



Revitalising Rural

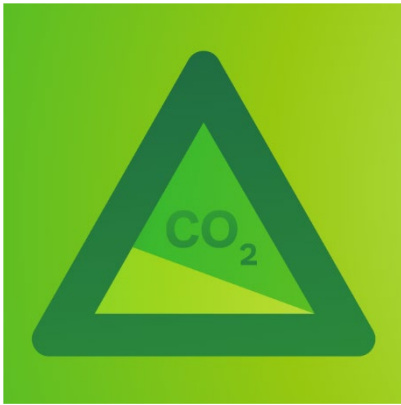


RURAL
SERVICES
NETWORK

Realising the Vision

**DECARBONISING RURAL COMMUNITIES
AND ECONOMIES**





Revitalising Rural

Realising the Vision

The Rural Services Network

We are a membership organisation and we work on your behalf for rural communities.

The RSN is the national champion for rural services, ensuring that people in rural areas have a strong voice. We are fighting for a fair deal for rural communities to maintain their social and economic viability for the benefit of the nation.

Our membership comprises 116 rural local authorities plus over 210 other rural service providers and interest groups including Rural Housing Associations, Healthcare Trusts and Charities. We also have over 200 larger Parish or Town Councils in the Rural Market Town Group.

You can find out more about the RSN at our website www.rsnonline.org.uk.

We always welcome new members and if you are interested in joining the RSN, click here for more information. [Join the RSN!](#)

Revitalising Rural, Realising the Vision

Revitalising Rural, Realising the Vision is a campaign run by the RSN, which sets out a number of policy asks in 14 key subject areas to help support rural areas to achieve their full potential, and to 'level-up' areas of historical underinvestment.

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Realising the Vision

DECARBONISING RURAL COMMUNITIES AND ECONOMIES



Why it matters

The impacts of dangerous climate change will affect all communities. This much is already clear from the rural impacts of increasingly frequent storm damage, flood events and periods of drought. Minimising man-made climate change matters as much to rural communities and businesses as it does to any others.

Rural areas, which host more than a sixth of England's population and which cover most of its land area, must play their full part if the UK is to rapidly reduce its carbon footprint and achieve its net zero target. An approach focussed on urban areas alone would fail.

There are opportunities as well as challenges for rural areas that arise from the decarbonisation agenda. There will, for example, be growth sectors in the green economy and new opportunities for community enterprise.

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Despite the push for energy efficiency, demand for electricity is expected to grow, not least as consumers switch to driving (chargeable) electric vehicles. This raises questions about the capacity and robustness of local power network infrastructure in rural areas.

Inevitably, onshore wind and solar farms will be (as they are now) predominantly sited in rural locations. They can be expected to expand in scale. It is important that rural communities receive direct benefits where they host development such as renewables infrastructure. There is likely to be local resistance if the countryside is perceived simply as a solution to largely urban emissions.

At the same time, there are long standing issues for properties (mostly found in rural settlements) which are off the mains gas grid and which rely on heating sources such as LPG, electricity, oil, and solid fuels. These will need to be addressed appropriately in a low carbon future.

The national policy context

Key elements of national policy include:

- Net zero target – the Climate Change Act 2008 set an initial target for the UK to reduce its greenhouse gas emissions by 80%.¹ In 2019 that ambition was raised, when Government set a statutory target for the UK to become net zero by 2050. That long-term target has been translated into (decreasing) carbon budgets for forthcoming five-year periods. The independent Committee on Climate Change monitors progress and advises Government about further actions needed to achieve its trajectory to net zero.
- National Adaptation Programme – the NAP sets out risks and opportunities which should help steer the UK towards its Net Zero target. The Committee on Climate Change has stated that it needs further development to identify appropriate actions and to manage risks.² Monitoring of emissions data shows there has been very significant progress made by the power generation sector, some progress by industry, limited progress with housing and no real progress with transport.
- Ten Point Plan for a Green Industrial Revolution – this 2020 document sets out the Government's, approach aiming to support 250,000 green jobs by 2030 and, in so doing, to accelerate the path towards net zero. Its ambitions include quadrupling renewable energy production from offshore wind, pioneering hydrogen as an energy source, ending the sale of new petrol and diesel cars by 2030, and installing 600,000 heat pumps in homes per year by 2028. Follow-up documents include an Energy White Paper and a Future Homes Standard, which proposes that from 2025 all housing built should be zero carbon ready. For further information see the RSN's [Through a Rural Lens document on the Ten Point Plan](#).

