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University of Warwick sustainable heat project explored by SSE

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SSE Energy Solutions has announced it is exploring the feasibility of supplying the University of Warwick with low-carbon sustainable heat from a shallow geothermal ground source.

It is coordinating a programme to drill test boreholes at two different locations on campus and is carrying out various tests throughout the process to validate the feasibility of a scheme that will use ground source heat pumps to provide sustainable heat.

If these tests prove successful, sub-surface ground water with all-year-round consistent temperature could supply two energy-efficient ground source heat pump energy centres for both the University's existing heat network and new developments on campus.

The project involves tapping into the earth's natural thermal energy, a completely renewable and green energy source, at depths of up to 350m. This could help the University of Warwick achieve its 2030 net zero target by reducing the natural gas currently burned to provide heat.

As part of the study, the company is working with the university to establish the best low-carbon solution through technology selection and a phased, modular approach.

In managing the project, the company hopes the eventual outputs could be replicable across other UK campuses and, if successful, could help the higher education sector to decarbonise more affordably.

Sector director for heat networks Jody Pittaway said: "We have developed strong expertise in the long-term operation of large-scale open-loop heat pumps in the UK, and we are pleased to bring that expertise to our current feasibility study with the University of Warwick. These initial tests are a first step on the road to heat decarbonisation. They will give the university essential information to facilitate the energy centre

design and help to deliver the University's 2030 decarbonisation goals."

Client and business development lead Avi Baidya said: "As an alumnus of Warwick University, I'm thrilled with the university's ongoing commitment to innovation, sustainability, and decarbonisation. This is perfectly matched by SSE Energy Solutions' own objectives to drive decarbonisation and promote positive change in the higher education sector across the UK."

University of Warwick director of environmental sustainability and sustainability Parvez Islam said: "The University of Warwick has an ambitious 10-year programme which will see a mix of new buildings, refurbishment of existing buildings and major facilities, and infrastructure upgrades. Our ambition is for these world-class facilities to be connected to a new innovative energy system, supplied by sustainable, low carbon heat.

"The university's Way to Sustainable strategy makes a commitment to five goals. We aim to meet Net Zero Scope 1+2 emissions by 2030, Net Zero Scope 3 emissions by 2030, achieve Biodiversity Net Gain, embed sustainability into the curriculum, and progress the UN Sustainable Development Goals through research.

"We are delivering our strategy through the pathways of research, education, operations and engagement. The current ground source heat investigations are a key part of achieving our 2030 net zero target."