

**BRIEFING NOTE FROM THE RURAL SERVICES
NETWORK AS SECRETARIAT TO THE APPG**

**DECARBONISATION OF OFF GAS GRID HEATING
APPG MEETING 19 JULY 2022**

1.0 INTRODUCTION AND BACKGROUND

The Government issued consultation documents seeking comments by 12th January, 2022 on the subject of “Phasing out the installation of fossil fuel heating systems in (1) homes and (2) businesses and public buildings off the gas grid.

Several of the proposals are of great concern to the Rural Services Network and other members of the Rural Coalition.

The Government has yet to issue a response to the consultation 6 months on.

We set out Key Rural Arguments in Section 2 below.

On 8 April 2022 Margaret Clarke CBE, Chair of the Rural Coalition wrote to The Rt Hon. Greg Hands MP, Minister of State for Energy, Clean Growth and Climate Change Department for Business, Energy & Industrial Strategy to share the Rural Coalition’s concerns with regards to the Government’s plans for the decarbonisation of off gas grid heating.

A summary of the asks contained in the Rural Coalition [letter](#) and the Minister’s reply can be found in Section 3 below. Also provided is commentary on the Minister’s reply, supplied by the Rural Services Network, one of the 13 organisations that make up the Rural Coalition.

2.0 KEY RURAL ARGUMENTS IN SUMMARY

The principle of working with the natural boiler replacement cycle as the key trigger to deploy low carbon heat makes sense. The principle is correct; however, the challenge is about how this principle is applied to best serve the policy objective of achieving a **'just transition'** away from fossil fuel heating and towards net-zero.

Of fundamental importance, **the Government must deal with the fragility of the rural electricity network before requiring electricity-based solutions.**

The Government has an over-arching **policy of no-one being disadvantaged by where they live. It is being ignored** in the proposals as they stand.

The RSN's lays out its thoughts on the Government's Heat and Buildings Strategy in its Rural Lens Review of the strategy, see: <https://rsnonline.org.uk/images/rural-lens/heat-and-buildings-strategy-rural-lens-review.pdf> at a glance our thoughts are as follows:

At a glance

Rural Services Network's thoughts on the **Heat & Buildings Strategy**:

1. Air source heat pumps are most likely to be attractive in homes that are well insulated¹ and are a cost-effective low carbon solution in **around 50% of rural households**². However, the Government believes that 80% of off-grid homes are suitable for a heat pump, even though 47% of rural homes were built before 1949³ and only 3% are at EPC C or higher.
2. Hard to decarbonise rural homes with limited opportunity for further insulation will need **diverse and decarbonised** options, including wood pellets, low carbon liquid fuels, hybrid heat pumps, and BioLPG, with strict safeguards to ensure all biomass meets rigorous sustainability standards.
3. The government's proposed **'Rural First'** approach, with a replacement boiler ban proposed from 2026 in off grid homes and small non-domestic buildings and 2024 for larger off grid businesses, will mean higher replacement heating costs for rural homes and businesses compared to urban on grid homes, where there is no confirmed boiler ban date (Sir John Armitt, Chair of the National Infrastructure Commission has [called for](#) a 2035 ban on new boiler sales).
4. The government's proposed **Heat Pump First** approach is reliant on government's very optimistic aspiration for heat pump costs falling dramatically, from an average of £12k per rural home, to parity with gas boilers by the end of this decade. These cost savings will be difficult to achieve in hard- to - treat rural homes and by going first, rural homes won't enjoy the full benefit from any cost reduction in heat pumps.

