

The Business Benefits of Going Green

Expert knowledge means success



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Note: This publication has not been updated since it was last published. Some of the hyperlinks may have changed and may need updating. In addition, some of the information in this publication may be out of date.

Introduction

Despite the growing trend for both business and the public to be environmentally friendly; a surprising number of businesses believe they are too small to affect the environment. However, research by the Environment Agency indicates that SMEs are responsible for more than 60% of industrial and commercial waste in England and Wales. It has identified the following five business sectors as those that create the highest “risk” to the environment:

- agriculture;
- construction;
- food and drink;
- textiles; and
- vehicle service and repair.

In addition, most businesses still do not monitor their environmental performance, despite the potential benefits and quickly rising energy costs. A survey by the British Standards Institution showed that 70% of companies are concerned about the rising cost of energy, nearly half (45%) worry about waste management and a third (30%) worry about carbon emissions. Yet nearly one third (29%) of those surveyed do not have any Environmental Management System (EMS) in place. This is despite the fact that many recognise the environmental and business benefits an EMS can bring.

Environmental legislation is making many businesses consider the effect of their business on the environment. But “going green” by improving the environmental performance of your business can offer commercial advantages, even for small businesses.

Energy reduction and the resultant cost savings can usually be made with only small changes to the way a business operates. For energy intensive businesses, a tax reduction on the Climate Change Levy may be available if agreed targets are met.

Tax advantages and, in qualifying cases, business loans are also available to businesses that invest in energy-saving equipment to help reduce their energy use and as a result their carbon emissions. They are also available to businesses that invest in water saving equipment and on new cars with low carbon dioxide emissions.

How to save energy

Even the smallest changes to energy use within your working environment can lead to pounds off your energy bill. Here are some simple measures you can easily implement:

Lighting & Heating

- Replace standard bulbs with long-life bulbs and standard fluorescent tubes with slimline tubes;
- Install infra-red movement detectors to control lighting in areas not in permanent use e.g. toilets;
- The recommended comfort heating setting is 19°C - make staff aware of this and check thermostats regularly;
- Don't open windows - turn heating down if the work place is too warm;
- Make sure thermostats and autotimers conform to workplace occupancy. Install 7-day time switches to allow different settings for each day.

Buildings

- An insulated building can help reduce heat loss by up to an astonishing 90% so, if you don't already have it, it's a very worthwhile investment;
- Draught-proof windows and doors to cheaply and effectively reduce heating costs;
- Suspended ceilings reduce heating costs and provide extra insulation;
- Check regularly for damp or problems which can lead to damp such as blocked gutters as it can seriously compromise your building's insulation;
- Check regularly for the soundness of windows, concertina and shutter doors, eaves, and roof lights.

Business Equipment

- Don't leave electrical equipment such as computers and photocopiers switched on for long periods when not in use;
- The extra heat thrown out by equipment left on by long periods can also raise the workplace temperature and lead to the use of fans: windows being opened or air conditioning being switched on, all of which add to unnecessary energy use;
- Even equipment in standby mode uses significant amounts of energy so make sure it's switched off if not in use for significant periods;
- Check seals on refrigerators/freezers and install controllers on them as, in the work place, they tend to run at energy-inefficient low loads most of the time.

Source: Centrica PLC

Could your business benefit from a Climate Change Agreement?

If your business is energy intensive, for example, printing or craft baking, you can receive an 80% reduction on the Climate Change Levy, a tax on non-domestic energy use, by signing a climate change agreement. In return for paying less tax, you agree to meet set energy efficiency targets. You join the scheme through your sector association, of which membership is not required, although some associations might charge an administration fee.

Top Tips on going green

Going green not only benefits the environment but also your business. Running an environmentally friendly company can lower your overheads and enhance the image of your business among existing and potential customers. Some of the simple things your business can do to both help save the environment and money are:

