

CASE STUDY: BIOMASS BOILER INSTALLATION



ETA Heat Pod into Hypnos Beds, Castle Donnington, The Midlands

The installation of one 220kW biomass-fuelled boiler system in a containerised solution.

Hypnos Beds has a perfect setup for Renewable Technologies. Having a large production and storage warehouse to heat it has a steady demand for heat, which lends itself to biomass boilers

Recognising the benefits that biomass heating offers, coupled with the availability of the Government’s Renewable Heat Incentive (RHI) - which pays a site’s owner for the heat produced by eligible renewable technologies (such as wood pellets) over a 20-year period – the owner decided to replace the gas heating system with a fully-automated biomass boiler system.

Having engaged Edge Renewables to design, install and commission the biomass boiler- complete

with fuel-handling and control systems, the installation was completed and commissioned in November 2015.

Below is one of the 68kW heaters blowing warm air into the showroom.



Biomass Headline Figures:

- Total capacity of 220kW
- 20 year estimated savings of £430,000.
- Payback within 8 years.
- Annual RHI Income of £16,000.
- Annual Pellet costs of £14,000.

CASE STUDY: BIOMASS BOILER INSTALLATION

System Information

The system's total installed capacity of 220kW is achieved with one ETA Hack high-efficiency biomass boiler with low emission levels. The boiler provides heating within the warehouse and production area. It is equip with automatic ignition, self-activated cleaning and large ash containers, these have been integrated into the automated control system to provide the client with an easy-to-use heat source, installed into a stylish heat cabin

In order to level out the peaks in the site's heat demands, Edge Renewables has incorporated two insulated heat accumulator tank within the cabin. This allows for the automated sequence controls to store and release heat in the most economical way – quickly responding to the site's demands.

Below: The Fully Equip Heat Pod with Pellet Fill Tubes.



Fuel

The new system utilises pellets, that conforms to the EN 14961-2 specification with a moisture content 10%.



The Renewable Heat Incentive (RHI)

Following the commissioning of the project in 2015, the installation was registered for the UK Government's non-domestic Renewable Heat Incentive (RHI) scheme.

This scheme was designed to encourage the uptake of renewable heat technologies such as biomass boilers and pays the owner of a qualifying installation to generate renewable heat for a period of 20 years.

Above: The Heat Pod from Innasol housing the biomass boiler, associated components and fuel store.

This will pay back the cost of the biomass boiler installation, in around eight years – thereby making a sound financial investment which will provide a comfortable return on the client's capital expenditure over the 20-year period.

Carbon Savings

As the system uses a sustainable wood fuel, which has absorbed carbon dioxide whilst it was growing, using it in a highly-efficient biomass boiler results in large savings in carbon emissions – when comparing it to the traditional alternatives using fossil fuels such as oil, LPG and natural gas.

About Edge Renewables

Formed in 2011, the company specialises in the design and installation of renewable energy technologies for homes, farms and businesses - such as biomass boilers and solar PV systems. In addition to this, the company also produces wood chip biomass fuel - a 'green', renewable fuel that is helping reduce the UK's dependence on fossil fuels.

.Find out more

To find out more, please call 0845 603 3833, email sales@edgerenewables.com or visit the website www.edgerenewables.com