¹ Carbon dioxide (CO₂) is the most common greenhouse gas emission, but there are others such as methane.

² *Reducing UK Emissions – 2019 Progress Report to Parliament*, Committee on Climate Change (2019).

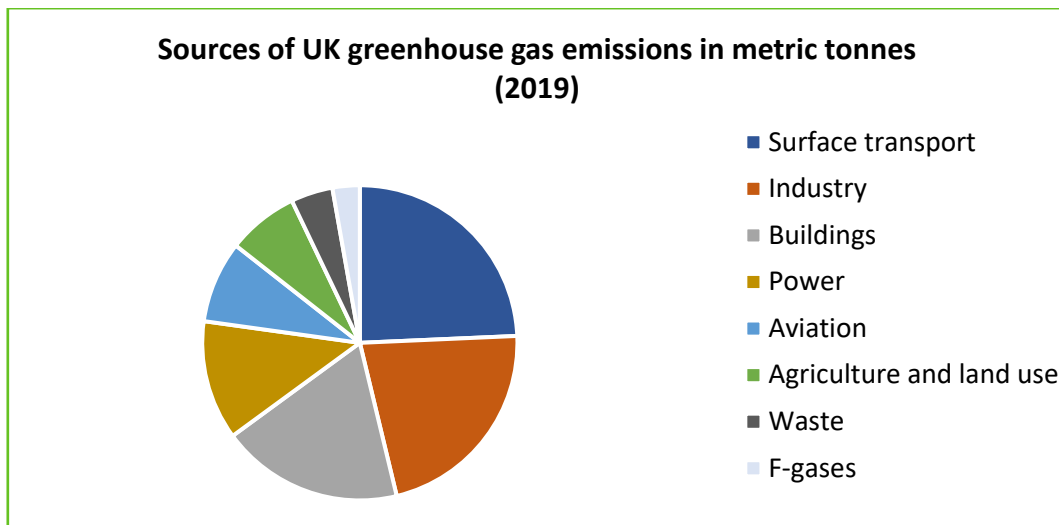


- The Road to Zero – is the strategy specifically for reducing emissions from road transport. It seeks to incentivise the production and take-up of low or no emissions vehicles. In addition to the target cited above, all new cars and vans should be zero emission by 2035. The Electric Vehicle Homecharge Scheme offers grants towards installing charge points at residential addresses. Businesses and employers can acquire vouchers towards installing charge points at their premises under the Workplace Charging Scheme. Highways England has been investing so that motorways and trunk roads can have a public charge point at 20 mile intervals (or less). As part of its National Buses Strategy, Government has announced a funding bid scheme (ZEBRA) for transport authorities to purchase 500 zero emission buses. For further information see the RSN's [Through a Rural Lens document on the National Buses Strategy](#).
- Energy Company Obligation – under the 2018-22 version of this policy, known as ECO3, vulnerable households can apply to have energy efficiency measures installed which cut carbon emissions and tackle fuel poverty. 15% of these measures are expected to be delivered in rural areas. ECO3 is funded through a charge on the energy supply industry, so is ultimately reflected in consumers' bills. The Government also supports an official advice service called the Green Deal, offering homeowners information about energy saving measures, approved suppliers, and available grants (such as the Renewable Heat Incentive).
- LEP Energy Strategies – Local Enterprise Partnerships have produced Energy Strategies as a vehicle to focus their support for low carbon energy projects in their areas. These are intended to contribute towards the aspiration for clean (economic) growth. Perhaps unsurprisingly, many of the low carbon projects supported are in rural locations.