- Turn off your PCs when not in use
Turning off computers and monitors at the end of the day and at weekends can reduce their energy consumption by 75%. Even if left in stand-by mode, energy consumption can be as high as 30% of normal use. If you switch off at lunchtimes too, energy consumption can be reduced by as much as 90% per year.
- Switch off the photocopier at night
Switching off your photocopier at night will save you the same amount of energy required to make 5,000 A4 copies. Even if left in sleep mode overnight, a photocopier will still consume the equivalent energy of running off 1,500 A4 copies.
- Keep windows and light fittings clean
Most people prefer natural to artificial light. By keeping windows clean you can improve the quality of natural light and reduce the amount of lighting needed and your lighting bill by around 19%. You can increase the efficiency of lighting used by ensuring that your light fittings are clean.
- Turn off lights when not in use
It is a common misconception that leaving lights on when not being used is more energy efficient than switching them off. In fact, a fluorescent tube burns 500 times more energy when left on for 15 minutes than the energy required to switch it on again.
- Change the type of lighting you use
If you are still using old large diameter (38mm) tubes, switching to slimline fluorescent tubes (26mm diameter) will use around 10% less electricity. You might also consider replacing any standard light bulbs with energy efficient ones. Although these are more expensive to buy, they work out cheaper in the long run. Not only do they use less electricity, they can also last up to ten times longer. The combined saving of replacing 10 standard light bulbs with low energy ones is approximately £65 per year.
- Reduce heating by one degree Celsius
It is unlikely that many people will notice a drop in temperature of one degree Celsius, so by setting the thermostat to 19°C instead of 20°C for an office, heating costs can be reduced by around 8%.
- Eliminate draughts
Draughty windows and doors not only cause discomfort for staff, they also waste energy. Fitting draught strips will stop heat escaping and draughts. Draught-proofing and keeping windows and doors closed can reduce energy consumption by 15%.
- Reduce water usage in your washrooms
If you have a cistern that is more than 10-years old, placing a displacement device in the cistern can reduce water consumption by between a litre and 3.5 litres each time the toilet is flushed, depending on the device used. The devices can be obtained free from your water company. Fitting an infra-red device to a urinal reduces water consumption considerably and will pay for itself within a year. A single uncontrolled 5-litre urinal that flushes every 20 minutes, 24/7 will use about £200 worth of water per year. Using an infra-red device set to flush at 40 minute intervals over a 60 hour week cuts the cost to £35 a year. Water-saving equipment can also save you money by qualifying for an Enhanced Capital Allowance. A dripping tap can waste up to 20 litres of water a day. However, in most cases all it takes is an inexpensive washer to fix the problem. You can also help save water by placing signs in washrooms reminding staff to turn off taps after use.
- Reuse and recycle paper
If anything, computers have increased rather than reduced the amount of paper we use at work. For example, we now print out e-mails and information from the internet daily. You can save paper and the money you spend on it by printing only where necessary and reusing paper printed on one side for internal use, such as printing e-mails. When paper can no longer be reused, instead of just throwing it away, provide paper-recycling bins and encourage your staff to use them. You can also be kinder to the planet by using environmentally friendly paper.

Source: Business Link London

Grid Technology: environmentally friendly computing

Grid computing uses the internet as a communications backbone to enable the use of large numbers of internet-connected under-used desktop computers for collaboration in executing computing tasks to solve very large problems.

Popular examples include the BBC's climate change project, which is aimed at identifying important patterns of weather change over time, and the identification of new candidate drugs that have the right shape and chemical characteristics to block HIV protease.

The UK is a world leader in this field through the e-science programme and has already received £250 million of Government funding.

As part of the programme, the Grid Computing Knowledge Transfer Network (KTN) was launched on 6 July 2005. The project will develop and maintain a web infrastructure, create a network of interested members and run a series of events aimed at sharing experience and improved understanding of the field. It is targeted at business owners, business advisers and senior IT leaders with responsibility for strategy and investment decisions. KTN is aimed at UK organisations from all sectors to enable them to take advantage of the significant advances being made in the grid computing field.

In August 2005, The Department of Trade and Industry (Now BIS) embarked on a £1 million drive to promote the use of grid computing by British blue-chip companies.

A new taskforce, dubbed IECnet, is being funded by the BIS to promote its commercial potential.

Why go Green?

The advantages to going green include:

- cutting costs;
- compliance with legal regulations; and
- improving your business reputation.

Cutting costs

Taking steps to minimise waste and use resources efficiently will not only reduce the impact that your business has on the environment – it can help you to cut your business costs. Far-reaching gains in both business and environmental efficiency can also be achieved through initiatives such as cleaner design.

Even apparently low levels of waste can have a significant impact.

The Environment Agency claims that by employing waste minimisation techniques, businesses in a wide range of industries may be able to make savings that are equivalent to between 4% and 5% of turnover, and that for manufacturing companies, savings may typically amount to £1,000 per employee, frequently with little or no capital investment. It goes on to claim that UK manufacturers could save £2-2.9 billion a year in operating costs by investing in best-practice waste minimisation techniques that include the systematic reduction of all forms of waste – including material, energy, effort, process and production waste – in order to conserve resources.

It points out that:

- A PC left on overnight wastes the same amount of energy that is required to laser print 800 sheets of A4 paper.
- Lighting an empty office all night wastes enough energy to heat water for 1,000 cups of coffee.
- Costs rise by about 8% for each 1°C by which business premises are overheated. (Recommended temperatures are: 19°C for offices; 16°C for workshops; 10-12°C for warehouses and stores).

