DECENTRALISED ENERGY MANIFESTO

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.**

This report sets out the vital policies for 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 a Future System Operator that is transparent, wide-ranging in scope and possesses deep expertise.
- Ensure the future network infrastructure allows households, businesses and industry to decarbonise, and is as smart and as flexible as possible.
- Encourage the widespread electrification of heat by changing the way costs of gas and power are calculated in bills.
- Legislate for the phase-out of gas boilers by 2035.

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HEAT NETWORKS

Heat networks are a proven technology, able to **deliver a modern, zero carbon and highly efficient way of heating buildings**. If properly supported, the heat network sector could **create more than 30,000 jobs by 2050.**

The next Government must:

- Set a clear strategy to deliver at least 20% of UK heat from heat networks by 2040.
- Deliver an investable environment for heat networks in the UK.

> *"Heat networks are key to providing affordable, reliable and low carbon energy to towns and cities across the country. The next government needs to make sure that the process for delivering established heat network zones is streamlined, to allow for the effective scaling of new and existing networks."*
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ENERGY EFFICIENCY

The recent energy price and security of supply crisis highlights the need to rapidly reduce the amount of energy we use in the UK. **A widespread rollout programme of high-quality energy efficiency measures is the most cost-effective way to cut energy demand.**

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 200,000 new full-time jobs in 2030.

The next Government must:

- Require all mortgage lenders to upgrade their building stock to an average of EPC Band C.

> *"Energy efficiency delivers instant and significant savings for consumers and protects them from future energy price volatility. The reality is that our homes and buildings remain woefully inefficient and need a radical overhaul for our future energy system. We need increased and sustained investment in energy efficiency for economic security, thousands of jobs, and achieving net zero."*
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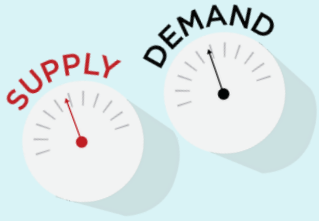
FLEXIBILITY



Flexibility in the grid is essential to making the delivery of net zero financially possible and maintaining the balance between supply and demand. Pioneering **a smart and flexible energy system could create 24,000 jobs** in tech and engineering by 2050.

The next Government must:

- Scale up targets for flexibility so we can use as much green electricity produced in the UK as possible.
- Reform the electricity market to ensure homes, businesses and industry are rewarded for their participation.

> *"A more flexible energy system, means a cheaper, greener and more secure energy system. The UK is a world leader in flexibility and must continue to set an example. We must think differently about our energy system and encourage greater collaboration across the value chain so that customers can feel the full benefit of a more flexible system."*
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> octopus energy

INDUSTRIAL ENERGY

British industry needs a coherent plan that sets out how to decarbonise by 2050 while remaining competitive, whether or not businesses are located inside or outside an industrial cluster. **A plan is needed to protect up to 110,000 jobs** working in farms, factories and furnaces across the country or we fear losing these industries to foreign markets such as China.

The next Government must:

- Set a clear, ambitious strategy for the decarbonisation of industrial sites outside of the clusters.
- Support the faster rollout of much-needed electricity and hydrogen infrastructure.

> *"We are supportive of net zero targets and want to explore how we can turbocharge progress in dispersed manufacturing sites. We have four sites across the East of England and the East Midlands which play a significant role in the local, rural economy. We want to work together to show how clear policy roadmaps, together with investment, will enable us to maximise low carbon technologies to support and sustain emission reductions."*
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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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