

Trigonos - 100kW Woodfuel Boiler

Woodfuel means hot water and heating for residential education centre

**Client:**

Trigonos Education Centre

Completion Date:

December 2007

Financed by:

Trigonos & Wood Energy
Business Scheme

Objectives:

1. To provide carbon-neutral heating and hot water to the Snowdonia-based residential education centre.
2. To replace eight separate oil and gas boilers in three separate boiler rooms with a single boiler room with woodchip boiler and LPG backup, all run by a bespoke control system and distributed via a heat main network.
3. To provide a unified service including a feasibility study, project management, installation and commissioning of the biomass system and after sales servicing and maintenance.

Implementation:

The biomass project came to fruition through the feasibility and system specification work Dulas completed and access to the WEBS grant scheme. A custom-built boiler room houses the biomass system and back-up LPG boiler. A bespoke Dulas control system manages the production and distribution of heat to multiple heat loads via an underground heat main network. The project was delivered on time and within budget.

Technical Specifications:

The system comprises a 100kW Froling Turbomatic woodchip boiler with 2200 litre buffer tank. Day to day running of the boiler is fully automatic with woodchip fuel being transferred to the boiler according to the demands of the separate heat loads. Automatic combustion is optimized using the lambdatronic control system, which automatically adjusts to varying fuel qualities up to 35% moisture content. The Dulas operations team monitor and improve the performance of the system remotely from their Machynlleth offices.

Conclusions:

The system provides fuel savings of £6,000 per year to the education centre and woodchip purchases directly benefit the local economy. The fuel is sustainably harvested from local sources, and the centre has reduced its carbon footprint by over 70 tonnes CO₂ per annum.

Woodfuel has a major role to play in replacing polluting fossil fuels to heat and power our homes, businesses, industries and institutions. Dulas biomass specialises in system installation and supply of biomass heat for a wide range of applications. Specialist services include contract energy services, boiler sales and fuel handling, woodfuel combined heat and power systems, fuel supply logistics and project management services.

To find out more about Dulas' biomass services, please contact Dulas Biomass Department on 01654 705000 or email info@dulas.org.uk. Go to www.dulas.org.uk for a complete list of our professional services for renewable energy.