



PHASING OUT THE INSTALLATION OF FOSSIL FUEL HEATING SYSTEMS IN BUSINESSES AND PUBLIC BUILDINGS OFF THE GAS GRID

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Introduction

1. The Country Land and Business Association (CLA) is the membership organisation for owners and managers of land, property and business in rural England and Wales. Our members manage around 10 million acres and operate over 250 different types of businesses.
2. Our members own and manage a wide range of non-domestic buildings, including office, retail, industrial, leisure, workshops, and healthcare buildings.
3. Many of these buildings are of traditional (pre-1919) construction and are listed or within a conservation area. As a result, these buildings present the greatest challenge to decarbonise.
4. Many of our members are engaging in practices to reduce their emissions, and many are undertaking 'carbon accounts' to measure and then manage their carbon emissions and assess where they can make improvements.
5. The CLA has long been very supportive of measures to mitigate climate change and we support regulation on this, but like all regulation, it should be proportionate, transparent, consistent, properly targeted, and effective.

Key Points

- Off-gas grid buildings are being asked to transition to low-carbon heating almost a decade sooner than their urban counterparts, a highly unconventional 'high-hanging fruit' approach which would require a relatively small number of widely differing buildings to take on all the immediate risks of an immature low-carbon heating market. These risks include high capital costs, high running costs, lack of installers and a lack of skills and knowledge, especially for older buildings, and insufficiently tested reliability, all resulting in a lack of consumer confidence.
- 2024 and 2026 is too soon to phase out the installation of fossil fuel heating in off-gas grid buildings. The roll-out of low-carbon heating in off-gas grid buildings must be first de-risked. One way to do this would be for a mass-rollout pilot scheme of off-gas grid buildings, with Government oversight and monitoring, including on the impact of local electricity grids.
- A technology-neutral approach must be introduced, rather than a "heat pump first" approach, so that building owners have the flexibility to choose the most effective low-carbon heating option for them and their building.



Consultation Questions

Question 1: Do you agree with the principle of using the natural replacement cycle to phase out the installation of fossil fuel heating systems in non-domestic buildings off the gas grid?

6. Although the natural boiler replacement cycle seems a sensible principle in theory, there are quite serious practical implications to consider. Currently, if an oil boiler comes to the end of its life in the middle of winter, it is relatively simple and quick to replace. The oil boiler sector is well established, there are sufficient supply chains and there are an adequate number of installers. The replacement of an oil boiler with another oil boiler may leave a business without heating for a few days. However, if an oil boiler breaks but needs to be replaced with a different type of heating, the time a business may be without heating is likely to increase to many days, possibly weeks. This is because a building owner and/or tenant will need to research which low-carbon heating to install, have a feasibility study undertaken, find an installer (of which there is a lack of, particularly in rural areas), and have the heating system installed.
7. There needs to be sufficient incentives and awareness so that businesses and/or landlords can either transition, or plan to transition, to low-carbon heating in advance of their boiler breaking down. This is essential to avoid rushed decisions, rushed installations and businesses going without heating, especially in the depths of winter. Incentives to transition should include lower capital costs, grant funding, tax incentives and cheaper running costs.

Question 2: Do the 2024 and 2026 timescales for introducing this policy provide sufficient lead in time for non-domestic off-gas grid consumers to prepare for their transition to low carbon heat?

8. No – although we are fully supportive of the aim to decarbonise the heating of buildings, 2024 and 2026 is too soon. The roll-out of low-carbon heating to off-gas grid buildings must first be de-risked. One way to do this would be for a mass-rollout pilot scheme for off-gas grid buildings, with Government oversight and monitoring, including on the impact of local electricity grids.
9. Non-domestic buildings present an additional challenge because the person responsible for the heating infrastructure may be the tenant or the landlord, or both. For an effective transition, tenants and landlords will need to have a conversation well in advance of the requirement to change to low-carbon heating. Where the tenant is responsible for the heating infrastructure, the existing rent and agreement is unlikely to reflect the upcoming requirement to change to low-carbon heating, and the high capital cost may not be viable for the tenant and require forward planning.

Question 3: Would an implementation date of 2024 (for large buildings) and 2026 (for smaller buildings) provide sufficient lead in time for industry to prepare for the increase in demand?

10. It is widely accepted that rural buildings present the greatest challenge to decarbonise yet are being asked to do so almost a decade sooner than their urban counterparts, as it



is proposed for mains-gas boilers to be phased out from 2035. This unconventional 'high-hanging fruit' approach would mean that off-gas grid, non-standard buildings are going to be exposed to all of the risks of an immature market, including a higher price for the technology, a higher cost of electricity, a lack of installers and skills, a lack of understanding around the efficacy of heat pumps in older buildings, insufficient funding, and an unsupportive tax system.

