

What is Decarbonisation?


Decarbonisation means reducing the amount of carbon dioxide emitted into the atmosphere.

In the UK it involves working towards net zero carbon by 2050 across all sectors, including buildings, transport, agriculture, energy, business and industry. This is a legally binding target. In practical terms it means:

- Reducing the nations CO₂e, or carbon dioxide equivalent (a measure of all main greenhouse gas emissions), by 100% compared to 1990 levels.
- We can't wait until 2050 for action and are working towards intermediary targets of a 68% reduction by 2030 and a 78% reduction by 2035
- Pushing energy efficiency and the use of renewable energy as far as possible across all sectors.
- Offsetting the remaining residual emissions through investing in projects that remove CO₂ from the atmosphere, such as carbon capture and storage and natural measures such as tree planting.

The benefits of decarbonisation are:

The main benefit is reducing global warming, which is having devastating effects on the planet: ice caps melting, sea levels rising, loss of biodiversity, extreme weather events, loss of life and property damage. OK, this does need to be a team effort with other nations and global businesses playing their part. But by taking a stance and setting a legally binding net zero target the UK is acting as a leader in decarbonisation, setting a global example and developing green, futureproofed jobs and skills.



260,000
Energy efficiency measures installed per year, providing warmer homes and lower bills

Direct benefits of decarbonisation for the UK include improving air quality in our towns and cities, leading to reduced instances of respiratory illness and long-term poor health. Additionally, decarbonisation efforts can help us to adapt and prepare for extreme weather events such as drought, extreme heat, heavy rainfall, flooding. For example, creating more green space in our cities can help to mitigate extreme summer temperatures and reduce instances of flooding.

What does decarbonisation mean for the housing sector?

Housing providers need to decarbonise their homes to reach both Energy Performance Certificate (EPC) targets and net zero targets. The target year for improving EPCs to a C is 2035, but for households in fuel poverty it is 2030. Decarbonisation will involve 'retrofitting' homes with a combination of energy efficiency measures, ventilation, and low carbon heating, including:

- wall/roof/floor insulation
- energy efficient doors and windows
- draft proofing
- low carbon heating and hot water
- solar photovoltaic panels
- energy storage (electricity, heat and hot water)
- ventilation (with heat recovery)
- advanced controls

Net zero carbon homes should:

- be made as energy efficient as practical
- generate remaining energy requirements through on-site renewable energy sources
- have energy storage to make the best use of renewable electricity and/or renewable heat generated

There will likely be some remaining emissions which housing providers can offset through investing in carbon capture or carbon removal projects, to reach net zero.

What does decarbonisation mean for residents of social housing or people in fuel poverty?

For residents of social housing, decarbonisation really means upgrades to their homes that make them warmer, cosier, healthier, and less expensive to heat and power. Their homes will also be low or net zero carbon homes following the necessary upgrades.

It might mean some short-term disruption during the assessment and installation process, and some readjustments following the completed retrofit projects as residents get used to their new systems.

It can also require some behavioural changes to make sure new systems operate as efficiently as possible.



Resilience planning into your housing stock.

Having a long-term strategy for housing stock decarbonisation will help to create resilience. This should include a programmed approach for the upgrade of homes out to 2030 and 2050. Develop a roadmap that aligns your retrofit projects with planned works programmes and organisational priorities (such as tackling damp and mould) and takes external drivers into account including changes in policy and technological improvements.

Explore new and innovative finance models in partnership with the private sector to reduce the reliance on grant funding. This could include sustainability linked loans, retrofit carbon offset credits, and revenue generating models from operation of renewable energy and storage.

Develop a data-led culture with frameworks and tools to support good data collection and analysis of housing stock performance. This will mean more in-home monitoring, developing partnerships with third party analytics providers, and embracing AI tools. Better data should lead to more informed decisions about how and when to decarbonise your homes.

Tips to start decarbonisation journey in housing.

Data, data, data. A critical starting point is getting housing stock data in order. You'll need to have data on the number and location of your homes, their energy performance, the condition of the stock, any planned maintenance requirements, and data on your residents. Data should be up to date, accurate, and from reliable sources. You should know where you have gaps in your data and develop a plan to fill them.

Develop a strategy that outlines your key principles for upgrading your homes, aligned to your organisational priorities, residents' needs, and external drivers. This should include a long-term, phased plan of upgrades that link to your planned maintenance schedules and take advantage of external grant funding cycles.

Seek economies of scale by upgrading specific archetypes together and working to retrofit on an area-by-area basis.

Build a trusted supply chain for a long-term delivery partnership of your retrofit programme. Invest in supply chain partners that align with your priorities, understand your homes, and take a resident-sensitive approach to retrofitting them.

There is no one-size-fits-all approach to decarbonisation. Every home is different, even those which on paper seem like the same 'archetype'. Gain experience in deploying a range of approaches with different technologies and techniques and collect data from completed retrofit projects to understand what

Types of Decarbonisation funds available.

There are various sources of decarbonisation funding available for UK homes and buildings, with varying eligibility criteria. This is not an exhaustive list:

- The Social Housing Decarbonisation Fund (SHDF) is the main funding for improving energy efficiency in England's social homes rated EPC D and below. It covers insulation, ventilation, low-carbon heating, and renewable energy, with Wave 3 launching in late 2024.
- The Home Upgrade Grant (HUG) funds English local authorities to upgrade fuel-poor homes off mains gas, rated below EPC C, with household incomes under £36,000.
- In Wales, the Optimised Retrofit Programme is helping to fund retrofit across thousands of social homes to install building fabric improvements and low carbon technologies.
- The UK's Boiler Upgrade Scheme (BUS) offers grants, including £7,500 for an air source heat pump, to replace fossil-fuel heating in England and Wales. In Scotland, funding varies by tenure, with Home Energy Scotland offering grants and loans, and the Social Housing Net Zero Heat Fund supporting retrofits for social housing.

What decarbonisation methods do Sureserve offer?

Sureserve are installation contractors for a wide range of housing retrofit measures, providing a whole house solution that covers fabric insulation measures, doors and window replacements, low carbon heating system upgrades, renewable generation and energy storage.

We offer up-front retrofit assessments and retrofit coordination required for government funded retrofit projects. We can also advise on how to develop a data-led retrofit strategy and provide support and advice on grant applications for retrofit funding.

Additionally, we install energy metering and monitoring systems to track progress of retrofitted homes and to pin-point preventative maintenance requirements, providing rich and actionable data to housing providers across their portfolios.

What types of decarbonisation projects can social housing providers undertake?

Social housing providers can undertake retrofit on an incremental basis, as long as the measures are planned to a whole house approach.

Incremental retrofit allows the cost of the projects to be spread over a longer period and helps to upgrade more homes on a step-by-step fashion. This can typically involve improving the fabric insulation of the homes first, before looking at changing fossil fuelled heating systems for low carbon options.

An incremental retrofit approach is likely to cost more overall per home, and will lead to more disruption to residents as multiple visits need to be made for the works.

An alternative approach is tackling whole house retrofit in one go, upgrading fabric, heating systems and installing solar PV and energy storage (where appropriate). This can result in economies of scale and less disruption for residents. However, not being able to spread the costs over time means less homes can be retrofitted at one time.