

# The Carbon Trust

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Making business sense of climate change



# Introducing The Carbon Trust

*The Carbon Trust helps **business** and the **public sector** cut carbon emissions, realize associated commercial benefits, and supports the development of low carbon technologies.*

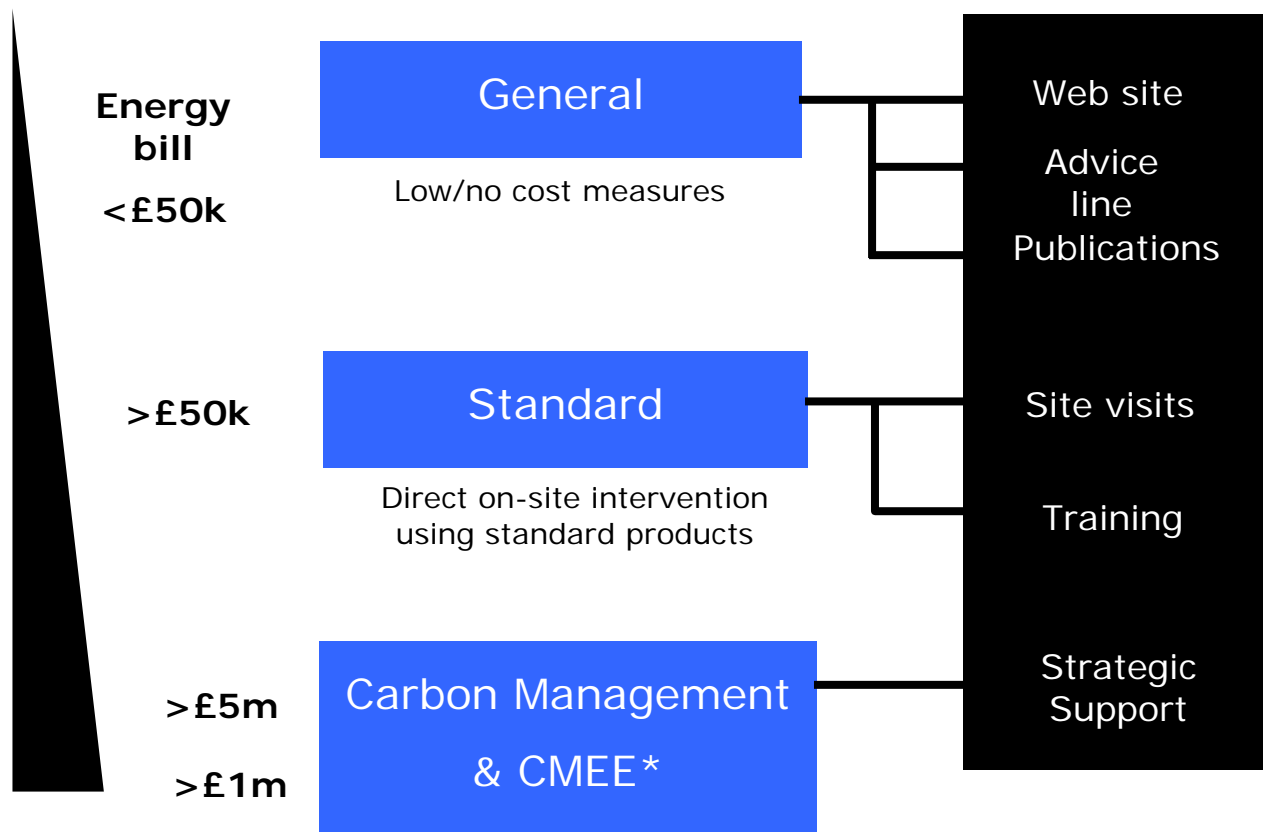


CO<sub>2</sub> Savings = £££ Savings

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# Help from the Carbon Trust



\*co-funded



SME Loans



ECAs



# The Carbon Trust – Current Products

## Opportunity identification

- Opportunities Assessments
- Multi-site Assessments
- CCA Strategic Surveys
- Post Survey Briefings
- Building Design Advice



# Opportunities Assessment

- Surveys tailored by the Account manager to meet organisations individual needs.
- Full survey of all energy uses for organisations with minimal energy efficiency experience.
- Focus on a narrower range of energy uses, with more depth analysis for organisations with some experience and evidence of implemented energy efficiency measures.

