Rural Vulnerability Day – Net Zero

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Decarbonising Rural Britain

Getting it right for the 2 million rural homes going first

Government has chosen a 'rural first' approach to home heat decarbonisation

Imminent Heat and Building Strategy will seek to phase out fossil fuel boilers in off-grid homes from **2026**

This is 7 years earlier than plans to phase out fossil fuel boilers in on-grid homes

Govt must treat rural homes fairly – **77%** of off-gas grid homeowners feel govt overlooks them on energy & environment issues



BOILER THREAT Homeowners face gas boiler ban within 14 years and it could cost thousands to replace them

The Telegraph

Banks could be discouraged from lending on draughty homes ahead of gas boiler ban

THE SUNDAY TIMES

Homeowners may have to improve energy efficiency before selling under new green plans



What do rural off-grid households think?



- Low awareness of existing government policies and potential impact on household budgets
- Over **50%** expect it to be more expensive for their homes to reach minimum energy efficiency standards
- Only **16%** of owner occupiers know their home's EPC rating
- 46% of owner occupiers would oppose (**55%** of Conservative voters) plans to regulate energy efficiency upgrades





The transition away from fossil fuels – what should take their place?

The challenge is too big for one solution – every low and zero carbon option needs to be embraced and backed

BEIS support technical assessment from Delta EE that **91%** of homes are suitable for electrification

However, "no cost or economic impact assessment" has accompanied this assumption

However, we have commissioned research on the impacts this transition could have on typical heating oil households.

Rural communities would benefit from a level playing field for green gas





The challenge for typical, hard-to-treat, oil heated homes



Mrs Smith lives in a detached home, with no major renovations that was built pre-1918. She heats the home with an old oil boiler that needs replacing.

Mrs Smith's home is representative of the most common archetype (16%) currently using heating oil in England.

Mrs Smith's home is large, with a floor area of $198m^2$



Which typical **energy efficiency** improvements could be made to this Mrs Smith's homes?

- 1. Loft insulation
- 2. Solid wall insulation
- 3. Double-glazing
- 4. PVC door



It would cost an estimated **£31,690** to make all these improvements with a heat pump.



It could take more than **2-3 weeks** of research, supplier contact, preparation, installation and clean-up time to install an ASHP and SWI in Mrs Smith's home



*utilised English Housing Survey to develop over 50 rural housing archetypes

https://www.ecuity.com/wp-content/uploads/2020/12/Ecuity_Off-Grid-Heat-Decarbonisation-Pathways-compressed-1.pdf

Heat pumps cost effective for the majority - 56% of oil heated homes

But 59% of these households may not be able to afford the upfront costs



Current Oil Heated Homes – Consumer Cost Perspective

Hard to Treat
Retrofit Candidates
Suitable for Immediate Electrification



Other affordable options needed - BioLPG can deliver for hard-to-treat homes



- On a levelized cost basis, BioLPG represents a cost effective, drop-in solution and can be used seamlessly in existing heating systems
- CCC have modelled a role for 900k hybrid heat pumps using BioLPG to tackle hard to treat homes
- Offers significant air quality benefits compared to biomass

"How much, if any, would you be willing to spend on a renewable heating system?"





BioLPG – available now and scaling for the future

- Co-production via feedstock used in other, growing bio-fuel markets
- Drop-in replacement for LPG can be used in any ratio up to 100%
- Investing in new supply sources and R&D
- 2020 volumes = equivalent to approx 30% of our domestic energy demand



For an energy switch (oil to BioLPG for example) it is often the quickest option with the least disruption. This easiest pathway is important due to the distress nature of energy switching (i.e. boiler breakdowns)

The future of heat in off-gas grid UK



Diverse and decarbonised

BioLPG is not the single answer, but neither is electrification or any other technology.



Choice, not mandate

Options that are suitable for homeowners dependant on their situation (financial, physical and property)



Affordable and achievable

To achieve conversion for all homes in 30 years needs financial support, available equipment and a workforce to deliver – which needs a range of solutions.



Equal status

This is not a test bed to trial systems for the rest of the UK.

2 millions diverse homes are not "no regret" or "low hanging fruit" – we need to get them right for the policy to work for everyone.



Thank you.

Andy Parker– Head of Strategy and Corporate Affairs

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