

Case study: Lancaster University take innovative and ambitious approach to decarbonisation

Lancaster University declared a climate emergency in 2020 and has committed to Scope 1 and 2 net zero by 2030. Thanks to ambitious decarbonisation projects the University has reduced its electricity and heating emissions by 50% since 2005. The institution is now one of the highest producers of renewable energy within the UK higher education sector.



An decarbonisation journey in action

Lancaster University has been ahead of its time and has always put sustainability at the heart of its capital projects. The University has an on-site wind turbine which produces around 14% of the institution's electricity campus each year along with an established Combined Heat and Power (CHP) engine and biomass boiler. The focus is now on the development of two major infrastructure projects - a 11.5MW solar PV farm and a low carbon heat energy centre.

Energy and carbon savings

Lancaster University won £21 million from the Government's Green Heat Network Fund to expand its original district heat network and develop a new energy centre. The facility, which features air source heat pumps, thermal storage and electrical infrastructure, will produce enough heating and hot water for nearly the entire campus.

- It will be the largest project of its kind when it is operational in October 2026, reducing gas consumption by 90%.

The University is also developing a large-scale solar PV farm which will consist of more than 17,000 photovoltaic (PV) panels, constructed on the University's land to the east of the M6.

- The 52-acre solar farm will produce enough energy to power approximately 2,800 homes a year.
- The facility will also house a bespoke research facility. It will also encompass a 50kW agrivoltaics demonstrator enabling the production of crops and electricity from the same land area.

Benefits

- Sharing success with other institutions and being a leading light in the higher education sector.
- Winning grant funding to tackle heat decarbonisation.
- Engaging students in the University's ambitious sustainability agenda.
- Engaging staff from across the staff body to form a strategic energy working group.



"We have been very fortunate to have a great team and support from our senior leadership to pursue an ambitious decarbonisation agenda. For Lancaster it's been the enthusiasm and experience of our people along with some fantastic funding success which has put us firmly on the path to net zero."

**-Avery Chong, Energy Manager at
Lancaster University**