¹ [Simple Energy Advice](#), government endorsed advice website

² [Ecuity Economics](#)

³ Ecuity Economics based on DECC Cambridge Housing Model

5. **Choice, not mandate** - options are needed that are suitable for **all** homeowners, dependent on their situation (financial, physical and property). 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. Solutions offered should be technology-neutral to encourage more rapid deployment of low-carbon heating while ensuring fairness. Where heat pumps are installed, this should be because households want them, rather than because the law forces them to install one.
6. **Equal status** – mistakes will unavoidably be made as heat pump installations ramp up, but rural areas should not be treated as a test bed to trial systems for the rest of the UK. 2 million diverse rural homes are not “low or no regret” or “low hanging fruit” – we need to get them right for the policy to work for everyone.
7. **Heat Pump Ready first, not Rural First** – all homes post 1970 – both on and off grid – should be targeted first, not the more challenging off grid homes. Unlike rural homes this is where heat pump take up is most likely, where installations can be streamlined and thus cost savings are most likely to be achieved. This will help meet the government ambition of 600,000 annual heat pump installs by 2028 is met, and reduce the risk of negative installation experience for households.

Business Energy Efficiency Federation Views

Under a heading of “**Fairness needed as we say goodbye to fossil fuels**”, Andrew Warren the Chairman of the Business Energy Efficiency Federation writing in the Energy in Buildings and Industry Magazine in January, 2022 said:

“Overall, there is increasingly a lack of meaningful support for technologies involved with electric heat generation. This is despite the Climate Change Committee’s Sixth Carbon Budget (December, 2020) identifying that around 900,000 off-gas-grid homes will need a solution other than a heat pump. And despite the most recent National Grid Future Energy Scenario Report (2020) stating categorically that renewable liquid fuels would be needed for over 1m rural homes due to limited capacity to achieve cost-effective grid upgrades to support heat pumps. Last autumn’s Strategy offers little or no support for their deployment

The drive towards the electrification of heat and the focus on Johnson’s 2028 heat pump growth target means that the off-grid challenges are being significantly underplayed. Rural residents and workers risk being greatly disadvantaged.”

3.0 RURAL COALITION ASKS, MINISTER’S RESPONSE & COMMENTS ON REPLY

1. **Drop the 2026 ‘enforced early adoption’ requirement for off gas grid homes.**
This cannot be imposed on privately owned properties until rural electricity supply networks are improved and both insulation systems and sustainable energy alternatives to heat pumps are available at cost levels for both installation and operation that are reasonable in comparison to national averages.

REPLY FROM MINISTER

“Action to decarbonise heat in off gas grid homes through this approach is a low regrets
--

option as electrification of heat is the only strategic option for off gas grid homes.”

COMMENTS ON REPLY

The idea that off gas grid homes are a low regret option and electrification is the only strategic heat option is challenged.

At present, in respect of rural areas, we regard it as a high total cost when capex, opex, grid reinforcement, and energy efficiency retrofit is taken into account. This will be exacerbated from 2026 (much earlier than on gas-grid properties) being forced to replace heating systems at short notice in the event of an irreparable breakdown of existing boiler, usually in the winter.

Government’s own analysis suggests 20% of rural homes may be unsuitable for heat pumps, with government providing grants for biomass wood pellet boilers in homes unsuitable for heat pumps. Wood pellets are not suitable for all homes so more low carbon heating options are needed, including sustainable biomass, low-carbon liquid fuels and green gas.

- 2. Instruct Ofgem to carry out a full review of resilience requirements with the Distribution Network Operators.** This would enable issues of rural resilience and capacity to be addressed ahead of their next five-year business planning cycle, 2023-28, and ensure resources are available to upgrade the rural network. Currently several thousand premises are not connected at all.

REPLY FROM MINISTER

“... the Government have commissioned a review of the electricity sectors response to Storm Arwen, with the aim of identifying lessons to be learned and actions to take forward. These actions will drive improvements to Great Britain’s electricity network resilience to severe weather events.”

COMMENTS ON REPLY

We are very pleased that Government has intervened following Storm Arwen to review the resilience of the rural distribution network. Electricity distribution network resilience is, however, about much more than resilience to the impact of severe weather conditions.

A review of the resilience of the electricity distribution network serving rural areas must address the capacity of the network to cope with future demands upon it from both electrification of heating and the need to power electric vehicles.

Until there is assurance of the resilience of the electricity distribution network servicing rural areas the requirement to replace off-gas grid heating with heat pumps as the ‘only strategic option’ is a flawed assessment

The DNOs (Distribution Network Operators) may be in the process of addressing this through negotiation of their next five-year planning cycle with Ofgem. If so, this would require putting the date for compulsory replacement back to at least 2028 or such later date when the problem is resolved.