11. The heat pump sector is still underdeveloped, and no number of policies or funding in the next four years would be enough to result in the growth required to adequately upskill heat engineers and develop robust supply chains to bring down the capital cost and running cost of the technology. Fossil fuels should be phased out when there is a cost-effective, affordable, and appropriate low-carbon heating option for off-gas grid, rural buildings.
12. There is currently no funding for heat pumps in non-domestic buildings, and the Boiler Upgrade Scheme for homes could limit the growth of the heat pump sector, by supporting the installation of 30,000 heat pumps a year from 2022-2025, which is approximately the number the sector is currently delivering without funding; the 30,001st consumer may wait until the next allocation of funding, meaning that the increase from 30,000 to 600,000 will have to be achieved in an even shorter time frame.

Question 5: Do you agree with our proposals to take a heat pump first approach to the replacement of fossil fuel heating systems in off-gas grid non-domestic buildings?

13. No – we support a technology-neutral approach. Although heat pumps have a role to play in rural areas, a 'heat pump first approach' should not be introduced, especially in an immature market. A lack of installers, skills, knowledge, and experience will result in poorly fitted systems, which will be more expensive to run in the short term, and more expensive in the long run as they will need to be repaired and replaced.
14. A technology neutral approach will enable greater research and development into net zero heating fuels and systems, whereas a heat pump first approach will stifle innovation and offer consumers less choice in the long run. It is essential that one heating type isn't favoured over another by government, so that the market can deliver the wider government objectives on net zero emissions, environmental sustainability, and air quality, and offer a secure and affordable fuel supply to consumers.
15. Many of our members have faced significant barriers when trying to install a heat pump, especially in older buildings, including not being able to find an installer, needing to upgrade the fabric which is not viable in terms of heritage designation or cost, , and needing to upgrade the electrical connection, which again is not viable in terms of cost. When our members have installed a heat pump, many have had ongoing maintenance issues, often exacerbated by installers ceasing to trade.



CLA Member Case Study

A landlord in North Yorkshire installed a ground source heat pump to heat a number of buildings. It soon became apparent that the system was under-specified, and they had continual problems with it, despite the installer being accredited. In addition, the landlord was unable to receive RHI due to misinformation from the installer. After some years of it barely working, the landlord had no choice but to rip it out and has now replaced it with an oil system. The tenants are all happy, but our member is incredibly frustrated and has wasted a large amount of money and time.

16. A 'heat pump first approach' would distort the market, disadvantaging other heating options, such as biomass, biofuels and infra-red, which may be a more cost-effective way of decarbonising off-gas grid homes.
17. The most cited issue from our members around the electrification of heat is the inadequacy of the electrical grid. A 'heat pump first approach' requires an electrical grid with sufficient capacity, especially considering it is not only the electrification of heat that the grid has to cope with, but also the electrification of transport. Before the phasing out of fossil fuel boilers in off-gas grid homes, especially if electrification of heat is the leading pathway, the electrical grid must be fit for purpose, and required upgrades must be centrally funded, rather than rely on private finance.
18. Storm Arwen showed us the vulnerabilities of rural dwellings and businesses reliant on electricity. For many rural properties, no power has meant no phone, no hot water, and no lights. However, in the future, under the current proposals, this will also mean no heating and no transport. It is incredibly important that rural homes have heating which is not solely reliant on electricity.
19. **CLA Recommendation:** Rather than a heat pump first approach, funding should be made available to owners and tenants (depending on where the responsibility lies) for a heat pump feasibility assessment. This would incentivise landlords and/or tenants to consider installing a heat pump early but keep the flexibility to ultimately chose the heating type is best for them and their property.
20. Currently, a heat pump feasibility assessment is undertaken by a heat pump installer, but this assessment should be undertaken by someone impartial. This could be a qualification offered within the existing accreditation bodies for domestic energy assessors and retrofit assessors. It is essential that there is additional training for assessors undertaking an assessment on traditional and/or listed buildings.
21. Enabling homeowners to choose the best low-carbon heating for their homes will be much more effective, and (importantly) more acceptable to homeowners than mandating a heat pump route. For many, a heat pump may be the best option, especially if there are grants available for the initial feasibility study and for the technology itself. However, the decision must fall with the homeowner, and there must be free, impartial advice available to support the decision.



