

# Keele University receives almost £1m to implement an ambitious three step decarbonisation plan



## Project overview

Keele University has put in place an ambitious decarbonisation plan to significantly reduce its carbon emissions. Sustainability has been a key focus for the University, who declared a climate emergency at the beginning of 2020. Their three-step decarbonisation plan, which is funded by the Public Sector Decarbonisation Scheme (PSDS) is expected to save 241 tCO<sub>2</sub>e tonnes of carbon per year and help them reach net zero by 2030.

The University received £963,171 grant from the Department for Business, Energy & Industrial Strategy (BEIS) PSDS delivered by Salix, to decarbonise their heating in three stages.

The first phase of their plan focused on lab upgrades, hot water, LED lighting and heating while the second stage centred around the installation of an air source heat pump (ASHP) in a small school residence hall as well as solar PV and an 8kwh battery to operate the pump.

Step three of their plan focuses on implementing a new smart room level heating control system in nine large academic buildings. This technology will detect if the room is occupied and adjust the room temperature accordingly. The installation of immersion heaters will further their goal of reducing carbon emissions as they utilise electricity rather than gas.

## Estimated savings for Keele University

### Annual savings:



**£46,000**

### Total grant value:



**£963,000**

### Annual carbon savings:



**243 tCO<sub>2</sub>e\***

\*Calculated using Green Book emissions factors for electricity published by the government.

### For more information...

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"The money received to undertake feasibility studies will lead to more projects because we now know what needs to be done and where – and we are committed to get them all done. We are looking at replacing gas boilers with electric boilers and already have a couple on their way for the end of summer. The next 12 months will be key for us in terms of decarbonising and implementing more heat pumps."

**Elliot Jones** – Energy Manager at Keele University

## Technical Breakdown

- Lab upgrades
- LED Lighting
- Solar PV implementation
- Pipework insulation
- Building Management Systems (BMS)
- Air Source Heat Pumps (ASHP)

## Collaboration

Keele is working with its Student Union to upgrade ageing infrastructure in Union buildings. The installation of LED lighting has brought significant financial savings of around £5,647 a year. Beyond this, the University has worked to instil their eco-ethos into the studies undertaken by the students.

Keele has also been in conversation with other Higher Education Institutions regarding their decarbonisation projects via The Environmental Association for Universities and Colleges (EAUC) forums.

## Next Steps

Keele is currently constructing the UK's largest University-based renewable energy park which will have 12,500 solar panels, two wind turbines and a grid scale battery.



The park will produce up to 50% of the University's total demand in electricity.

In addition, the University received additional funding from BEIS and Salix's Low Carbon Skills Fund (LCSF) which was utilized for Project Development Support and Heat Decarbonisation Plan Support. The fund has provided the opportunity for feasibility studies which showcased the area's most in need of upgrading. As a result, Keele are going to focus on upgrading from gas to electric boilers.

## Public Sector Decarbonisation Scheme (PSDS)

The Public Sector Decarbonisation Scheme is funded by The Department for Business, Energy and Industrial Strategy (BEIS) and delivered by Salix Finance.

The scheme was made available for capital energy efficiency and heat decarbonisation projects within public sector non-domestic buildings, including central government departments and non-departmental public

bodies in England only, to deliver the following objectives:

1. Deliver stimulus to the energy efficiency and heat decarbonisation sectors, supporting jobs.
2. Deliver significant carbon savings within the public sector.

Further information about the PSDS and further schemes can be found on the Salix website.

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