- 3. Put in place a grant scheme for off gas grid homes** that will enable these homes to transfer to sustainable energy alternatives (including insulation and up-rated electricity supply to the premises) on a like-for-like cost with gas or oil boilers.

Alternatively, a broader 'net-zero ready' fund could help meet transition costs on a more flexible basis including alternatives to heat pumps where appropriate.

REPLY FROM MINISTER

"The Boiler Upgrade Scheme will provide upfront capital grants for the installation of low carbon heating systems in homes and small non-domestic buildings. That scheme is also targeted at supporting buildings off the gas grid to transition from high carbon fossil fuel heating, such as oil, to low carbon alternatives. Biomass boilers will be available as an alternative to heat pumps, providing certain eligibility requirements are met."

"The Government is also providing financial support through £950 million in funding for the Home Upgrade Grant which will provide energy efficiency upgrades and low-carbon heating to low- income households living off the gas grid in England to tackle fuel poverty and meet net zero."

COMMENTS ON REPLY

We are pleased that Government is grant aiding boiler replacements through the Boiler Upgrade Scheme (BUS) and it acknowledges alternatives to heat pumps are needed. Assurance is necessary to confirm that this scheme will be adapted, post 2026, to enable off gas grid customers to access it at very short notice in the event of failures of existing boilers, particularly in homes where retrofit energy efficiency measures will also be required. If this is not in place, households will be faced with high energy bills as any heat pump will not be operating efficiently. The BUS scheme is not targeted specifically at off gas homes, so the number of rural homes likely to benefit may be quite low.

It is highly desirable that premises maximise their insulation prior to installation of heat pumps. We seek assurances that the Home Upgrade Grant will make this possible for more than just a small number of properties, and very at short notice in the event of a boiler failure after 2026, particularly given the age and energy efficiency of much rural housing stock.

- 4. Put in place guidance and support for off gas grid residents** that will enable them to understand the 'road map' towards decarbonised heating for homes with their specific characteristics (e.g., heritage status, construction type, quality of electricity supply, low carbon alternatives to heat pumps etc.).

REPLY FROM MINISTER

"Our Simple Energy Advice service has already had over 1.7 million users, providing homeowners with personal, tailored advice for improving and decarbonising their homes and links to local, accredited, trusted installers."

"Additionally, the Government's 'Find your Heat Pump Options Calculator' will be launched shortly and will support consumers in making choices between various heat pump options depending on their property's characteristics."

"We are currently exploring the best ways to engage the public, including considering options to support more tailored and targeted guidance in local areas, and how best to partner with stakeholders more generally to increase the public's understanding of the need to change how we heat our buildings and key steps they can take."

COMMENTS ON REPLY

We look forward to the launch of the Heat Pumps Options Calculator, although given the need for alternatives to heat pumps, the title fails the inclusivity test and should be amended. It would be beneficial if this could be trialed, pre-launch, with some off gas grid users of oil- fired heating that might find themselves having to make an urgent change of boiler following irreparable breakdown.

The organisations that make up the Rural Coalition have a very wide membership base many of whom live in more challenging and 'hard to treat' premises. The Rural Coalition has offered to meet with the Minister, or officials, to explore ways in which the Department can engage with this part of the public and target guidance to them.

Most households and businesses off the gas grid are unaware of the 2024/2026 boiler ban dates and the government must ensure this is communicated to businesses and households in good time. The latest BEIS household attitudes survey suggests awareness of low-carbon heating, the decarbonisation challenge and likely uptake is still low.

- 5. Support the training and development of more people to be able to provide appropriate installation and maintenance services in all areas.** The majority of off-gas households are located in rural areas, often very remote. The availability of skilled tradesmen willing to travel has often been a cause for concern in such areas.

