels is far more common in these areas, and higher temperature heating systems have a role to play both as a transitional technology, and with the development of biofuels as a near-zero carbon alternative to heating oil and coal.
12. The UK Government's HABS acknowledges that not all off-grid properties will be suitable for heat pumps and that there could be a role for biofuels such as BioLPG and particular attention was then paid to 'hard-to-treat' homes, deemed unsuitable for a low-temp heat pump by the HABS. In this sector, BioLPG offers a solution with a low upfront cost if used in a standalone boiler, and the lowest total cost over 12 years if used in a hybrid heat pump system.



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13. BioLPG is not currently recognised in the Standard Assessment Methodology (SAP), the UK Government's National Calculation Methodology for assessing the energy performance of dwellings and determining Energy Performance Certificates (EPCs). We are urgently pressing the UK Government to rectify this anomaly so BioLPG can play a meaningful role in rural heat decarbonisation. We would therefore recommend that the committee gives consideration to how these barriers can be overcome, so as to ensure that consumers in Wales have greater choice in heating their homes.
14. In October 2020, Calor commissioned an independent study, examining off grid heat decarbonisation across the UK. The study found that for 46% of homes currently using oil to heat their homes in Wales, the most cost-effective low-carbon heating option is a bioLPG boiler or bioLPG hybrid (heat pump and BioLPG boiler) deployment. To emphasise the challenge facing many rural households in the near future, for the largest and oldest rural homes, heat pump with retrofit costs could reach over £30,000 for many properties.
15. In the remaining 54% of homes currently heated using oil in Wales, the cost-effective option is to either carry out a retrofit to enable the use of a heat pump or to immediately electrify. However, there are also wider considerations above levelised costs that may not make these properties suitable for retrofit or electrification.