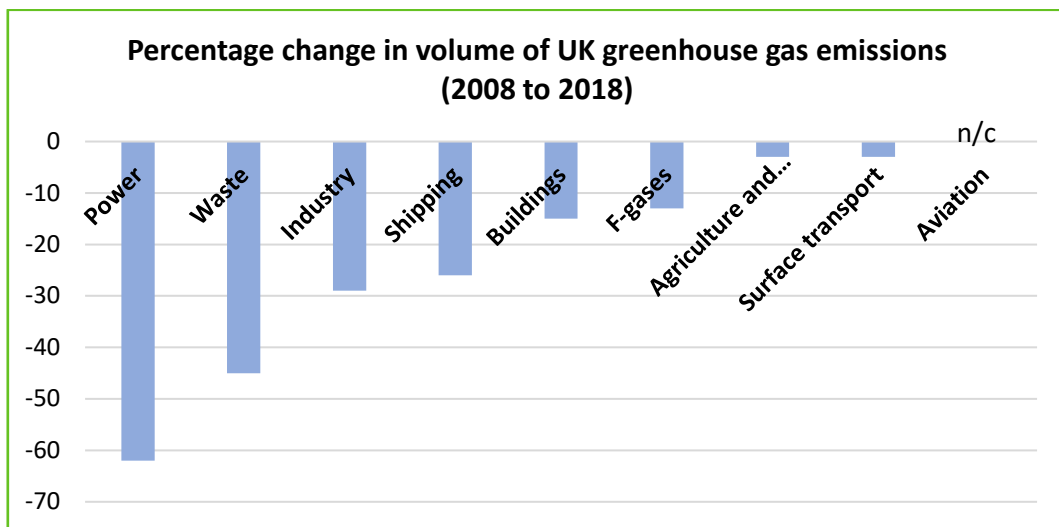
The rural dimension

Estimates for the whole of the UK – both its rural and urban areas – show that the main sources of greenhouse gas emissions are surface transport, industry, buildings (including housing) and the power sector.³

³ *Reducing UK Emissions – 2020 Progress Report to Parliament*, Committee on Climate Change (2020).



The ten-year trend amongst these different sectors varies hugely. Most show a reducing output of greenhouse gas emissions (with the power sector at -62% the outstanding performer), but some are still largely unchanged in their output.



Evidence about the locations of renewable energy production shows that:⁴

- Predominantly rural areas are the location for 60% of England's renewable energy generating capacity, which equates to 16,555 Megawatts (MW);
- In particular, these areas are the location for 64% of capacity from onshore wind and 60% of capacity from photovoltaics – two key renewable sources;
- This is out of all proportion to their 22% share of the country's households.

⁴ Secondary analysis of data from *Renewable electricity by local authority*, BEIS (2019).

Installed energy capacity, in MW, from renewable sources in 2018 (per cent of England total)

Type of local authority area	Households	Photovoltaics	Onshore wind	Plant biomass	All renewable sources
Predominantly Rural	22%	60%	64%	87%	60%
Urban with Significant Rural	13%	16%	14%	3%	17%
Predominantly Urban	65%	24%	22%	10%	23%
England totals	100%	100%	100%	100%	100%

Much of the existing housing stock in rural areas does not easily lend itself to being made more energy efficient. Buildings tend to be older and many are off the mains gas grid. Notably, those local authority areas with the highest CO2 emissions per property are all predominantly rural⁵. For further information see the [RSN's response to the Future Building Standards consultation](#).

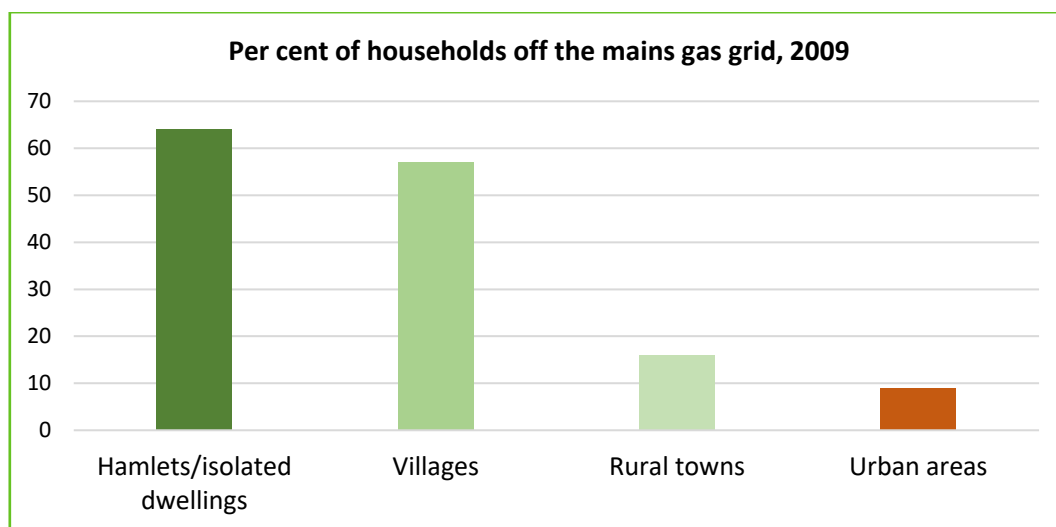
Top six English local authority areas for CO2 emissions per property per year (2017-20)

