



The site of Abraham Moon & Sons in West Yorkshire, where energy costs fell by 75%, saving the company £6,000 per month.

Cloth Maker Cuts Energy Bill By £6,000 Per Month

Abraham Moon & Sons, the Yorkshire-Based Manufacturer of Traditional Woollen Cloth Cut Their Energy Costs By £6,000 Per Month With New LED lighting.

The Company

Established in 1837, Abraham Moon & Sons is a large-scale manufacturer of high-quality woollen cloth – the last of their kind in Britain.

Situated in a 100,000 square foot factory in the town of Guisley, West Yorkshire, the fourth-generation family business employs 180 staff in a 24/7 manufacturing operation.

The cloth that Moons produce is exported to 60 countries around the world, for use by some of the leading names in fashion including Pringle, Dolce & Gabbana, and Edinburgh Woollen Mills.

The Problem

In 2009, as the price of electricity started to rise sharply, Moons decided to explore ways of becoming more energy-efficient. With the lights on 24/7, the factory lighting was an obvious area for review.

Moons had approximately 2,800 lights – of various shapes and sizes. While the majority were 6-foot long fluorescent tubes, they also had several of the older 8-foot tubes, which were becoming difficult to source.

Like many factories, the fluorescent tubes at Moons didn't last as long as they should have, due to vibration from machinery. It was common for their on-site electrician to change as many as 400 tubes

per year.

An additional problem that lurked in the background was the main electrical incomer which sat close to its upper limit at 1600 Amps. With virtually no spare capacity, and the continuous risk of overloading, Moons knew that this too was a problem that needed to be addressed.

The Search

As part of the energy review process, Moons approached The Carbon Trust for guidance. After a thorough investigation of the site, The Carbon Trust confirmed that new lighting would help reduce their energy consumption.

They suggested that Moons take out their T8 fluorescent tubes, and replace them with T5 fluorescent tubes – a slightly thinner equivalent which would give them energy savings of approximately 15%. But Graham Lockwood the Finance Director at Moons wasn't impressed:

"I was disappointed when told that the latest in lighting technology would only give us savings of 15% over our existing fluorescent tubes.

This meant a long payback period of 4 years, during which time many of the tubes would have failed and need to be replaced. And it meant changing all of our existing light fittings, to accommodate the smaller diameter T5

tubes.”

As it turned out, it wasn't the technology or the poor pay-back that stopped Moons from moving ahead with new T5's. It was actually due to the fact that they couldn't find a suitable electrical contractor. Lockwood continues:

“We put the job out to tender with several local electrical contractors. But for some reason – probably the complexity of doing the work during production hours and the size of the project – we didn't get any serious bids. This gave us more time to consider other options. It was then that we were introduced to Bamford Energy Management who proposed LED lighting.”

The Solution

When Lockwood and his colleagues first looked at LED lighting, they didn't know what to think. The light output was good and energy savings impressive. But it seemed too good to be true.

After a few meetings with Bamford Energy Management, and a site visit to one of their existing clients, Lockwood felt confident enough to move forward with a small-scale trial. They installed six 8-foot tubes beside a loom, and monitored the lighting and energy consumption for three weeks.

As part of the trial, Moons were keen to ensure that their staff were happy with the new lighting and so encouraged them to give feedback – which turned out to be positive. Several inspections of cloth took place under the new LED lights to ensure that they were getting the illumination they required.

John Walsh, the Managing Director at Moons was also involved in the decision-making process. He too did the all-important inspection of the cloth under the LED lights and gave it his approval. The order was then given for Bamford Energy Management to proceed with the full roll-out of 2,800 lights across the site.

The Installation

The installation of new LED lighting at Moons took place in two stages. In phase one, ten electricians from Bamford Energy Management worked full-time for two weeks to re-lamp the main production area.

Phase two commenced two weeks later with the re-lamping of the stores and yard area. This took one week to complete.

Graham Lockwood was pleased to report that:

“our normal production activities were not affected in any way. The whole installation went very smoothly. I was pleasantly surprised as I expected more disruptions.”

The Benefits

Moons have experienced many benefits from LED lighting including:

- Energy savings of £6,000 per month, with a full return on investment due after two years.
- 33% reduction in site electrical load from 1200 Amps to 800 Amps.
- Improvement in the intensity and consistency of lighting across the factory.
- No need for any maintenance on the new lighting.

All in all, the installation of new LED lighting has been a major success story for Abraham Moon & Sons. Graham Lockwood concludes:

“I'm really pleased with the LED lighting. Our electricity bill is down by £6,000 per month and we're guaranteed several years of high quality, low-cost lighting. I would strongly recommend LED to anyone who relies heavily on lighting for their business.”

Find Out More

Graham Lockwood is the Finance Director at Abraham Moon & Sons. He is happy to speak with interested parties by phone or in person. Site visits can also be arranged.

To find out more, please contact Les Morris of Bamford Energy Management on 07801 097900.