Education Case Study: Cranfield University, Bedfordshire, UK

Background

Cranfield University in Bedfordshire has a combined floor area of more than 66,000m^2 and a high annual heat demand of between 6 and 7,000,000kWh. The campus needed a high performance, reliable heating system – one that would not only fit seamlessly within the existing District Heating setup, but would also provide a cost-effective and sustainable fuel solution for the campus's future.

Biomass boiler house at Cranfield University

Clearpower Solution

Since commissioning in early 2015 the university is benefiting from a future-proof energy supply thanks to the installation of a 960kW PCE90 Compte-R wood chip boiler system. Integrated with the existing 1.4MW gas-fired CHP system – together they now provide 24/7 heating and hot water for 34 campus buildings. The boiler is interconnected to a new steel-framed fuel store, which holds the system's wood chip supply. This top loader store has a capacity of 135m^3 and can comfortably take a full lorry's worth of woodchip (27 tonnes).

Benefits

The biomass boiler is expected to provide more than 30% of the university's entire annual heating demand and is set to save up to 500 tonnes of CO_2 – reducing its carbon footprint by around 5%. The installation is also supported by the Renewable Heat Incentive (RHI), which means it will benefit from guaranteed, payments for all the renewable heat it generates over 20 years. The boiler will also contribute to the delivery of the carbon reduction target in the University's Carbon Management Plan. Apart from helping to heat the campus the new boiler and boiler room will be available to support teaching and also research on campus.

Top loader wood chip store at Cranfield University

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Clearpower's vision is to be Ireland's leading renewable energy solutions provider, delivered to the highest possible standards.

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