Local authority district	CO2 emission per property per year
Eden (in Cumbria)	7.39 tonnes
Ryedale (in North Yorkshire)	6.53 tonnes
West Somerset	6.17 tonnes
Richmondshire (in North Yorkshire)	6.14 tonnes
West Devon	6.04 tonnes
Derbyshire Dales	5.85 tonnes

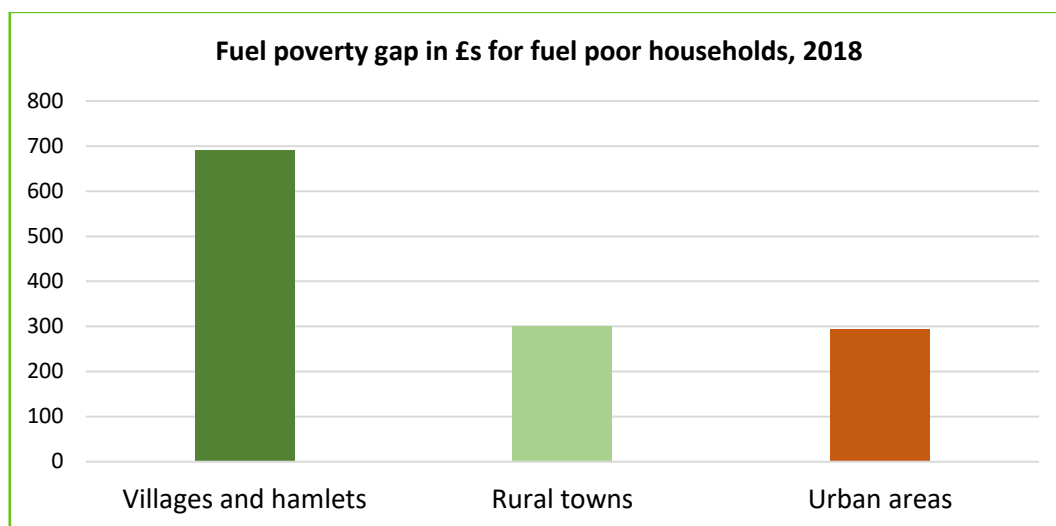
In 2010 some 36% of all households in rural areas were located off the mains gas grid.⁶ The comparable figure for urban areas was 8%. As the chart below shows this issue is especially relevant for smaller rural settlements. Although these rural figures are somewhat dated, figures up to 2018, for England as a whole, show there has been little change.

⁵ Analysis of home Energy Performance Certificate data from 2017 onwards, BBC Shared Data Unit (2020).

⁶ From *Statistical Digest of Rural England 2013*, Defra and Government Statistical Service (2013).



In 2018 some 425,000 or 10% of households in rural areas were classified as being fuel poor (that is, they faced high fuel costs which could leave them below the official poverty line).⁷ This is slightly lower than the 11% of fuel poor rural households five years earlier (in 2013). However, the 'fuel poverty gap' is especially large for those households in smaller rural settlements i.e. the extra income they would need annually to move them out of fuel poverty. For further information see the RSN's [Through the Rural Lens document on the Sustainable Warmth Strategy](#).



A poll conducted by Opinium for Liquid Gas UK, the trade association for the LPG and bioLPG sector, and published in May 2021, found that 93% of rural off-grid households considered they could not afford the average cost of installing heat pumps. Like the RSN, Liquid Gas UK calls for national policies to avoid taking a one-size-fits-all approach to decarbonising home heating and instead to reflect the distinct character of homes in rural areas.

⁷ From *Statistical Digest of Rural England 2020*, Defra and Government Statistical Service (2020).

There were just over 11,000 locations in the UK which had public charging points for electric vehicles by February 2020.⁸ These charging points had almost 31,000 charging connectors (a figure which had increased by 843 in the previous month). No rural analysis has been found of where these are, although of interest is that more than a quarter are in the Greater London area. Taking the two most rural of English regions, 8% (2,469) of connectors are in the South West and 6% (1,937) are in the Eastern region.

