

Ensuring everyone has a healthy warm home and affordable low carbon energy.



To achieve clean energy by 2030 and tackle the climate crisis the country needs to pivot urgently. The creation of GB Energy is leadership on the national scale, but we must make sure nobody is left behind locally. The Net Zero Terrace Streets partnership has developed an 'end to end' solution to deliver decarbonisation in a 'one touch' approach.

Tackling the causes of cold draughty hard-to-heat homes.

Prevention is always better than cure. We know that preventative public health measures (including healthy warm homes) are cost effective in supporting people to live longer, healthier and more productive lives.

We will achieve that by upgrading the insulation and thermal performance of whole terraces, simultaneously installing affordable space heating and hot water. Our community approach brings economies of scale. Our scheme takes advantage of clean, efficient shared borehole ground source heat pumps (GSHPs). They are much more efficient than the alternatives of direct electricity boilers and without the carbon of existing gas boilers. With our smart local energy system, we can take pressure off the electricity grid, install more quickly, and ease concerns about the cost of energy.

The Net Zero Terrace Streets solution consists of a number of elements:

- A whole house retrofit to improve energy efficiency: insulation, glazing, external doors, draught reduction and ventilation. Both assessment and undertaking the necessary works to support the whole package. This retrofit ensures heat and hot water can be supplied by a 6kW heat pump, including cost reductions through Demand Side Response (DSR) measures.
- A robust, investible package that can be supported various patient investors, repaid through a standing charge.
- Communal bore holes linked to efficient ground source heat pumps (GSHPs), providing hot water and space heating.
- Community based solar energy generation and power storage supporting lower energy costs.
- Wider community benefits for transport and climate resilience, possibly including creating community electric car clubs.
- Community flood prevention, incorporating flood resilience measures where necessary.

Driving down costs in the future, and decarbonising homes

Compared to individual households running electric heating the savings from systematic retrofitting and GSHP may be as much as 80%. The system will automatically optimise bills, utilise local community energy when available and deliver flexibility to electricity networks, reducing future costs for everyone.

- This offers a planned, phased coordinated approach which could deliver zero-carbon terrace homes in 3-7 years.
- We are working on the demand side of the equation. Our cutting edge smart system should be able to scale the DSR to ease pressure on the national grid.

RVE is a community owned renewable energy group delivering on Net Zero Terrace Streets in partnership with:



Net Zero Terrace Streets' aims:

- To provide an inclusive, modular, replicable solution and no upfront cost to residents.
- Deliver healthy warm homes and affordable, low carbon energy, improving lives.
- Reduce home energy use and support low energy prices across the community.
- Help local communities to come together and change from fossil fuels to renewable energy.
- Provide a solution that enables millions of households, often on limited or fixed incomes to achieve affordable Net Zero homes.
- Provide a solution for all housing tenures - owned, private or social landlord rented - recognising the diversity of terrace streets.
- Deliver this package to whole streets bringing economies of scale and faster zero carbon, while keeping profits in local communities for public benefit.

Terraced homes are ready for retrofit

Terraced housing offers a strong opportunity for community-based retrofit and decarbonisation. There are over 6 million terraced homes in the UK.

Volume building of high-density terraced homes started around 1800 during the rapid urbanisation of the Industrial Revolution. Despite their age these small homes have remained popular.

Successive owners have seen several whole house upgrades, proving to be very adaptable. The retrofit to net zero will be the latest in a long line.

Want to learn more?



Take a look at our video here:

Why terrace streets?

Terrace streets are in danger of missing out. They lack space for Air Source Heat Pumps and are unlikely to be connected to larger District Heating schemes.

Smaller terraced homes are often in poorer areas where people cannot afford to fund substantial changes to their homes themselves. Many were built without cavity walls.

Private landlords are starting to install direct electrical boilers which cost tenants much more to operate than gas boilers.



- **1848** - Started to supply piped drinking water and sewerage.
- **1851** - Started to supply town (coal) gas.
- **1882** - Mains electricity starts to roll out.
- **1926** - National Grid is switched on.
- **1967** - Roll out of strategy to convert every home in the country to natural gas.
- **1980s** - Double glazing becomes a default choice, subject to budget.
- **2000** - Warm Front scheme launched.
- **2013** - 2.3million homes improved under Warm Front before it was ended.
- **2022** - Russian invasion of Ukraine pushes natural gas prices to a new high.

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