
Make a Difference ...



The key to cutting the amount of energy used in the workplace is
good management ...

'We can beat climate change and have a better life. But we need big action from
governments and industry – now!'

Friends of the Earth



INTRODUCTION

This document and quiz are intended to assist in the development or enhancement of improved environment policies within the workplace, and the effects these policies can have on climate change.

WHAT IS CLIMATE CHANGE?

Climate patterns vary within natural cycles and are affected by natural events, such as volcanic eruptions and weather patterns that include La Nina and El Nino. However, in recent decades scientists have been suggesting that human activities that release certain gases into the atmosphere, are altering the Earth's climate beyond what would be expected as a result of natural cycles. The term 'climate change' refers to projected changes in the Earth's climate that are expected to occur because of human activities.

HOW MIGHT THE CLIMATE CHANGE?

A number of possible impacts of climate change have been identified. The main impacts are predicted to be temperature increases, sea level rises, changes to rainfall patterns and increased variability of weather events.

THE GREENHOUSE EFFECT

The Greenhouse Effect is the natural phenomenon that warms the Earth, enabling it to support life. The sun's warmth passes easily through the blanket of gases around the earth to reach the Earth's surface. However, instead of this heat being lost back to space when it is reflected by the Earth's surface, certain gases in the atmosphere (called greenhouse gases) block this heat. Greenhouse gases are a natural part of the atmosphere and without them we could not live on Earth. However, the problem we now face is that human actions, particularly the burning of fossil fuels, are increasing the concentration of these gases. This is believed to be raising the Earth's temperature, creating the prospect of global climate change.

This is the Enhanced Greenhouse Effect.

DID YOU KNOW ...

The Earth is warming faster than it has for thousands of years.

The 10 hottest years on record have happened since 1997.

We should commit to continual improvement in environmental performance by minimising adverse environmental impacts, where reasonably practicable.



WE CAN DEMONSTRATE OUR COMMITMENT BY

1. Reviewing and understanding the range of environmental impacts arising from our activities.
2. Setting environmental objectives and targets for our most significant impacts and defining the means of achieving them to improve our environmental management and performance.
3. Reducing energy and resource consumption by implementing effective and efficient reduction methods consistent with best practice.
4. Influencing and managing our suppliers and projects to ensure that goods procured – and services undertaken – comply with our environmental policy.
5. Developing green travel plans by encouraging greener travel practices.
6. Minimising the use of toxic and environmental damaging materials – and preventing the release of pollutants.
7. Minimising the generation of waste and implementing recycling initiatives.
8. Periodically reviewing policies to take account of changes in our organisations, legislation, government targets or other internal and external factors.

GREENING UP ...

'Greening' our offices, for instance, makes good business sense. The less we use, the less we pay for ...

Greening our workplace involves ...

- (a) Reducing resources consumed and waste produced.
- (b) Reducing the amount of water and energy consumed and pollution produced.
- (c) Buying goods and services which minimise environmental impacts.
- (d) Increasing the amount of waste we recycle or re-use.
- (e) Promoting the efficient use of public transport for commuting and business travel.

WORKING FROM HOME – ENERGY POLICY

Working from home is a lifestyle choice that is growing in popularity, and the green element of doing so is particularly appealing to businesses wanting to clean up their environmental act. Businesses and employees are able to make use of better technology and the internet, which means that it is easier to stay in touch, particularly now that most households have broadband connections.

According to National Statistics in 2003, 14% of men and 8% of women making up the workforce, did so working from home.

DID YOU KNOW ...

Energy costs in offices can be reduced by more than half by adopting simple energy-saving measures.

48,461 households were flooded in the summer floods of 2007.

THE ENERGY POLICY

Office equipment is the fastest growing user of energy in the working environment.

Electricity consumption by office equipment represents 25% of the total electrical energy used in offices. This places a significant cost on the organisation, as well as on the environment.

Additionally, the limited life of some office equipment means that much waste is generated when the equipment becomes obsolete.

Heating/cooling and lighting accounts for the rest of the electrical energy used in most offices, but simple steps can dramatically reduce the amount of energy used.

WHAT'S IN A PC?	
MAKE UP	PROPORTION
Plastic	23%
Ferrous metals	32%
Non-ferrous metals	18%
Electronic boards	12%
Glass	15%

A single computer can contain up to 2kg of lead material ...

DID YOU KNOW ...

Each time we overfill the kettle, we waste enough energy to run a TV for over 24 hours.

If you leave your computer monitor on all night you will be wasting enough energy to microwave six dinners ...

REDUCE, REUSE, RECYCLE ...

It is important to reduce resource consumption by considering whole life-cycle costs of products.

Buy recycled and part-recycled products to reduce consumption of resources. This will stimulate demand for recycled products and promote the collection and reprocessing of waste, diverting it away from landfill.

