



The University
Of Sheffield.
Energy
Institute.

Decarbonising UK industry whilst strengthening its economic potential

As the UK enshrines into law the target to slash emissions by 78% by 2035, the need to decarbonise industry has never been more pressing.

The Energy Institute at the University of Sheffield is playing a critical role in supporting the UK's journey to net zero. Our sustained investment in innovation and testing facilities makes us one of the largest and best equipped research and development hubs for low carbon energy solutions in Europe. We are primed to take an active role in the Government's levelling up agenda, and reinforce the UK's role in the global green energy market.



Unrivalled expertise in:

- » Hydrogen production and use
- » Carbon capture, utilisation and storage
- » Biofuels and sustainable aviation fuels
- » Nuclear
- » Wind energy
- » Energy storage
- » Circular economy

National scale facilities:

Translational Energy Research Centre

Nuclear Advanced Manufacturing Research Centre

Centre for Research into Electrical Energy Storage & Applications

S2GRE Siemens Gamesa wind turbine generator R&D competence centre

Advanced Resource Efficiency Centre

We're supporting industry to translate academic research into real-world solutions

We're a key partner in the £75m **Zero Carbon Humber project** to accelerate decarbonisation in the UK's most carbon-intensive industrial region which is supporting clean growth, future-proofing vital industries, and protecting and creating new jobs.

We're part of the £20m UKRI-funded **Industrial Decarbonisation Research and Innovation Centre**, investigating hydrogen production using biomass with carbon capture and storage, a net-negative emissions source of fuel, and a vital component of the UK's pathway to net-zero.

We're decarbonising the **steel industry** by investigating how surplus energy generated from renewable sources like wind and wave power can be used to create hydrogen, which is considered one of the best hopes for reducing the carbon footprint of steel.

We're collaborating with industry and other academic institutes to remove barriers to the adoption of **low-carbon transport** including sustainable aviation fuels and surface transport.

Cement is responsible for 8% of global CO₂ emissions. We're researching how to make cement using waste products from power generation and steel production. The result is a material that requires far less carbon than conventional cement to produce.

We're decarbonising supply chains in our **Advanced Resource Efficiency Centre** helping international organisations reduce their environmental impact and increase efficiency.

www.sheffield.ac.uk/energy

energyinstitute@sheffield.ac.uk

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