Question 6: Do you agree that most non-domestic off-gas grid buildings will be suitable for a heat pump?

22. A heat pump can technically be installed in any property, but a harder to treat or larger older building will need a bigger heat pump with many more emitters, which will cost significantly more to install and to run. A heat pump will therefore not be a viable option in a number of traditionally constructed non-domestic buildings, especially those let on a reduced rent to support small, local businesses, which is commonplace in rural areas.
23. Currently, the heat loss and flow temperature assessments underestimate the actual thermal insulating capacity of most solid walls, and therefore often require larger systems than are actually needed or additional insulation, in traditionally constructed buildings, both of which add extra cost. For rural buildings to be effectively decarbonised, and for a correct evaluation of the suitability of a heat pump, the thermal insulating capacity of solid walls must be accurately assessed which requires the u-values of solid walls to be updated, alongside further improvements to SAP/RdSAP.
24. In December 2021, findings from a government backed study were published, which sought to better understand the feasibility of a large-scale roll out of heat pumps across homes in the UK. The report: Electrification of Heat Demonstration, concludes that all housing types are suitable for a heat pump. However, out of the 742 trial properties, only 20% were off-gas grid, despite off-gas grid homes being required to transition to low carbon heating almost a decade sooner than urban homes. In addition, only 8% of trial properties were constructed before 1919, despite one fifth of all homes being of traditional construction. The study is still in its infancy, and only so there are not yet any findings as to the medium to long term success of the installations and the study is limited to homes, rather than homes and non-domestic buildings.
25. There is a lack of understanding and confidence around the efficacy of heat pumps in older buildings, and before a heat-pump first approach can be mandated, a mass-rollout pilot must be undertaken, targeted at off-gas grid, traditional buildings, with Government oversight and monitoring, including on the impact of local electricity grids. Until that point, a technology neutral approach must be adopted.

Question 7: What types of buildings are likely to fall into the 'hard to treat' category?

26. Traditional buildings, generally defined as those built before 1919, are likely to fall into the 'hard to treat' category. This is because they are constructed with permeable solid walls, as opposed to cavity walls of modern construction. Solid walls absorb moisture and release it through evaporation, allowing the building to 'breathe', whereas modern construction forms a barrier that prevents moisture from entering. Breathability and ventilation are key in traditional buildings to allow effective evaporation, and because of this, fabric measures which form a barrier, such as solid wall insulation, are often not suitable, leading to insulation failure, damp, and mould.
27. However, as set out in point 19, the thermal insulating capacity of solid walls is often underestimated, and not only may solid wall insulation be harmful to a building, but it may not be required. It is essential for the u-values of solid walls to be updated,



alongside further improvements to SAP/RdSAP, so that traditional buildings can effectively transition to low-carbon heating.

28. Often rural landlords let out redundant, traditional farm buildings to small, local businesses on a low rent. This has two benefits, redundant buildings are brought back into use, which is essential for their upkeep and maintenance, and it supports new businesses, who would not be able to afford market rent. Whilst the cost of a heat pump remains disproportionately high and there are no grants available, transitioning to low-carbon heating may not be viable for these types of buildings.
29. Listed buildings and buildings within conservation areas often require planning permission for low-carbon heating technologies and fabric measures, and so are likely to fall into the 'hard to treat' category. This adds extra cost and time to a project, and local authorities often take inconsistent approaches in decision-taking. Many of our members would like to make changes to reduce the carbon impact of their buildings but have been refused permission or are put off applying due to previous bad experiences with the planning system.
30. **CLA Recommendation:** The NPPF and its Planning Practice Guidance should be carefully reviewed (with public consultation), to ensure that the climate change benefits of physical measures (again correctly measured and risk-assessed) are taken fully into account in decision-taking, alongside all other planning benefits or harms.

Question 8: What low carbon heating systems do you foresee being used as alternatives to heat pumps in 'hard to treat' buildings?