# Multi Site Assessments

- For organisations with more than 5 sites.
- To obtain an overview of energy saving opportunities that exist across the organisation.
- An Energy Management review to help organisation deliver savings across there portfolio of operations.
- Includes a Senior Management briefing.

# Climate Change Agreement Strategic Survey

- Helps companies to understand their historic performance vs CCA targets and hence their projected performance against future targets (the “base case”)
- Identifies as many energy/ carbon savings opportunities as possible (additional to those already planned) and develops a cost-effective implementation plan
- Demonstrates the financial benefits of the implementation plan vs the “base case”

# Post Survey Briefings

- A presentation to Senior Management of a Surveys findings.

# Buildings Design Advice

- Design Review - New building or refurbishment with 2,500 – 5,000 sq.m floor area.
- Phased Advice - New building or refurbishment with 5,000 – 10,000 sq.m floor area.
- Specification Advice - New building or refurbishment with greater than 10,000 sq.m floor area.

# The Carbon Trust – Current Products

## **Solution development**

- **Technology Modules**
- **Detailed Surveys (Feasibility Study)\***
- **CHP Advice**

*\* co-funded*

# Technology Modules

These are follow up modules for organisations that require more detailed evaluation in specific areas.

ie: -

- **Compressed Air.**
- **HVAC.**
- **Industrial Heating.**
- **Lighting.**
- **Refrigeration.**
- **MM&T.**

## Detailed Surveys (Feasibility Studies)

- After an Opportunities Assessment organisations may require more detailed guidance on Specific Measures that have been identified.
- Detailed Surveys are only part funded.

# CHP Advice

- Evaluation of CHP Technical & Cost feasibility
- Advice for more advanced schemes

# Carbon Trust – Current Products

## **Implementation support**

- **Staff awareness or Staff training**
- **Energy Efficiency Accreditation Scheme**
- **Implementation Services**
- **Interest Free Loans**

# Staff Awareness or Staff Training

- Training at a clients site
- At a Carbon Trust event

# Energy Efficiency Accreditation Scheme

- Help in setting targets

# Implementation Advice

- Progressing recommendations identified in an OA

# Carbon Trust – Current Products

## **Implementation support**

- **Enhanced Capital Allowance**
- **Interest Free Loans**

# The Energy Technology List



- **All products and technologies on the Energy Technology List meet energy saving criteria**
- **Enhanced Capital Allowances – provide a tax incentive for installing more efficient equipment**
- **They deliver significant long-term financial benefits over and above the enhanced tax relief - just by being energy efficient**
- **[www.eca.gov.uk](http://www.eca.gov.uk)**

# Loans Interest Free from Carbon Trust

- **Interest free loans of £5,000 to £400,000 available for energy efficiency projects showing payback of less than 5 years**
- **Available to SMEs**
  - < 250 employees
  - < 40 million Euros turnover
  - < 27 million Euros assets
  - max 25% non-SME controlling interest
- **Loan repayable over maximum of 4 years**

**(NB: agricultural, fisheries, transport and export companies not eligible)**



# Opportunities Assessment – Case Study

- West Midland Plastic Extrusion Company

# Action Plan

Recommendations	Saving £	kWh	Cost £	P/B
Energy Man.	42,136	980,299	8,000	0.2
Cooling Water	<b>110,000</b>	<b>2,510,269</b>	<b>120,000</b>	<b>1.1</b>
VSD Drives	11,000	251,027	12,000	1.1
Insulation	6,000	136,924	8,000	1.3
Compressed Air	12,000	273,848	8,000	0.7
Lighting	7,000	159,744	6,000	0.9
Motors	4,766	108,761	8,000	1.7
Machine Operation	14,298	326,289	8,000	0.6
<b>Totals</b>	<b>207,200</b>	<b>4,747,161</b>	<b>178,000</b>	<b>0.86</b>

