Lancaster University

Driving energy decarbonisation

Join Lancaster University in our bold, sector-leading mission to decarbonise energy through cutting-edge research, innovative solutions, training, and operation.

Lancaster University is at the forefront of energy system decarbonisation, underpinned by our purpose, our place and our people. We combine research expertise with operational infrastructure and strong industry and policy partnerships to create a unique, scalable test bed for innovation and training. Our integrated approach drives the advancement of solutions that can be applied beyond our campus, informing energy decarbonisation, in the region, nationally and internationally.

From undergraduate students to senior management, we are driven to pioneer the transition to a sustainable campus and share insights from our journey.

Our leadership team, inspired by the student voice, declared a climate emergency in 2020 and has committed to ambitious net zero targets: ***net zero from electricity and heating by 2030 and from all other emissions by 2035***.

Lancaster University is in a unique position to become a national demonstrator for the transition to net zero. Ranked 25th in the UK and joint 80th in the world in the 2025 QS World University Rankings for Sustainability, our ambition is to be at the forefront of the net zero transition, sharing our expertise and experiences to hasten decarbonisation across the world.

Our purpose, our people and our place provide the perfect platform to contribute significantly to the region's profile and county-wide economic development plan.

Our place: campus energy infrastructure

A scalable, integrated platform for research, innovation, demonstration and training

Real-world complexity in a campus environment to de-risk, test and scale innovation toward net zero. A model for a large organisation or a small settlement comprising accommodation, recreation, shops, and business facilities.

The Lancaster University campus enables experimentation and innovation at scale, using a wide range of energy infrastructure and demand.

The energy infrastructure supports cutting-edge research, technology development and demonstration, and systems thinking, providing a dynamic platform for impactful industry partnerships.

Our energy infrastructure is immense.

According to figures published by the Higher Education Statistics Agency, we are one of the highest producers of renewable energy of all UK universities. Our infrastructure includes:

- 2.35 MW wind turbine
- 11 MW east-west orientated solar farm, the second in the UK
- 50 kW field agrivoltaics demonstrator comprising vertical and single-axis tracking arrays
- 7 MW of air and water source heat pumps, the first array of its size in the UK, operational 2027, housed within a new Energy Centre along with a visitor facility
- 1 MW biomass boiler (offline)
- District heating network across campus, currently under expansion.
- Pilot anaerobic digester (located at Cockerham Green Energy Limited, 5 miles from campus)
- Grid import and export capacity
- State of the art data feeds for monitoring of demand across campus
- Nuclear control room simulator for interdisciplinary training in engineering, cyber-security and psychology

Our people: research expertise and partnerships

Integrating scientific and practitioner expertise for systems-based solutions

From students to researchers to facilities to senior management, we are driven to pioneer our transition to a sustainable decarbonised campus and share insights from our journey.

Lancaster University is at the forefront of the net zero transition and actively seeks opportunities that contribute to our mission. Our researchers are continuing to develop new knowledge and inform policy and practice, drawing from across science and technology, arts and social sciences, health and medicine, and management disciplines to help solve the complex energy challenges we face.

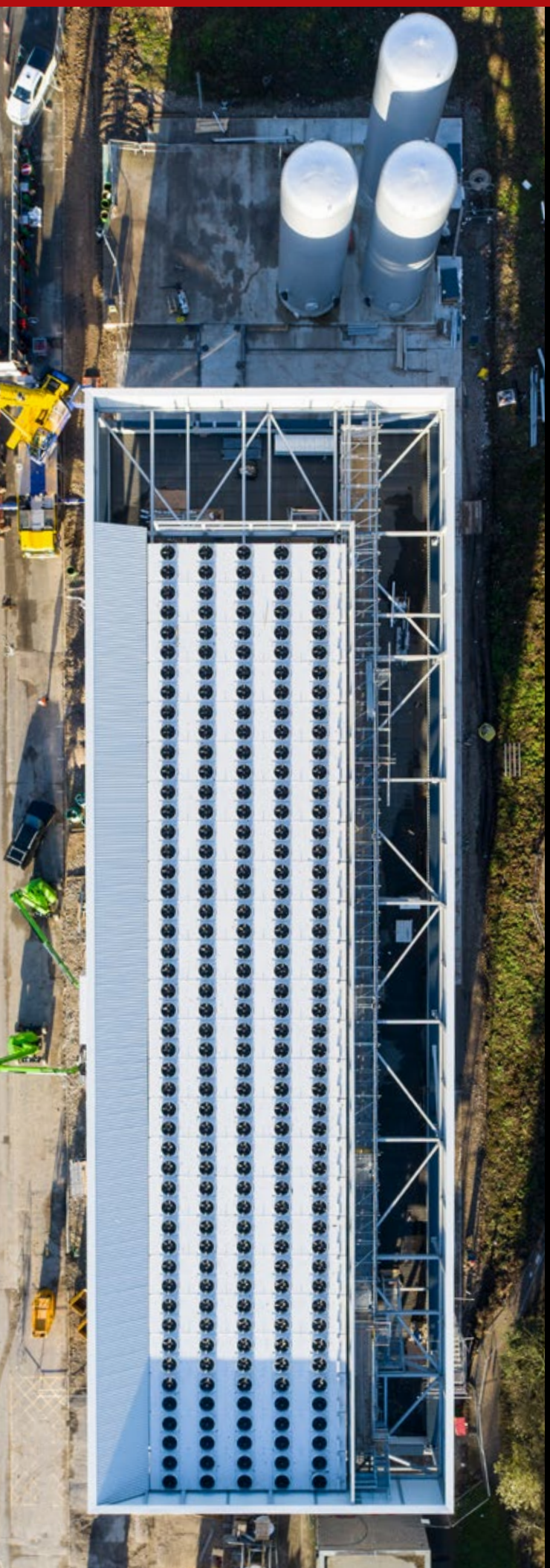
We do not work alone – we have won national awards for our distinctive collaborative approach with external partners, ensuring multi-faceted impact that delivers sustained changes in policy and practice. We engage with a variety of businesses, ranging from SMEs to corporations, to effect change in creating sustainable, decarbonised energy systems that meet the needs of local communities.

Energy expertise cuts across the physical, environmental, social and health sciences.

We lead in advancing and testing technological developments, engaging the public in co-designing decarbonisation pathways, enabling socially and environmentally just transitions, and evaluating the consequences for human health.

We have a track record in several critical topic areas, including:

- Integrating nature-positive targets into energy systems decarbonisation
- Building secure digital energy systems and sustainable computing platforms
- Developing next-generation battery materials and storage chemistry
- Synergising demand and supply-side approaches to energy system decarbonisation



Join us to write the next chapter in energy system decarbonisation

Together, we design, develop, trial and scale the technologies and systems of tomorrow.

We seek new partners across the energy sector, from utilities and equipment manufacturers to sustainability experts and community groups.

Let's collaborate to:

- Accelerate energy system decarbonisation
- De-risk innovation through real-world testing
- Shape policy and market pathways
- Train the next generation of energy experts and data scientists
- Develop place-based solutions that meet the community's needs

Why partner with Lancaster University?

- We champion interdisciplinary excellence
- We offer a testbed infrastructure that reflects real-world energy demands
- We secure competitive grants and deliver measurable impact
- We connect you to regional and national innovation ecosystems
- We shape energy policy at local, national, and international levels

Contact:
www.lancaster.ac.uk/energy-lancaster
www.lancaster.ac.uk/sustainability/action/energy-and-carbon