



Organisation: Furniture Manufacturer
Sector: Manufacturing
Requirements: To reduce electricity consumption
Services provided: ESOS Energy Audit Report advising behaviour change
Provider: Mulholland Energy
Achievements: 25.4% reduction in electricity in 6 months

IPMVP ★★★★★
level

The Client

Our client is an international manufacturer of beds and home furniture with sites across the world. In the UK the operation has manufacturing sites, distribution centres and retail outlets.

Objectives

To demonstrate in a manufacturing environment that simple no cost measures involving daily systematic switching off of electricity-using equipment can result in significant savings.

Services provided

In 2015 Mulholland Energy conducted a Phase 1 ESOS Energy Audit of the site. While examining half hourly electricity data, it was observed that there were high electricity baseloads at nights and weekends when much of the manufacturing had ceased. One recommendation in the report predicted a 16% reduction in electricity consumption by an organised daily systematic shutdown of plant, equipment and lighting.

Services provided in house by client

The ESOS Report was issued in December 2015 but between 2016 and 2018 this measure was not implemented by the site. However, in late 2018 senior management decided to improve the environmental performance of the company across all sites in the UK. Each Factory Manager was asked to identify energy saving and other environmental opportunities for improvement in operational sustainability.

At the site in question the Factory Manager consulted with his manufacturing team leaders to identify and implement opportunities. To assist with this process they reviewed the 2015 ESOS Audit Report where they considered the switch off measure described above. The team then decided to implement the measure.

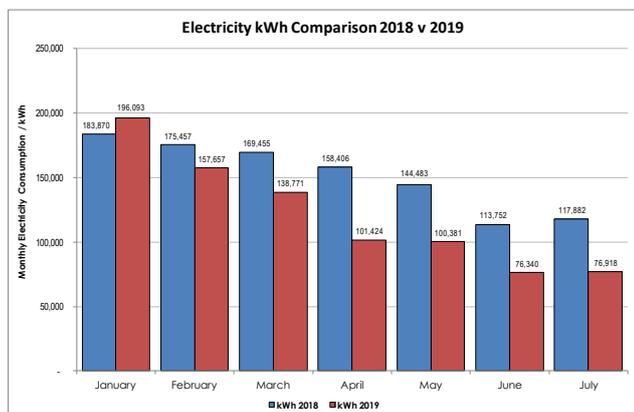
This was achieved by getting each Department Manager to identify all electricity using equipment and lighting in their area of responsibility. They then considered when the equipment could be safely switched off and when it needed switching back on to service operations. Each department had a spreadsheet with this information and individuals in key areas were allocated delegated responsibility and authority to action the agreed switch off plan.





Results

The switch off programme began in February 2019 and the savings can be seen in the graph where the monthly consumption figures for January to July 2019 are compared with the same months in 2018.



Month	2018 kWh	2019 kWh	Change	% Change
January	183,870	196,093	12,223	6.6%
February	175,457	157,657	- 17,800	-10.1%
March	169,455	138,771	- 30,684	-18.1%
April	158,406	101,424	- 56,982	-36.0%
May	144,483	100,381	- 44,102	-30.5%
June	113,752	76,340	- 37,412	-32.9%
July	117,882	76,918	- 40,964	-34.8%

Between February and July 2018, the electricity consumption was 879,453 kWh and between February and July 2019 the consumption was 651,491 kWh. This represents a saving of 227,962 kWh (25.4%). For a unit cost of 12 p/kWh this represents a cost saving of £27,355 over 6 months or £54,711 per annum for no capital investment cost.

During this period no other capital measures were made to reduce electricity consumption. This means all savings were attributed to behaviour change.

The savings were greater than those predicted in the 2015 ESOS Audit as in 2019 the quieter periods had been extended which gave rise to greater savings. In 2019 Mulholland Energy were commissioned to conduct the Phase 2 ESOS Energy Audit of the site and detailed the savings in their report.

Summary

This is an example of an outside agency identifying the opportunity by examining electricity use in relation to manufacturing patterns. However, the opportunity was implemented wholly by site staff with no further external support to achieve 25.4% savings. It is likely that in most UK manufacturing organisations there are opportunities for no-cost measures by simply switching off equipment and lighting when it is not required.

If you would like to speak to one of our energy specialists on behaviour change, ESOS, ISO 50001 or energy training please contact John Mulholland john@mulhollandenergy.co.uk

Visit our website: www.mulhollandenergy.co.uk