# Summary

- Company Annual Energy Spend    £842,724
- Company Annual Energy Usage    19,605,984 kWh
- Saving 24.5%
  
- 2,207.8 Tonnes CO<sub>2</sub>

## Next Action

- Quotations obtained for new chiller plant
- Board not confident of projected savings and payback
- Carbon Trust with the customer co-funded a Detailed Study to establish feasibility.

# Result

- **Recommendations to replace existing cooling system with 3 New Technology chillers**
- **New saving is twice original Opportunities Assessment prediction, but more expensive**
  
- **New saving                      £260,036                      3,818,443 kWh**
- **Pay back                              1.48 years**
  
- **Carbon Saving                      1642 Tonnes CO<sub>2</sub>**

# Energy Awareness

## Introducing a Staff Awareness Programme

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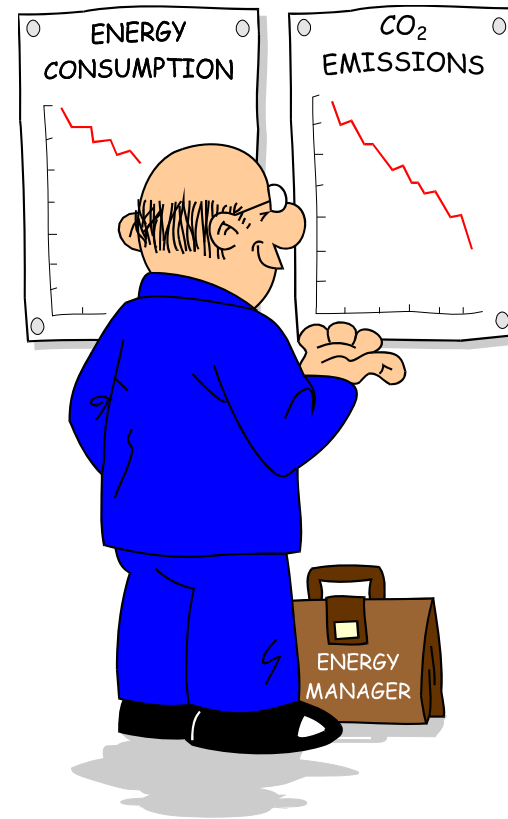
## Motivation of Staff Awareness

- Every year, £2.4 billion — 21% of the total spent by UK businesses on energy — is wasted.
- Much of this waste could be avoided.
- The first step is to raise awareness of energy use and its implications.
- Climate change is emerging as a major challenge



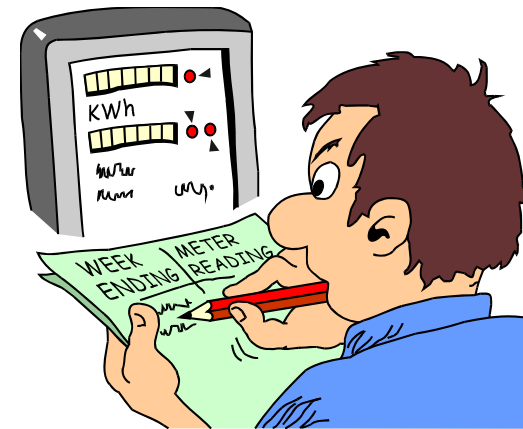
# Motivation of Staff Awareness

- Senior Management support is essential
- Appoint a Energy Manager / Champion
- Form an Energy Committee



