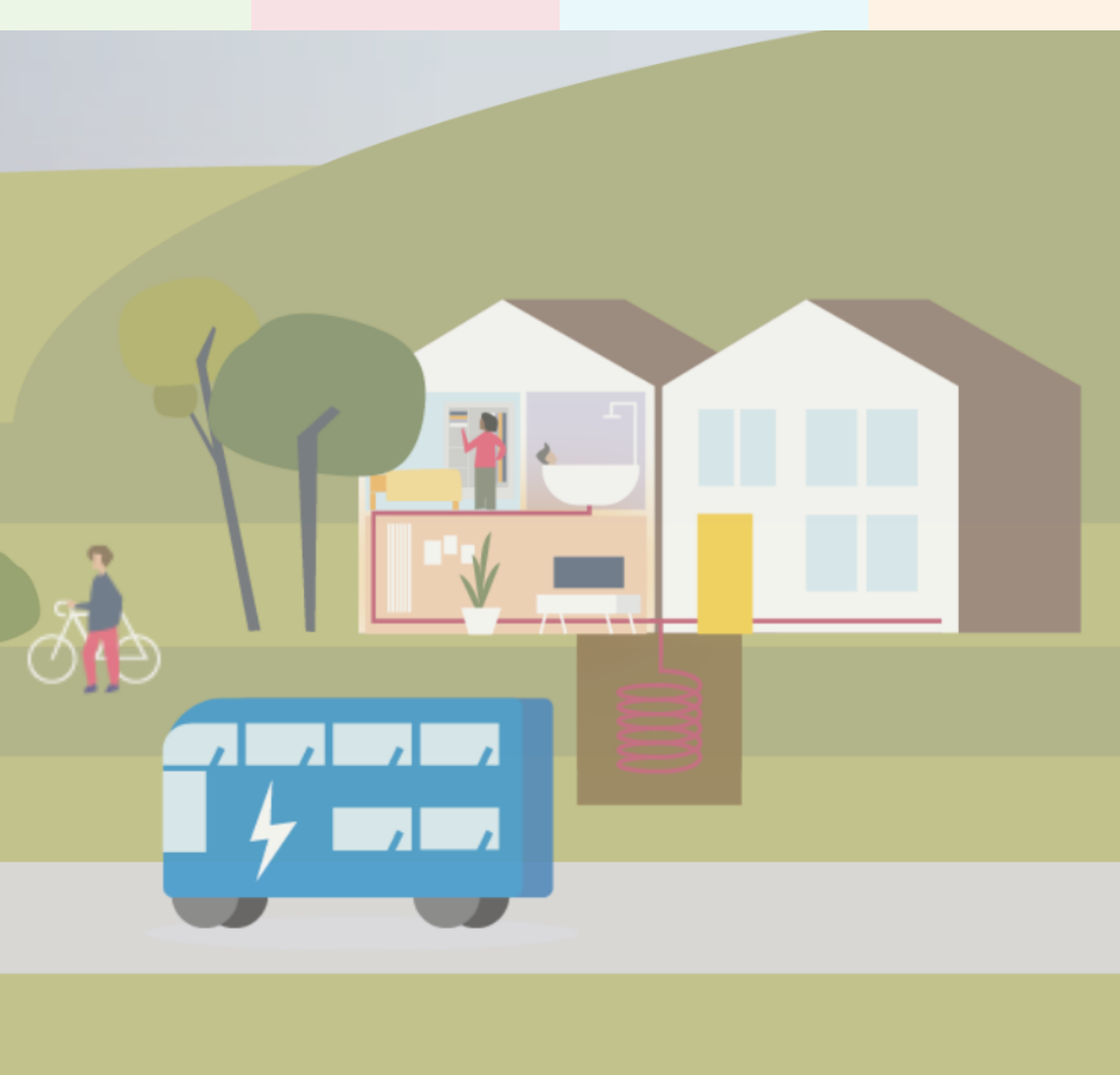




DECENTRALISED ENERGY ELECTION MANIFESTO POLICY REPORT

The **Association for Decentralised Energy (ADE)** represents more than 160 organisations from across the energy system and advocates on the priorities for the UK in achieving net zero and boosting energy security. **We believe that an energy system designed around the user's needs, enabling the right technology choice in the right place, serves everyone better.**

This report sets out the vital policies that the next Government will need to adopt if we are to successfully reach our decarbonisation goals while creating a modern and secure energy system.

The next Government must foster an energy system that prioritises smart, local and joined-up approaches. It is necessary to think about decentralised energy technologies as part of a wider whole systems view, where all aspects of the energy network are taken into account to create a cohesive and integrated system that empowers the user. Innovate UK research shows delivering net zero through locally specific strategies focused on decentralised energy would cost just £58 billion and create £108 billion in energy savings. This is compared to a place-agnostic, national approach that would cost almost four times as much at £195 billion and only create £57 billion in energy savings.

Additionally, the predicted broader social benefits of taking a locally specific approach are double that of a place-agnostic approach, at £825 billion to £444 billion respectively.

Across the whole system, the next Government must:

- Create an accountable and transparent Future System Operator with a truly whole systems scope and the expertise to match.
- Ensure that households, businesses and industry are not thwarted in their ability to decarbonise by a lack of network infrastructure, whilst prioritising a smart and flexible grid ahead of laying dumb cables or power lines.
- Rebalance levies to support widespread electrification of heat.
- Legislate for the phase-out of gas boilers by 2035.
- Make sure local-based solutions are put at the heart of any future plans to decarbonise buildings and transport.

