Earthmill diversifies with combined heat and power launch

The UK’s leading farm turbine firm, Yorkshire-based Earthmill, has announced a major diversification into the rapidly growing combined heat and power (CHP) renewable energy market.

The £13m turnover Earthmill business was launched in 2009 by managing director Steve Milner and has grown to become the UK’s biggest supplier of wind turbines to farmers and landowners. The firm now has over 200 turbines across the UK, with offices in Yorkshire and service and technical teams throughout the country.

The low carbon technology uses a specially designed reactor which heats sustainable fuel such as woodchip to produce a flammable gas. The clean-burning ‘biogas’ is then used as fuel in a gas engine to drive a generator and produce electricity. A large amount of heat is produced in the process but unlike conventional power stations, it is not wasted. The thermal or heat energy is transferred into water which can then be used on farms to heat dairies, or pig or poultry sheds making the process over 88% efficient.

Due to its low emissions, an accredited CHP unit qualifies for double subsidies: the high-reward ‘Biogas RHI’, or Renewable Heat Incentive tariff, for the thermal energy that is captured in the process; and ‘ROCs’, or Renewable Obligations, as reward for producing clean electricity.
The CHP units, which cost around £320,000 to buy and install, can be operational within three months, with the initial investment recoverable within five years. Provided the farmer or landowner has an onsite requirement for heating, and consumes reasonable volumes of electricity, the units will generate heat and power, and attract subsidies for a 20-year period.

High energy and heat consuming farms - such as dairy, pig and poultry units - benefit the most from the efficiencies of the technology, reducing costs and generating additional revenues simultaneously.

“We were one of the pioneers of farm-scale wind power in the UK, and since then we have been staying close to all emerging technologies. This is the first time we have seen a clean power technology that is sustainable and proven to deliver the same long-term returns on investment and operational benefits we saw in the wind sector several years ago,” said Steve Milner, managing director of Earthmill.

Earthmill’s announcement of its diversification into CHP follows over a year of research and negotiation with leading technology suppliers. The venture will formally launch its offering, Earthmill CHP, at the Great Yorkshire Show in Harrogate this week.

Earthmill will become the first installer in the North of England, and the first in the UK to offer a customer co-operative for fuel buying and energy sales into the national grid, maximising operators’ profits.

“Providing the support and reassurance that our wind customers have come to expect is crucial to the success of the CHP division, and we are bringing all the benefits of our scale as the UK’s leading farm wind provider to this new technology,” added Earthmill commercial director, Mark Woodward

“By grouping the buying and selling power of all our customers we can drive a better deal for every producer, lowering costs and increasing revenues. This will see net returns of circa £80,000 for the smaller CHP units, and a conservative payback period of just four years.”
He added: “For the thousands of farms across the UK that have had wind turbine planning applications declined over the last five years, the new technology, which has no planning restrictions, will enable some of those farmers who missed the opportunity of generating income from wind to diversify rapidly into the energy sector.

“There will be an urgency to get into the market before subsidies are reduced, but CHP technology is sustainable in the long term, which is why we have taken the decision to invest heavily in the new division,” concluded Mr Woodward.