

# CASE STUDY:

## Gumma Farm



## BIOMASS BOILER SYSTEM REPLACES 2 LPG BOILERS, SAVES CLIENT 20% FUEL COSTS AND REDUCES CO<sub>2</sub> BY 98%

### SUMMARY OF PROJECT:

- 199kw Lindner & Sommerauer biomass boiler.
- Distribution pipework including all internal connections to existing heating systems.
- Runs on wood chips.

### KEY OUTCOMES:

- **Biomass Fuel Cost Reduction;** 25% versus poultry LPG.
- **CO<sub>2</sub> Reduction;** 96% or 88 tonnes versus LPG.
- **RHI Accreditation;** Client is now RHI accredited and is receiving payments, which generate additional revenue streams for the farm.

### Financial Benefits:

- RHI Payments and fuel cost savings make the project both sustainable and financially viable.

### ABOUT US

**MJS Mechanical and Electrical Solutions** are a Midlands-based mechanical, plumbing and electrical, design and installation company.

MJS regularly carry out installations for other renewable energy companies throughout the UK, offering them access to an experienced team of installers, builders and groundworkers to assist with their project delivery if additional capacity is required.

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## KEY FACTS\*

### Project Included:

Lindner & Sommerauer 199kw biomass boiler system. Flue system, thermal store and distribution pipework including internal connections to heat exchangers also included.

### Fuel Consumption:

87 tonnes of wood chips, per annum (based on system of similar capacity, in a similar application)

### Fuel Cost Saving:

Wood chips; 25% versus poultry LPG costs (Source; Biomass Energy Centre)

### CO<sub>2</sub> Saving:

Up to 96% vs LPG (Source; Biomass Energy Centre)

### RHI Payments:

A project of this size would gain approximately £22,409 in RHI payments every year for 20 years, index linked to inflation.

### Total Project Price:

**£130,000**

### Payback Period:

5-6 years (combining RHI income & fuel cost saving).

\*Financial information not specific to this project – figures are based on an average of several typical products of this size. Current information on RHI payments for guidance only, not to be considered a guarantee.

## Background

Gumma farm is a free-range poultry farm with 2 boiler sheds, growing 132,000 per year

## The Requirement

The driver for the customer was the reduction of the farm's LPG fuel bill and to generate Renewable Heat Incentive payments. A further driver was to supply a better growing environment for the birds by producing drier heat than existing LPG heaters =.

They also hoped to alleviate the need to spend money on electricity to run the large ventilation units that are required to remove the products of combustion that are typically pumped into poultry sheds heated by open LPG heaters.

The fuel cost savings and RHI payments will be reinvested back into Gumma Farm.

## Complete Biomass District Heating Package

Wye Valley Energy installed the boiler, fuel delivery system and buffer tank in the plantroom as well as the heat main to connect the poultry sheds and farm house. We also managed the trenching, primary and secondary connections, erecting of buildings and all civils.

## The Renewable Heat Incentive

The installation is now accredited into the Renewable Heat Incentive and is receiving payments

## Biomass heating Summary



- 1 x 199kw Lindner & Sommerauer biomass boiler.
- Runs on wood chips.
- 4m Agitator and 4.7m auger to enable a large fuel store to build and to minimise fills.
- 5,000 litre buffer tank.
- 6 new fan radiators in the poultry shed (3 per shed) and a hot water system.
- 3 class 2 RHI eligible ultrasonic heat meters complete with certification.
- Heat exchanger fitted into farm house.
- Biomass boiler linked to existing heating and hot water system in the farm house.
- High efficiency, low energy system pumps.
- Full assistance with RHI application including schematic drawings.
- Commissioning, programming and end user training



**Contact Us to Discuss  
Your Biomass Project**

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