31. Biomass heat is well suited to hard-to-treat buildings in rural areas, particularly for larger buildings or in a heat network of clustered properties, which are commonplace in rural areas. Biomass boilers and wood burners must be appropriately recognised SAP/RdSAP and EPCs. Not only is using of local firewood sustainable, but its commercial production underpins, finances and drives the management of local woodlands, which is one of the key long-term aim of Defra's England Trees Action Plan. Furthermore, air quality risks associated with biomass heating – a key concern with biomass deployment in urban areas - are far reduced in rural areas due to lower population and building densities. It is also critical for rural tenants to have some form of heating, which is not reliant on electricity, as recently demonstrated by events such as storm Arwen in November 2021, where many rural occupants in northern England were without electricity for up to 10 days during the winter.
32. Hydrotreated vegetable oil (HVO), Biofuels and infra-red could all have a role to play in decarbonising rural heat.
33. Enabling owners and/or tenants to choose the best low-carbon heating for their homes will be much more effective, and (importantly) more acceptable than mandating a heat pump route. For some, a heat pump may be the best option, especially if there are grants available for the initial feasibility study and for the technology itself. However, the decision must fall with the building owner and/or tenant, and there must be free, impartial advice available to support the decision.



Question 9: Will these alternative low carbon heating systems align with the net zero, sustainability, air quality and consumer experience criteria set out as bullet points in the 'Alternative low carbon systems' section?

34. Wood fuel which comes from the nearby woodland is entirely sustainable. Operations like thinning and removal of diseased trees generates low grade wood, local sales of which as firewood logs or wood chip generates income to help fund ongoing woodland management. Thinning of a woodland is essential for long term timber production and for improving the biodiversity of the habitat, as removing the low-quality trees lets in more light concentrating growth on the remaining better-quality trees and enabling a diverse woodland floor habitat to be sustained.
35. Using locally grown firewood to heat rural buildings is wholly sustainable, and drives a circular economy, incentivising woodland management, which has significant rural economic, biodiversity and climate change mitigation benefits. 41% of England's broadleaf woodlands are unmanaged and Defra's England Trees Action Plan <https://www.gov.uk/government/publications/england-trees-action-plan-2021-to-2024> aims to ensure more woodlands are brought under favourable management. A sustained rural biomass heat market can help achieve this as wood-fuel income improves the viability of woodland management.

Question 11: How do you foresee the costs associated with installing a heat pump in non-domestic buildings changing over the next 10 years?

36. It is essential that the cost of installing a heat pump in non-domestic buildings comes down over the next decade, so that transitioning from fossil fuels to low-carbon heating is fair, affordable, and cost effective. Currently, installing a heat pump costs significantly more than an oil or gas boiler, often costs more to run, and does not always result in more EPC points. This needs to change if we want to effectively decarbonise buildings.
37. It is also essential that there are sufficient skills in the low-carbon heating sector, particularly in rural areas, specialising in traditional and listed buildings.

Question 13: How can the government support cost reductions in low carbon heating technologies suitable for non-domestic buildings, particularly heat pumps?

38. Targeted funding should be introduced for off-gas grid buildings so that they can effectively transition to low-carbon heating. This is particularly important if rural buildings are going to be asked to transition almost a decade sooner than their urban counterparts, taking on all the risks of an immature market, including higher capital cost of technology and installation. This could be reintroducing the non-domestic Renewable Heat Incentive (RHI), or a non-domestic version of the Boiler Upgrade Scheme, where the level of grant is linked to the size of the installation.
39. There are existing disincentives in the VAT system that discourage the move to low carbon heating.
40. Schedule 7A, Group 2 of the Value Added Tax Act 1994 specifies the specified energy-saving materials that qualify for reduced rates of VAT. Whilst ground source heat



pumps, air source heat pumps, micro combined heat and power units, and wood-fuelled boilers can qualify for reduced rating, it would be helpful to expand the list to include all forms of low carbon heating such as infra-red heating and energy saving measures that can be undertaken to the fabric of a property, such as wall, roof and floor insulation (cavity and solid wall), secondary glazing and double glazing. It will be important to keep this list updated as new technology is developed.