A FEW THINGS TO THINK ABOUT ...

Calculators: Use a solar-powered calculator.

Computer Calendars: Since your computer is on most of the day, use the calendar and diary on it. As well as saving paper online calendars and diaries have electronic reminders.

Scrap paper: Rather than using post-it notes and notebooks, use scrap paper.

Printing: Think twice about printing. Do you really need to print it? If it is to show to others, email it.

Bookmark: Add to bookmarks: If you find an interesting website, bookmark it to remember it, rather than printing it out.

Emails: Add a line to the bottom of every email, urging recipients to be green and not print out the email. (Tools/Options/Signatures).

Fax: Don't fax unless you really think you need to. Use email. (By using the fax, you are transferring printed thing from one sheet of paper to another remote one).

Stamps: Collect used stamps. There are Charities which sell on used stamps to raise funds. Example: The Royal National Institute for the Blind. www.rnib.org.uk

Juice Cartons: There is commonly held belief that the cartons juice and milk come in, which are mainly Tetra Pak, are not recyclable. This is not the case. Visit www.tetrapakrecycling.co.uk to see if your Local Authority recycles these cartons.

Buy Fairtrade: The Fairtrade movement began with coffee almost 20 years ago. Now the Fairtrade label can be found on tea, sugar, nuts and fruit juices.

Don't Smoke: Land is cleared to grow tobacco – and this happens in parts of the world where food is already scarce. Tobacco growers also use pesticides and fertilisers, and these harmful chemicals get into drinking water, animals and other crops.

Curing tobacco requires it to be heated, usually by burning wood. Almost 600 million trees are felled around the world for this purpose.

Each cigarette-manufacturing machine used four miles of paper an hour, and then the cigarette, when burned, gives off a concoction of harmful chemicals (over 4,000 chemicals), including two of the main gases related to the greenhouse effect – carbon dioxide and methane – as well as over 43 carcinogens.

Ugly Butts: A cigarette butt can take up to 12 years to break down!

Boycott Nestle: Nescafe is probably drunk in most offices in the UK. Nestle is the most boycotted company in the UK. The company's aggressive marketing of baby formula in the developing world, has increased the probability of babies drinking tainted water, causing diarrhoea. It is estimated that 1.5 million infants die each year because they are not breastfed. For details, visit: www.babymilkaction.org

Under the Banana skin: The innocent yellow fruit is the public face of one of the biggest ongoing exploitation stories on Earth. The banana industry is dominated by five international companies, each paying their workers no more than 5p per day. Bananas are the most valuable food product for UK supermarkets – only petrol and lottery tickets outsell them. Thousands of people have been driven off their land to make way for new plantations – and any form of union action is banned.

As with tobacco plantations, thousands of tonnes of toxic pesticides are poured on the banana plantations – often sprayed from planes, drenching workers still in the fields - and birth defects and serious illness are common among workers, as a result.

Choose Fairtrade Bananas. It may cost a few pence more, but it will truly make a difference.

Plates and Cutlery: Kit the office out with a set of real plates and cutlery which can be used again and again, rather than having to send used plastic/paper to the landfill whenever someone brings in a birthday cake!

Heating: Turn the heating down. Heating can account for around 60% of an office's total energy bill.

Computers: Choose energy-efficient computer hardware. Look for the Energy Star Label (www.eu-energystar.org). Anything that has earned the Energy Star uses less energy and automatically enters a low-power mode when not in use.

Before buying any new computers, laptops, monitors, printers or photocopiers, check out their energy efficiency. www.sust-it.net This site rates popular devices according to the amount of energy used and works out how much each device is likely to cost to run over the year.

Go paperless: Computer systems can efficiently archive documents and send invoices by email. This saves on paper and ink.

Hand dryers vs. paper towels: Most surveys favour hand dryers! The dryer uses electricity to heat and blow air, while paper towels require energy to produce and are then either thrown away into landfill or recycled.

Recycle mobile phones: There are many schemes for old phones, sending them to developing countries, for instance.

Recycle CDs: Don't throw them away. CDs are 100% recyclable – even the cases. Send them to a recycling firm, such as Polymer Recycling – www.polymerrecycling.co.uk – which will turn them into burglar alarms and car reflectors.

Artists may use CDs to make sculptures – www.cdsculpture.com – and gardeners can use them to scare birds away or use them as drink coasters. For some ideas, visit www.hintsandthings.co.uk to find 101 things to do with old CDs.

Duplex printing: Print on both sides of the paper.

Use recycled paper: Order chlorine-free recycled paper – www.evolve-papers.com. Using recycled paper saves energy and means fewer carbon-absorbing trees have to be cut down and feed wildlife habitats needing to be destroyed.