REPLY FROM MINISTER

"We are working closely with the heating industry to ensure that sufficient installers are available to install heat pumps across the country. Upskilling training can be completed in one week, and plenty of training capacity is available to comfortably meet demand for upskilling. We expect most heat pump installers to be existing heating engineers who have upskilled in response to growing heat pump demand. According to BEIS research published in 2021, 72% of off gas grid heating installers without heat pump experience would upskill to install heat pumps if demand for fossil fuel heating decreased."

COMMENTS ON REPLY

Access to fully trained installers of non-fossil fuel- based heating systems will be crucial over the next few years. That said we repeat that this will be of little use if the electricity distribution network does not have capacity to supply rural premises.

Installer businesses will not seek heat pump training on a whim – they will respond to customer demand. With customer demand falling, and business costs rising, this is unlikely to happen without generous long-term subsidies in place – probably unachievable by 2026.

It is fundamental, however, that impartial advice and support beyond mere 'installation' is delivered.

A 'whole premises' approach will clearly be required including insulation, adaptation of current installations and, potentially, very localised district heating systems. Are these requirements being factored into training initiatives for the industry and is there evidence of them being taken up in more rural areas?

In addition, Government might like to consider further discussion and consultation over this policy with stakeholders:

1. If 'enforced early adopters' are required to stimulate the market in decarbonised domestic heating systems Government must consult more widely and **identify willing sectors/locations that can play this role where the electricity supply is robust and buildings are more suitable**. A heat pump ready, rather than rural first seems like the best approach.

FURTHER COMMENT

The Rural Coalition renews its offer to assist the Department to reach out and identify locations where a critical mass of keen early adopters can be found.

This would be a more constructive approach to building capacity in the industry than the cruder approach of forcing early adoption by the happenstance of boiler breakdown.

2. In the light of Storm Arwen consult with rural stakeholder organisations to support and encourage remote rural communities to develop **local electricity generation and supply**. This would make their connection to the National Grid a back-up rather than asole source of energy.

REPLY FROM MINISTER

The recent storms, particularly Storm Arwen and Storm Eunice, brought severe weather to various parts of the UK and caused damage to electricity infrastructure across the country. The Government understands this has been an extremely challenging time for those without power, especially those in remote and rural locations.

As a result, the Government have commissioned a review of the electricity sectors response to Storm Arwen, with the aim of identifying lessons to be learned and actions to take forward. These actions will drive improvements to Great Britain's electricity network resilience to severe weather events."

COMMENTS ON REPLY

See further comment in response to question 1 above. Hybrid heat pumps could play a strategic role in minimizing grid reinforcement in rural areas, as well as providing increased contingency with

WESTMINSTER HALL DEBATE 16TH JUNE, 2022

In responding to the debate, The Minister for Energy, Clean Growth and Climate Change, Greg Hands MP, made a number of important points to note relating to the issues put forward in this briefing note:

"no one will be required to install an unsuitable technology in their home or business. We know well that heat pumps will not work everywhere, at least not with the current technology. Some off-grid properties are simply too poorly insulated or have certain characteristics that would make installing the technology impossible. We will take care to ensure that that group of hard-to-treat properties will have access to suitable alternatives, such as high-temperature heat pumps, solid biomass and so on"

"My right hon. Friend asked me to reconsider the 2026 deadline. Equally, the pace at which we can make heat pumps become affordable will guide our decisions on the right time to introduce regulation and the other actions needed to make a fair transition"

"On his questions about hybrids and biofuels, along with those from my hon. Friend the Member for Buckingham, we would like to see those fuels become another

solution, particularly for off-grid properties that cannot use a heat pump. We are working closely with industry to build the evidence that will inform the biomass strategy mentioned by my hon. Friend, due to launch later in 2022. The strategy will review the amount of sustainable biomass likely to be available to the UK and set out how this can be best used across the economy to achieve our net zero targets”

FURTHER READING

Appendices on the following can be found on pages 5 to 7 at this [link](#):

Compulsory early adoption

Electricity distribution network

Heat pumps and rural properties

Characteristics of the rural population including:

- Population age profile
- Rural earnings
- Cost of living
- Fuel poverty

DRAFT