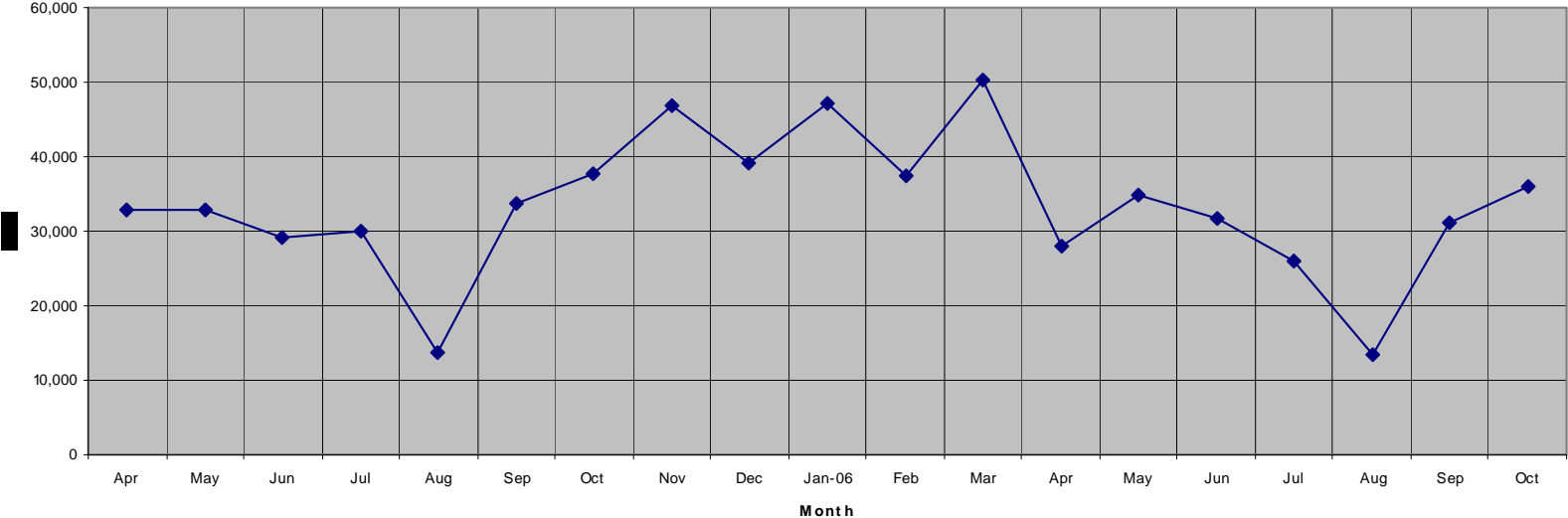
# Your Current Situation

- Know your company's energy consumption.