ENERGY EFFICIENCY



The recent energy crisis highlights the need to rapidly reduce the amount of energy we use in the UK, and a widespread rollout programme of high-quality energy efficiency measures is the most cost-effective way to cut energy demand. We must use persuasive push-and-pull incentives to foster an investment environment that allows for the rapid insulation of Britain's homes.

Recent modelling from Cambridge Econometrics suggests decarbonising our homes through the installation of energy efficiency improvements and the deployment of zero carbon heating technologies would create 138,400 new full-time jobs in 2030.

83,500 of these would derive from energy work, 33,500 from the switch away from high carbon heating systems to low carbon alternatives and 21,400 from the reallocation of household spending away from energy.

The next Government must:

- Implement widespread building standard reform to require Energy Performance Certificates (EPC) of a rating of C or higher across the owner-occupier and rented sectors.
- Require all mortgage lenders to have an Energy Efficiency Rating and Environmental Impact Rating of C or higher on average across their portfolios by 2028.

HEAT NETWORKS



Heat networks are a proven technology, able to deliver a modern, zero carbon and highly efficient way of heating buildings – in Denmark, where heat networks are widespread, many customers saw no heating bill increases in 2022. A heat network revolution in our towns and cities can provide more affordable and resilient heating.

The development of heat networks to their full cost-effective potential could create more than 30,000 jobs by 2050. There are a number of skills gaps in the sector at the moment, and addressing these would accelerate the deployment of heat networks, improve the quality of design/construction and reduce delivery costs.

The next Government must:

- Set a target for at least 20% of UK heat to be supplied by heat networks by 2040 and to be the dominant form of heating in urban and semi-urban areas.
 - Set out a clear strategy for meeting this target, including outlining how the new sector can foster the growth of jobs and skills needed.
- Deliver an investable environment for heat networks in the UK by:
 - Reducing the burden on Local Authorities to deliver heat network zones.
 - Removing the current cost premium for zero carbon heat within zones.

FLEXIBILITY



Flexibility in the grid is essential to making the delivery of net zero financially possible. Demand side response schemes like the recent Demand Flexibility Service launched by National Grid in the Winter are extremely important in maintaining the balance between supply and demand as we further decarbonise on our journey to net zero.

Deploying more demand response and battery storage will also create significant additional employment in high skill areas such as systems design, engineering and software development – current government estimates say that this could create 24,000 jobs by 2050.

The next Government must:

- Set targets for scaling up flexibility so we can use as much green electricity produced in the UK as possible, alongside targets for expanding renewable energy capacity.
- Reform electricity market arrangements to redistribute the value of energy from large generation to households, businesses and industry.
- Continue the growth of the valuable Demand Flexibility Service by removing market barriers for demand side response to ensure that all energy users are rewarded for their participation.

INDUSTRIAL ENERGY



British industry needs a coherent plan that sets out how to decarbonise on the pathway to net zero by 2050 while remaining competitive, whether they are located inside or outside an industrial cluster. This plan must be focused around regional reindustrialisation that puts smart, local energy at the heart of industrial efficiency and competitiveness – ultimately, the factories, farms and furnaces that make up the backbone of the UK economy need to know what is happening next.

There are currently 110,000 people working in industrial energy jobs across the country, supporting local economies everywhere from the Humberside industrial cluster to sugar factories in Suffolk. Many of these jobs are involved in working on Combined Heat and Power facilities.

The next Government must:

- Set out a clear, ambitious strategy for how industry outside of the North-East and North-West clusters will decarbonise and ensure that all industrial policy, and energy policy impacting industrials, reflects the likely slower pace of dispersed decarbonisation.
- Develop a plan to make sure that much-needed new electricity and hydrogen networks don't hinder industrial decarbonisation.

GLOSSARY

ENERGY EFFICIENCY

Energy efficiency in buildings reduces demand for the heating and power usage of indoor spaces through a combination of measures, such as insulation, draught proofing and LED lighting.

Energy efficiency measures directly reduce customers' bills and make their homes warmer and more comfortable. It also means the construction of fewer new generating plants and reduced network infrastructure investment combined with greater resilience and lower carbon emissions.

HEAT NETWORKS

In most houses, the central heating system pipes hot water from the boiler to heat your radiators and the hot water in your taps. A heat network is the same principle on a massive scale. An energy centre will generate heating and cooling, which is then transported via insulated underground pipes to homes and businesses.

Individual heating solutions are not very efficient. It doesn't matter if you're burning fossil fuels or using electric heat pumps – bigger is usually better.

FLEXIBILITY

Flexibility simply means turning the electricity supply up or down at different times to meet different needs and balance the grid.

Consumers can be paid to turn up or turn down electric vehicle chargers, fridge banks, air-conditioning units and even large industrial engines and generators, depending on if more or less electricity is needed on the grid.

An energy system that is flexible will not only be greener but will be more affordable, more reliable and more energy secure.

INDUSTRIAL ENERGY

Industrial energy refers to the energy used by heavy industry, which is generally the production of raw materials such as chemicals, iron and steel, minerals and paper. These processes are generally both critical to the functioning of the economy and heavily energy intensive, meaning that the transition to a low carbon future poses a significant challenge across these sectors.

One industrial energy efficiency approach is combined heat and power (CHP), which integrates the production of heat and electricity into a single, highly efficient process.

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