A research report finds that, for rural areas, decarbonising transport may prove the most challenging aspect of all on this agenda.⁹ Specific challenges include:

- The need to increase the scale and reach of the network of electric vehicle charging points (across relatively low demand locations);
- The need to extend the range (or distance) electric vehicles can travel between recharges, so they are better suited to rural geographies;
- The potential demand on the electricity grid in rural areas, as a widespread switchover to electric vehicles impacts demand;
- The need for faster progress developing hydrogen or alternative technologies, to aid decarbonisation of bus and HGV fleets in rural areas.

Policy solutions

There is an immediate opportunity to support a green economic recovery from the pandemic-induced recession, so that future growth contributes directly to the target to become a net zero country. Rural areas have a major part to play in that journey. Achieving greater energy efficiency is not generally constrained by technologies, but it does require a more strategic or joined-up policy approach than hitherto implemented, plus some gap funding to prove approaches can work, and create scalability.

⁸ From *Zap-Map*, website accessed February 2020 (www.zap-map.com).

⁹ *Opportunities and challenges for rural communities from net zero carbon legislation*, Rural England CIC (forthcoming).



Decarbonising Rural Communities and Economies

Specific policy asks

Economic growth programmes: all such programmes should include explicit objectives to support low carbon and net zero growth. Specialist advice and related grant funding should be made available for existing rural businesses to help them reduce their carbon footprint. Government should use its Covid-19 recovery package, *A Plan for Jobs 2020*, to improve energy efficiency in rural homes, especially off the mains gas grid. This would make them greener and easier to heat, whilst supporting green jobs for tradespeople in rural areas.

Housing and renewables: housebuilders, homeowners and landlords should be incentivised to install or adopt renewable or low carbon energy technologies, which would also help address rural fuel poverty. The target recently set for installing heat pumps is useful, but that technology will not suit some properties, not least many older and hard-to-decarbonise homes in off-grid rural areas which the Government indicates are a priority. The approach for retrofitting existing homes, including eligibility to access the Homes Upgrade Grant, therefore needs to cover other options such as biofuels and heat networks.

Housing energy efficiency: for maximum effect, the switch to renewables should happen in conjunction with making homes more energy efficient. The technology for housing development to Passivhaus standards exists, but the financial model needs development, not least in rural areas where development sites tend to be small and have fewer economies of scale. Some pilot exemplar rural schemes should be supported to test feasibility and improve viability of the approach, paving the way for commercial provision to such standards in future.

Electric vehicle charging: the funding recently announced by Government to make quicker progress with rolling out rapid charging infrastructure is welcome. It must, however, be used to improve the network of public charging points across rural areas (including those areas distant from motorways or trunk roads). Drivers in rural areas are more likely to travel further and gaps in the network are a practical constraint given typical ranges of e-vehicles.

Rural buses: introducing buses using electric battery or hydrogen fuel cell technologies involves significant investment, both in new vehicles and depot fuelling facilities. This may be hard to justify commercially in rural areas unless bus service patronage grows. The Government's ZEBRA funding

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scheme should specifically target some uncommercial rural areas. Current electric buses also have a limited range that will be inadequate for some rural routes. A comprehensive review is needed of the electric grid and, where appropriate, hydrogen supply to avoid punitive upgrade costs arising in rural areas.

Electricity network capacity: the path towards net zero will significantly boost demand for electricity, not least to heat homes and charge cars. Government and energy industry must ensure that electricity distribution networks, sub-stations and connections are made fit-for-purpose. This will be particularly relevant in rural areas, where infrastructure is often less robust.

Local energy networks: Government should provide gap funding to kick start the development of decentralised energy networks in rural areas, where they typically face higher costs due to serving low population and housing densities. This would support the growth of networks that are based on local renewable production or combined heat and power technologies. These could also help retain money within local rural economies and support local jobs.

Local services: it should not be overlooked that one of the most effective ways to reduce carbon emissions in rural areas is to retain and, where possible, grow locally based services, such as food shops, post offices, schools, GP surgeries and transport networks. Equally, that providing good digital connectivity will reduce the need for rural residents to travel and enable home working. Policies for public transport, digital, land use planning, community action, education and health all have a part to play.