In cartridges: Recycle the cartridges. www.actionaidrecycling.org.uk will produce a cartridge collection box for offices. For a list of other recycling companies specialising in printer cartridges, visit www.ukcra.com

Recycle bins: Place these near printers and photocopiers. Strategic placement of recycling facilities will make a difference.

Have a website: Use it and keep it up-to-date. Instead of saying that you will 'pop the information in the post', say 'look at our/my website'.

Mailing: Think twice before sending out a mailing. Before sending out yet another round of marketing material or newsletters, consider the environmental implications alongside the financial implications. The two are increasingly walking hand-in-hand.

Volunteer: Volunteering gives new skills, which may prove valuable, such as improving communications and diplomacy.

Cater for cyclists: Cycling is extremely environmentally friendly and cyclists have lower levels of stress and have a fitness level equivalent to someone 10 years younger.

Avoid cardboard boxes: An eco-conscious removal firm will save waste by moving things in reusable crates. If this is not an option, use recycled cardboard boxes. Collect them, for instance, in the weeks leading up to a move.

Let in the sunlight: Maximise the use of available light – paint light-coloured walls.

Unwanted furniture: Give it to charity – www.green-works.co.uk. Remember to sign the Gift Aid document.

Acknowledgements: BBC: Make a Difference at Work: The Co-operative Business and Enterprise Colleges Network: The Planning Advisory Service.

20 QUESTION QUIZ ... Answers at the end

1. What source is the largest contributor to the UK's greenhouse gas emissions?
 - a) Transport
 - b) Domestic
 - c) Power Stations
 - d) Agricultural livestock
 - e) Other industrial

2. About how many wind turbines would we need to generate all the electricity Britain needs each day?
 - a) 25
 - b) 2,500
 - c) 250,000

3. In 2050 1 in 100 homes in the UK could be ...
 - a) Under water
 - b) Inside an iceberg
 - c) Full of sand

4. What are scientists warning might become of increased concern to Britain on the next 50 years as the climate warms?
 - a) Scorpions
 - b) Sharks
 - c) West Nile Virus
 - d) Termites
 - e) Poisonous spiders
 - f) All of the above
 - g) None of the above

5. How much greenhouse gas does a typical nuclear power station produce?
 - a) Twice as much as a gas power station
 - b) Half that produced by a gas power station
 - c) Almost none

6. By what year should all new domestic development be 'zero-carbon'?
 - a) 2012
 - b) 2016
 - c) 2020
 - d) 2050

7. Every day, up to 70million barrels of oil are pumped out of the ground. How many years can we keep extracting this amount?
- a) 5 years
 - b) 40 years
 - c) 100 years
8. Which of the following consumes the most energy in a typical office?
- a) Air conditioning
 - b) Heating
 - c) Lighting
 - d) Office equipment
9. What has been the average global temperature change over the last 100 years (in Celsius)?
- a) +2 degrees
 - b) +1 degree
 - c) +05 degree
10. By 2050, how much must global CO2 emissions be reduced by to avoid the risk of extinction of one-third of species?
- a) Less than 20%
 - b) 15% - 30%
 - c) 50% - 85%
 - d) More than 90%
11. Which one of these is a greenhouse gas?
- a) Oxygen
 - b) Carbon Dioxide
 - c) Sulphur Dioxide
12. Cows of guilty of speeding up global warming?
- a) True
 - b) False
- a. Roughly, how fast is the Arctic warming, in comparison to the rest of the world?
- a) Half as fast
 - b) The same
 - c) Twice as fast
 - d) Three times as fast

13. Which country has the highest CO2 emissions per capital?

- a) Australia
- b) Canada
- c) Britain
- d) United Arab Emirates
- e) USA

14. Which one of the following is NOT a result of climate change?

- a) The rise in sea levels
- b) Drought
- c) Water scarcity
- d) Desertification
- e) More frequent earthquakes

15. What was the hottest year on record since the late 1800's when records began?

- a) 1910
- b) 1974
- c) 1998
- d) 2002
- e) 2003

16. If you turned the tap off whilst brushing your teeth, you would save enough water to supply:

- a) 500,000 houses a day
- b) 100,000 houses a day
- c) 200 houses a day

17. The UK is the world's

- a) 10th largest emitter of carbon dioxide
- b) 5th largest emitter of carbon dioxide
- c) 8th largest emitter of carbon dioxide

18. In London, we produce forty-four million tonnes of CO2 per day, which is:

- a) 5% of the country's total emissions
- b) 8% of the country's total emissions
- c) 10% of the country's total emissions

19. On average, every person in the UK throws away their own body weight in rubbish every ...

- a) 3 weeks
- b) 5 weeks
- c) 7 weeks

ANSWERS

1 c)	2 c)	3 b)	4 f)	5 c)	6 b)	7 b)	8 a)	9 a)	10 c)
11 b)	12 a)	13 c)	14 d)	15 e)	16 c)	17 a)	18 c)	19 b)	20 c)