

CASE STUDY

SUMMARY

Customer:
Numatic International

Industry:
Domestic, commercial
and industrial cleaning
equipment manufacturing

Services Provided:
Audit of energy saving
opportunities to comply with
the requirements of The
Energy Savings Opportunity
Scheme, ESOS

**Delivered Savings
Identified:**
£139k pa

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Numatic International

Numatic International appointed JRP Solutions to carry out an ESOS Audit on their estate which comprises a manufacturing site at Chard, a showroom at Warrington and a transport fleet consisting of private cars, pool cars, service vans and an HGV truck. The manufacturing site at Chard accounts for 92.7% of the total energy usage, consuming 19.28GWh per annum through a combination of electricity, natural gas, solar photovoltaics (PV) and LPG for use in forklift trucks. The remaining 7.3% of the energy use, equating to 1.5GWh, was excluded from the audit as de minimis.



An analysis of utility use at the Chard manufacturing site revealed the significant energy uses to be: moulding machines, compressed air, vacuum conveyors, chillers, lighting, heating and forklift trucks. Between them these accounted for approximately 95% of the total onsite energy consumption.

The energy improvement projects which arose from the ESOS audit fell into 4 main categories: behavioural, process, heating and lighting. The highest saving recommendation was to implement lighting upgrades throughout the site, giving projected savings of 500MWh pa, equating to a cost saving of £53k pa. The associated implementation cost was £170k, giving a simple payback of 3.2 years.

A further recommendation arising from the audit was a lower cost project focussing on behavioural management. Implementing a dedicated energy policy, improving monitoring and targeting, furthering energy awareness training within the workforce and selecting dedicated energy champions gave projected savings of 456MWh pa (a mixture of electricity and natural gas), equating to a cost saving of £31k pa. The associated implementation cost was £15k, giving a simple payback of 0.5 years; a much lower payback period than the high capital cost lighting scheme whilst still achieving considerable savings.

Using JRP Solutions' Energy initiator® software, a tool designed to systematically survey the energy consumption of industry infrastructure and process machinery, a site energy certificate (SEC) was produced. This shows the current rating on an A-G scale of energy management and a predicted rating if all recommended opportunities are implemented. Currently the site is operating at a 78% or a C rating in terms of design and a 69% or D rating in terms of operation. If all recommendations were implemented these would both increase to 90%, equating to an A rating.

"Having met all our targets in the Plastics Industry Climate Change Agreement (CCA) for several years, we felt that ESOS was going to be largely a waste of time and money. Having evaluated several potential Lead Assessors, we found JRP's pragmatic approach both reassuring and professional.

JRP helped us examine in more detail potential projects that we had been considering, such as improving the efficiency of our dryer systems. We have now gone ahead and made a substantial investment in a new main dryer. Looking back, despite our original criticism of the need for ESOS in addition to the CCA actions, the effort still turned out to be worthwhile, mainly because we chose the right consultants." Andrew Smith, Property and Energy Manager, Numatic.

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