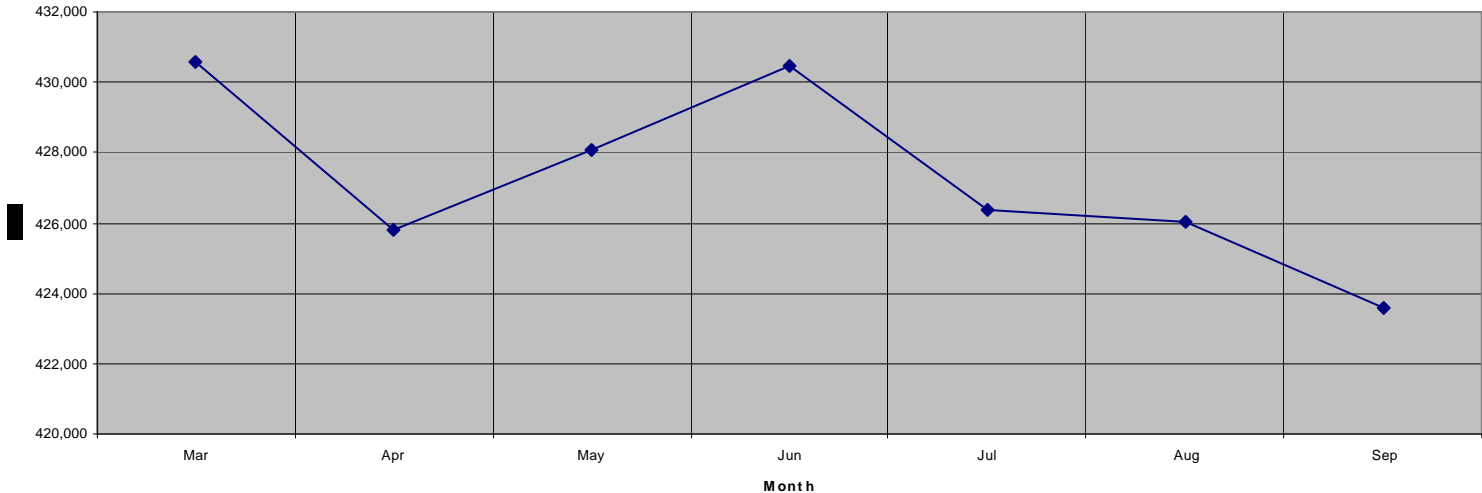
# Monthly Electricity Usage

Monthly Electricity Usage



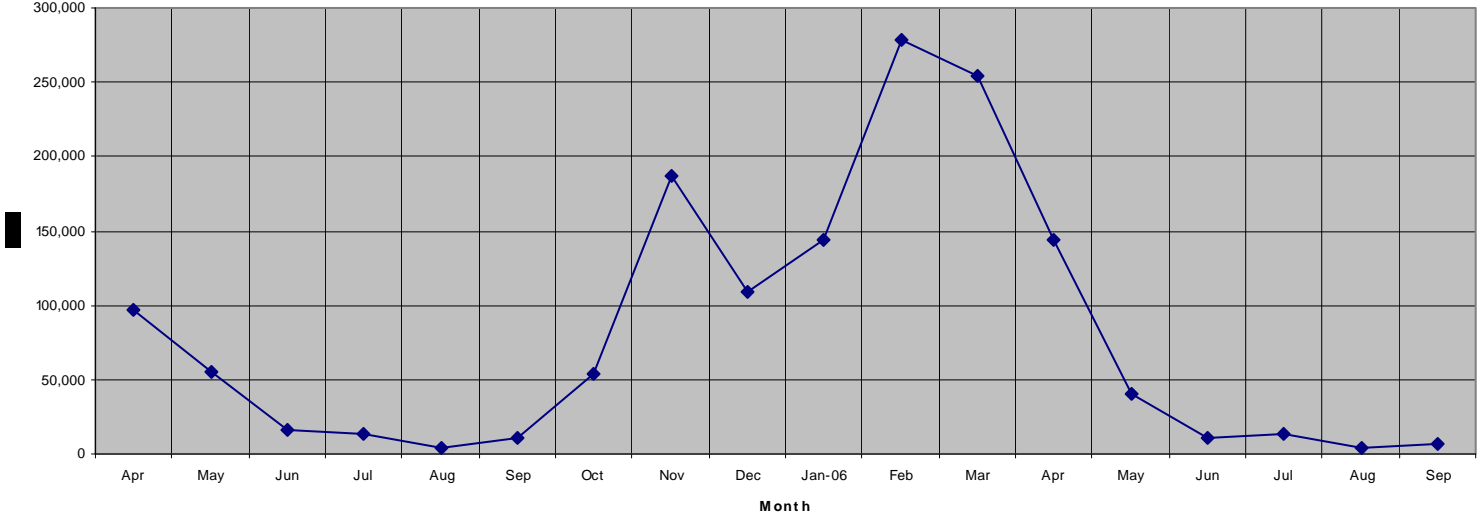
# Rolling Annual Electricity Usage

Rolling Annual Electricity



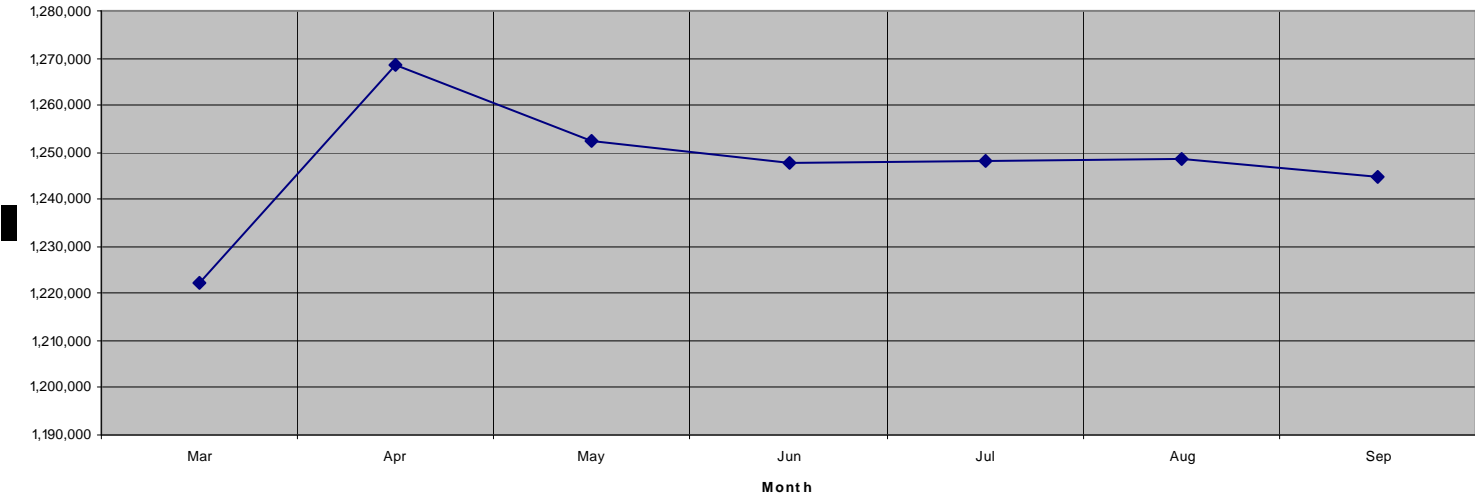
# Monthly Gas Usage

Monthly Gas Usage



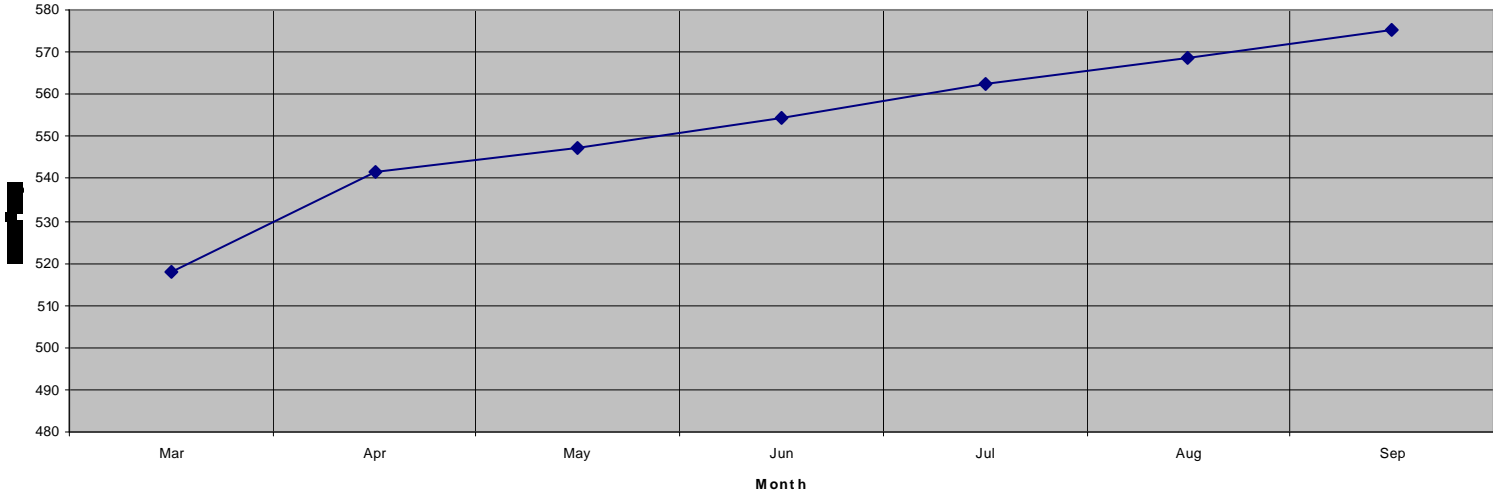
