accelerate, | Scottish Enterprise

The company is establishing a programme of energy and utility usage efficiency. Based on previously successful "switch-off" actions an SOS Campaign (Switch Off & Save) has been launched to tackle personal attitudes toward energy usage. High energy usage facility systems (e.g. building lighting and H&V systems) are being evaluated with a view to installing more energy efficient operating systems and regimes.

Switch off and Save

Piramal Healthcare
knowledge action care

Lean Team

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Lean Implementation Project

Evaluation of energy and utilities usage across "Site" facilities to reduce CO2 emissions and costs.

Initial work carried out has shown the following:

- Use of liquid ring vacuum pumps across all manufacturing suites is a significant contributor to water usage
- Laboratory and manufacturing suite H&V systems are the highest single users of steam (heating or air) and a significant user of electricity (inlet and extract fan motors)
- H&V systems are not designed or controlled with energy efficiency in mind (systems do not incorporate variable speed drives or lower settings for "outwith hours" running
- Lighting across all facilities is not designed for energy efficiency (lighting type, lighting control/operation)

Measurements & Gap Analysis - During 2009 quick hits were identified with significant benefits

- Liquid ring vacuum pumps - usage logs were introduced and pumps were turned off overnight and when not in use. 55% saving in water usage achieved during 2009 = 15240 m3
- HVAC systems - ensuring that HVAC systems were turned off when not in use (in particular "mothballed" facilities) and isolation of 2 unused fume cupboard banks in R&D laboratories. Savings of 25% electricity (64mWh) and 35% steam (244 tonnes) were achieved during Sep/Oct compared with 2008

Approximate Annual usages (2008):

1. Steam (low pressure) - 3000 tonnes
2. Electricity - 1500 mWh
3. Water - 30000 m3

During 2009 these were reduced to:

1. Steam (low pressure) - 1950 tonnes
2. Electricity -1125 mWh
3. Water - 15225 m3

The installation of fully variable speed drives on H&V systems is estimated to save a further 10% on H&V usage of steam and electricity and a change to more efficient design of H&V HEPA filter will release an additional 10%. Lighting systems have yet to be evaluated with respect to more energy efficient design. Modification such as splitting room lighting circuits (where one circuit control the lighting in a large area), replacement of inefficient lighting units, and use of motion detectors will be considered.

An energy awareness campaign (**SOS** - **S**witch **O**ff & **S**ave) has been initiated during December 2009 to raise awareness of all personnel at Piramal, Grangemouth as to the amount of energy used by general lighting and heating systems. This campaign is based on Carbon Trust data, posters etc. adapted to show usages in typical Piramal settings. Impact on CO2 emissions and bottom line data have been used to reinforce the message. The campaign has involved a general awareness presentation sent to all employees, Switch Off & Save stickers and signs at switch points, and posters on departmental notice boards. A system for reporting bad energy practice is being considered.