



Wind Power Boosts Leicestershire Farm Income and Enhances Abattoir Efficiency



KEY HIGHLIGHTS

- The installation of a 50kW wind turbine has reduced the running costs of a livestock farm near Melton Mowbray in Leicestershire, whilst at the same time increasing the operating efficiency of a new on-site meat processing facility.
- E3120 turbine at Melton Meat generates 208,000 kWhs in first 15 months of operation.
- “The turbine is on target to pay for itself within five years, after which we’ll have free power for at least another 15 years. It has added to the business’ overall efficiency levels and future-proofed us against rising energy costs.”
– Mark in reference to his E3120

Leicestershire livestock farmer, Mark Gale, farms 200 acres of arable land on the outskirts of Melton Mowbray with his business partner. Together, they also own and manage Melton Meat Ltd – the region’s largest sheep, lamb and goat abattoir, which has recently been relocated out of the town to new facilities on Mark’s livestock unit.

Mark and his business partner took over the abattoir business in the town of Melton Mowbray in 1998 after it had been closed for 18 months. “We wanted to improve the margins of our own farming businesses by securing a better return from our livestock,” Mark explains. “We invested in

the abattoir because it gave us the perfect opportunity to bypass the middlemen in the fresh meat supply.”

At first the duo intended to be silent partners in the abattoir, but they are both now running the business on a full-time basis. “The business has grown rapidly over the last 16 years,” Mark adds. “We focus exclusively on lamb, sheep and goats, sourcing livestock from local farms as well as from farmers in Yorkshire and Scotland. We then supply butchers and meat wholesalers from Sheffield down to London.”

As the business expanded it became necessary to move to larger premises, and as such the abattoir has recently been relocated onto Mark’s farm.

“We converted a couple of existing sheep sheds into a state-of-the-art meat processing plant two years ago,” Mark continues. “We’ve installed new production lines and equipment which allow us to work much more efficiently. What would have taken us five full days to process can now be done in a three-day week with much shorter working days.”

“The abattoir is now exceptionally efficient which helps to keep costs down and margins high. We also have plenty of lairage and grazing space on the farm which allows us to buy and sell livestock at opportune times to take advantage of the market and increases the welfare of the animals.”

Construction on the new abattoir began in 2011, with the new facilities being equipped with 100% electrical equipment. “We chose to install electrical water heaters,

refrigeration equipment and sterilising kit – as opposed to gas or oil fired equipment – because I knew I wanted to invest in either solar PV or wind turbine technology at some point in the future,” Mark explains.

“I became interested in farm-scale power when the first generation of reliable wind turbines came to the UK. My family and I live on the farm so I’d always been keen to use the land to harness energy so that we could reduce our carbon footprint.”

Mark has installed an Endurance E3120 turbine on land a few hundred yards from the farmhouse and buildings, but considered other forms of renewable energy including solar photovoltaics (PV) and biomass boilers before settling on the 50kW turbine.

“For this site a turbine works best,” he explains. “We are located on top of an exposed ridgeline which has a constant supply of wind. Installing a turbine also has the benefit of taking up very little land so we are still able to farm our entire acre.”

Mark selected the E3120 after visiting other similar machines in the vicinity and by taking advice from industry experts at various open days and renewable energy shows. “At first I thought a 50kW turbine would be too big for our site and location, but having seen other E3120 machines in action I realised they weren’t actually too imposing. They also have good reputation for being reliable, well built and easy to maintain, with spares easily available via Endurance’s dealer network. They also give a fantastic output.”

The turbine was installed, commissioned and is now maintained by approved Endurance distributor, Aeolus Power (Wind-Energy) Ltd, with Hallmark Energy providing support through the planning phase.

The turbine was commissioned on 10th April 2013 and in its first 15 months of operation produced 208,000 kWh.

“We’ve averaged 5.02m/s of wind speed during that period, and the turbine has been 100% reliable. It has contributed massively to the overall profitability of the meat business,” Mark explains.

Figures from the turbine’s records show that 48% of the electricity generated has been used directly by the abattoir, farm buildings and farmhouse, with the remaining 52% exported back into the National Grid.

“We use electricity from the turbine to power the abattoir’s water heaters, chilled stores and sterilising equipment,” Mark describes. “Not only have we significantly reduced the site’s monthly electricity bills, we’ve also earned a decent income via the Government’s Feed-In Tariff scheme and through the sale of exported electricity.”

“The turbine is on target to pay for itself within five years, after which we’ll have free power for at least another 15 years. It has added to the business’ overall efficiency levels and future-proofed us against rising energy costs. It has also made it easier for the us to ride out fluctuations in the marketplace which assists our ongoing business viability.”

Now that’s green energy in action.