# Rolling Annual Gas Usage

Rolling Annual Gas



# Rolling Annual Specific Gas Usage

Rolling Annual Specific Gas

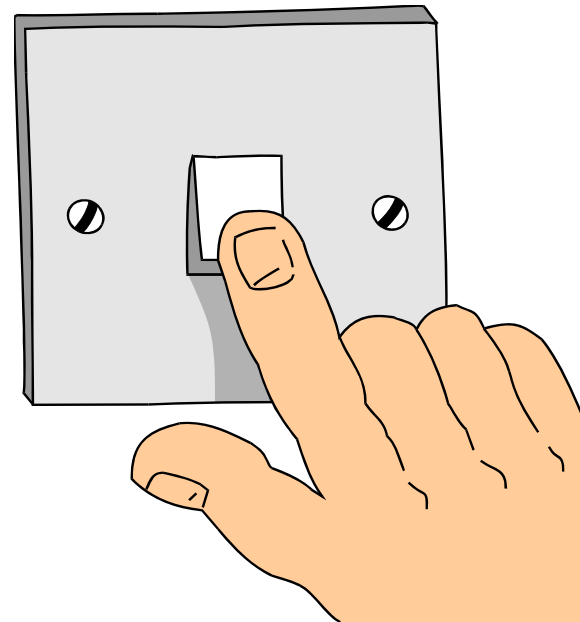


# Set Target Areas

**Identify where and how most energy is wasted and by whom.**

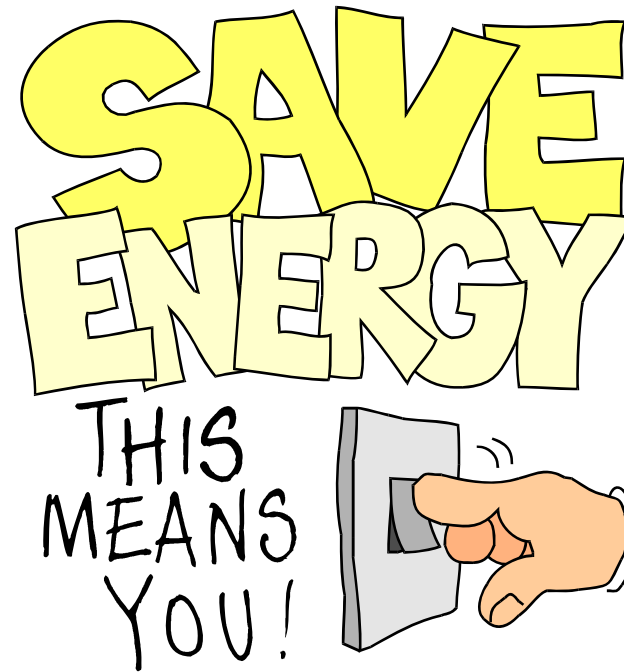


**Find out how aware  
staff are about  
energy waste**



# Motivate

- Communicate
- Publicise



# Make Everyone an Energy Manager

Changing human behaviour is FUNDAMENTAL

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# The Carbon Trust – Contacts

[www.thecarbontrust.co.uk](http://www.thecarbontrust.co.uk)

Customer Centre: 0800 085 2005

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