41. The supply of energy-saving materials without installation (that is, only those materials), is standard rated, whereas the installation of energy-saving materials purchased directly from a retailer is reduced rated.
42. **CLA Recommendation:** All supplies of energy saving materials, including supplies of materials without installation, qualify for reduced rating. This would reduce the cost of those supplies and help to incentivise the take up of low carbon heating.
43. Landlords must be able to offset all energy efficiency improvements against income tax. Under current tax rules, a rental business cannot deduct the cost of capital expenditure when computing its profit or loss. It can be difficult to determine what is of a capital nature and what is of a revenue nature that is deductible from income as this is reliant on the facts and circumstances in each case. Case law is often not very clear and so there can be uncertainty in the treatment of expenditure incurred.
44. Although no single rule has been devised for distinguishing between capital and revenue, it is generally accepted capital expenditure includes the cost of buying, altering, building, installing, or improving fixed assets used in the rental business, whereas expenditure to maintain or preserve an existing asset (rather than obtaining a new one) is revenue in nature and is deductible. There are also questions as to whether the expenditure is to improve the entirety of an asset (capital) or only the part of an asset (revenue). In that case, what is taken as the entirety of the asset? There are two scenarios where uncertainty arises.
45. The first relates to the correct treatment of expenditure on measures undertaken to make the fabric of a property more energy efficient. This could include wall, roof, and floor insulation (cavity and solid wall) or secondary glazing. It would be helpful if these additional measures were accepted as revenue in nature. HM Revenue and Customs (HMRC) already accept that replacing single glazing with double glazing can be treated as revenue expenditure .
46. **CLA recommendation:** The government should confirm that expenditure on energy saving measure to the fabric of a building will be treated as revenue not capital in nature and this should be reflected in the HMRC's Business Income Manual (BIM35000 - Capital/revenue divide) to give taxpayers certainty.
47. Secondly, uncertainty arises as to whether the installation of a heat pump in place of, say, an oil-fired boiler is a repair as part of the entirety of an asset (whether this is the property or the complete heating system) or is to be treated as the whole asset. If it is treated as the replacement of an entire asset, then this expenditure will be capital in nature and the cost will not be deductible from rental income under the normal deductibility rules.



48. Where low carbon heating is included in the Energy Technology List as a technology that qualifies for the UK government's energy-saving Enhanced Capital Allowance (ECA) scheme, a qualifying business, such as a property business, will be able to claim the ECA against their income for that tax year. However, as landlords of residential housing are excluded from claiming capital allowances for plant and machinery installed in dwelling houses the ECA will only benefit those property businesses installing this technology for commercial buildings. In addition, whilst the Energy Technology List includes technology such as air to air heat pumps, air to domestic hot water heat pumps, other low carbon technology such as ground source heat pumps, wood burners, high-retention night storage heaters, direct electric heaters, and infra-red heating technology are not included.
49. **CLA recommendation:** The capital allowances regime should be expanded to incentivise the installation of low carbon heating in buildings. This can be achieved by amending the Capital Allowances Act so that the restriction in section 35 does not apply where property businesses install qualifying energy technology in their residential properties and so can claim the ECA. The Energy Technology List should be expanded to include all forms of low carbon heating, including ground source heat pumps, wood burners, high-retention night storage heaters, direct electric heaters, and infra-red heating technology. This list should be reviewed and updated as new low carbon heating technology is developed and introduced into the market.

Question 20: Do you have any views on how best to ensure compliance with the proposed regulations laid out through this consultation?

50. The key to effective compliance is by the regulations being proportionate, transparent, consistent, fair, and properly targeted, not enforcement. If significant enforcement is required, the underlying policy is almost certainly defective. The current proposals require rural buildings to transition away from fossil fuels almost a decade sooner than their urban counterparts under a 'heat pump first approach', which will expose them to all the risks of an immature market. This is not consistent or fair to rural occupants.

Question 22: What are the potential implications for businesses of introducing an end date by which all buildings must have transitioned to low carbon heating (e.g. in the early 2040s)?

51. Before an end date is introduced, it is essential that the u-values of solid walls are updated, alongside further improvements to SAP/RdSAP. It is also essential that the cost of heat pumps, and other low-carbon technology, has come down, in addition to the running costs of heat pumps coming down.

Question 24: Do you have any evidence on how groups protected under the Public Sector Equality Duty may be affected by our proposals to phase out high carbon fossil fuel heating in nondomestic buildings off the gas grid?

52. Rural communities often have older residents, and for many, changing their heating system will be incredibly disruptive and technology difficult to understand. This is not only at the time in which a system is being fitted, which may require significant



clearance of rooms, but also the preparation required before that point: choosing a new heating system, obtaining quotes, organising the work, and making good. People (especially older people) often find change difficult, and something as significant as how they heat their building may be an enormous overhaul for them. It is essential that there is support and funding available to help them transition, in addition to support using the new heating system so it can achieve the level of comfort occupants are used to.

Question 25: Do you have any views on what more could be done to ensure businesses and communities affected by our proposals experience a smooth transition to low carbon heat?

53. Free, impartial advice and support is essential for a smooth transition to clean heat. Changing the way people heat their buildings might be one of the biggest investments and changes owners and/or tenants make, and it is essential they are given the right information at the outset on how to achieve the most cost-effective, suitable option. Currently, the majority of advice is provided by the suppliers of different heating technologies, which is not impartial.
54. Rural communities often have poor digital connectivity, which can make disseminating information harder, especially to older people.

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