

Invicta Clean Energy

Wood gasification boiler and solar thermal collector providing heating for a detached, rural property, with backup provided by an oil-fired boiler

This modern detached house is heated by a wood gasification boiler and a solar thermal collector with an oil-fired boiler providing backup. The owner has access to free timber and has virtually eliminated any cost of fuel for heating his house.

A 25kW EcoAngus Super wood gasification boiler is linked to a 1500 litre Akvair Solar Plus accumulator tank via a pressurised circuit. A Laddomat 21-60 maintains the efficiency of combustion within the boiler and regulates the rate at which the store is charged. The circuit includes a 150 litre expansion vessel.

Protection against overheating is provided by a thermal safety valve which, if the temperature in the store charging circuit reaches 95°C, will open to admit cold water through a 'quench' coil in the boiler jacket.

Between April and Oct when the boiler is not in use a 60-tube solar thermal collector maintains temperature in the Akvair via dual solar coils which in turn ensures an ample supply of domestic hot water.

The existing oil-fired boiler was retained and connected to the Akvair to provide backup and convenience when the wood boiler is not in use.

Isle of Grain, Kent



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