



# Reducing Carbon Emissions Energy Audit Checklist

## Sustainability

Sustainable development (or 'sustainability') is a frequently misused and misunderstood term. The most widely accepted definition is:

**"To meet the needs of the present without compromising the ability of future generations to meet their own needs"**

(Bruntland Commission, report to the United Nations, 1987)

## Introduction



Sustainability and Carbon Audits on a regular basis helps identify energy waste and identify opportunities for improving energy and waste practices and can save carbon emission, improve working environments. This checklist is designed to stimulate questions about energy practices. These questions may raise issues which may have been overlooked and could improve your environment.

Most of the measures are simple good housekeeping measures which can be implemented without to much expenditure.

## Basic Information

Name				
Contact Telephone Details				
Date of energy audit:				
Site address being audited				
Normal occupancy hours of building (time when occupants arrive and leave)	Arrival Time		Closure Time	

## Lighting

	Suggestion / Idea	Action
	Check that lighting in unoccupied areas is switched off and all non-essential lighting is switched off outside of business hours.	
	Are any external lights on during daylight hours?	
	Are tungsten lights still on use? Look particularly in store rooms, desk lamps etc. These lamps are being phased out.	
	Are light switches clearly labeled?	
	Ensure blinds are open when there is sufficient daylight available. Large items of furniture such as filing cabinets should be moved so as not to obscure daylight.	
	Are lights switched off in toilets and store cupboards? If not, consider posters and stickers to remind staff to turn lights off.	

### Carbon Trust Statements

**Lighting an office overnight wastes enough energy to heat water for 1000 cups of tea**

If you want to calculate out the carbon saved by reducing your carbon footprint by any initiatives you have carried out log on to the Carbon Trust website for poster calculations.

## Heating

	Look out for signs of over-heating, for example, staff wearing summer clothes in winter or opening windows when the heating is on. Ask staff for feedback on internal comfort conditions.	
	Are external doors and windows closed when heating or cooling is on?	
	Is there adequate draught proofing on windows and external doors?	
	Ensure thermostats are set correctly. Ensure that thermostats and controls have not been tampered with by staff.	
	Are radiators blocked by boxes and furniture restricting air circulation?	
	Is heating or air conditioning used on unused spaces, such as cupboards, corridors?	

## Cooling and Ventilation

	Check that air conditioning is operating only when required. In a retail environment, the heating should switch off when a temperature of 19°C has been reached and cooling should not come on until the temperature exceeds 24°C	
	Ensure electrical equipment are not installed under the temperature sensor?	
	Check that maintenance is carried out regularly. Dirty or faulty fans, blocked filters, air ducts and components directly affect system efficiency and will increase running costs and risk of breakdown.	

### Carbon Trust Statements










**A typical window left open overnight in winter will waste enough energy to drive a small car over 35 miles**

**A 2°C increase in office temperature creates enough CO2 in a year to fill a hot air balloon** (a 1°C will increase the energy consumption by approximately 10% within the area supplied)

**Air conditioning an office for 1 extra hour a day uses enough energy in a month to power a TV for over a year.**

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## Electrical Equipment

	Ensure all desktop computers and their monitors are switched off at the end of the working day. Staff should be educated to switch their own computers off.	
	Are printers switched off at the end of the day?	
	Are photocopiers switched off at the end of the day and weekends?	
	Switch off televisions, conference facilities and other digital equipment during out of hours periods.	
	Can standby settings be avoided? (e.g. TVs, LCD projectors etc.)	
	Are Desk fans turned off at the end of the day?	
 	Are both wall mounted water boilers and kettles in use? (Hot water boilers, water coolers and other kitchen equipment should all be switched off when possible. In the case of hot water boilers and water coolers this might only be practical over the weekend or holiday periods)	
	Is the office fridge/freezer defrosted regularly?	
	Check hours of operation of vending machines and ensure all unnecessary equipment is switched off overnight and at weekends	

### Carbon Trust Statements

**Switching off all non essential equipment in an office for one night will save enough energy to run a small car for 100 miles.** (Or uses enough energy to photocopy 224,000 copies or would make over 4500 cups of tea.)

**A computer left on overnight for a year creates enough CO2 to fill a double-decker bus**

**A photocopier left on overnight uses enough energy to produce over 1500 copies**

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## Water Use

	Are taps left running? (One drip per second is 34 gallons per month)	
	Is water escaping from overflows either inside or outside buildings?	

### Ofwat Statement

If we all cut our water use by 20 litres a day, the water companies could reduce their yearly greenhouse gas emissions by up to 8%. **This is roughly equivalent to the annual emissions from 90,000 cars, or from supplying the population of Liverpool with electricity for a year.** On top of that, the reduction in greenhouse gas emissions from households would be even greater – the equivalent of annual emissions from 620,000 cars, or from supplying nearly half the population of Greater London with electricity for a year.

## Waste

	Is waste recycling being carried out in the workplace?	
	Are your staffs aware of what can be recycled?	
	Do you have sufficient waste recycling bins?	
	If local waste bins in use how much is waste is not recycled in the department?	

<b>Are there waste recycling facilities for collecting the following waste?</b>		
	Paper	
	Cardboard	
	Confidential paper	
	Cans	
	Bottles	
	Plastic packaging	
	Glass	
	Food	
	Toners	
	Ink Cartridges	
	Batteries	

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## Transport

	Are cycle lockups or sheds provided?	
	For your colleagues who are interested in cycling make them aware of the NHS cycle loan scheme <a href="http://www.nhsbikes.co.uk/hci.html">http://www.nhsbikes.co.uk/hci.html</a>	
	Are people aware of the Transport for London TfL operate the Cycle scheme to get to work! <a href="http://www.tfl.gov.uk/roadusers/cycling/14808.aspx">http://www.tfl.gov.uk/roadusers/cycling/14808.aspx</a>	
	Have your colleagues completed the NHS Travel Carbon Footprint which assesses individual travel carbon footprints– Link <a href="http://tcfsspswl.hubsphere.com/people/new">http://tcfsspswl.hubsphere.com/people/new</a>	
	Do colleagues minimize business travel by opting for webinars / teleconferencing facilities?	

## Procurement

	Do you issue blister packs to reduce supplies of drugs issued when patients leave?	
	Do you carryout stock audits to reduce wastage in your department?	
	Are checks carried out on returned drugs to reduce wastage?	
	Are items checked regularly and stock rotated What % of stock is wasted?	
	Do you report back on the cost of wastage to the department / account holder?	
	Is stock badly stored i.e. causing damage?	
	Are items or stock inappropriately packaged i.e. too little packaging causing or too much causing packaging waste?	

## Awareness

	Are there posters/guidance displayed to remind people of good energy practice?	
	Are people aware of any forthcoming Sustainability Awareness Days?	
	Are people aware of the company environmental goal?	

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