According to the government-funded programme Envirowise, many companies throw away profit in the form of avoidable waste. It claims that 93% of production materials on average are not used in final products, while 80% of products are discarded after a single use.

Environmental Management Systems

Implementing an EMS can help your business to identify and monitor where cost savings can be made, for example:

- simple measures such as turning computers and equipment off at night, and only filling office kettles with the amount of water needed can save money on your energy and water costs;
- printing documents only when necessary can save money on the cost of office supplies (e.g.: paper and ink);
- reducing hazardous waste could save money on disposal costs;
- Taking advantage of energy generating equipment such as small wind turbines and solar panels could reduce your energy costs and may even generate energy that you can sell on. (Such equipment is coming down in cost, and over 6-12 years can pay for itself in energy savings.

An EMS does not need to be a complicated and expensive system; a simple recording of energy costs and other data could be all you need to start finding opportunities to make changes and savings.

Cleaner Design

Designing products that create less waste during production and are easier to reuse, refurbish or recycle can help to minimise the environmental impacts of your products or processes and cut your costs. Well designed packaging suitable for multiple journeys can also help to cut waste and improve efficiency across the supply chain. Envirowise's free Designtrack service can recommend steps you can take to reduce the environmental impact of your product and processes without detracting from their quality.

Getting help

Waste Watch, an environmental charity that promotes sustainable resource use provides specialist advice to organisations that wish to develop and implement environmental programmes for the purpose of cost savings and improved efficiency. For more information visit:

www.wastewatch.org.uk

The Waste and Resources Action Programme, which is funded by the BIS¹ and Defra, aims to create markets for recycled materials and products. It runs the Recycle Now campaign, aimed at the public, businesses and other organisations. For more information visit:

<http://www.wrap.org.uk/>

Could your business qualify for an interest free loan?

SMEs can apply for interest free loans of £5,000 to £100,000 from the Carbon Trust to replace or upgrade existing equipment and appliances with more energy efficient versions or install energy saving products such as insulation. The Carbon Trust is a government-funded independent company that helps businesses cut carbon emissions. For more information visit: www.carbontrust.co.uk/energy/takingaction/loans.htm

Or from http://finance.siemens.com/financialservices/uk/products_solutions/energy-efficiency-financing/Pages/index.aspx/Pages/home.aspx

Could your business claim for double glazing?

HM Revenue and Customs treat installing double-glazing as allowable expenditure on repairs, so the entire cost of replacing single-glazed windows with double-glazing can be offset against your tax bill. For more information visit: www.hmrc.gov.uk

Legislation compliance

It is important to be aware of environmental legislation and its potential significance for your business.

Based on European Union (EU) legislation, the WEEE (Waste Electrical and Electronic Equipment) Directive has come into effect as well as RoHS (Restriction of use of Certain Hazardous Substances) Directive.

The Waste and Resources Action Programme (WRAP) provides guidance to SMEs on how these and other environmental regulations may affect them, as well as offering advice on good environmental practice.

The EU is also developing framework legislation that will aim to set energy efficiency requirements for products, while its Integrated Product Policy (IPP) will seek to improve the environmental performance of products throughout their life cycle.

WEEE Directive

The aim of the WEEE Directive is to minimise the environmental impact of a wide range of electrical and electronic equipment, including office IT kit, during its lifetime and when it becomes waste. The Directive sets criteria and assigns responsibility for the collection, treatment, recycling and recovery of equipment. It will affect manufacturers, retailers and consumers of electrical and electronic goods, including business users. Broadly, the Directive assigns responsibility for the recovery and disposal of equipment to manufacturers and retailers. But business users that dispose of goods without replacing them will be liable for disposal costs.

Donating obsolete IT equipment to a charity such as Computer Aid International, sends PCs for re-use in schools in the developing world, may also fulfil your recycling obligations.

Information about the significance of the WEEE Directive for SMEs is available from the WEEE Recycling Network at: www.weenetwork.com

RoHS Directive

The related RoHS Directives bans the placing on the EU market of new electrical and electronic equipment containing more than agreed levels of lead, cadmium, mercury, hexavalent chromium, polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE)

flame retardants from 1 July 2006. Manufacturers will need to ensure that their products – including the components – comply if they are to sell within the Single Market.

Landfill Directive

From 30 October 2007 new rules apply for non-hazardous waste. Liquid wastes are banned from landfill and other waste must be treated before it can be landfilled.

The Landfill Directive sets demanding targets to reduce the amount of biodegradable municipal landfilled waste and aims to reduce the pollution potential from landfilled waste that can impact on surface water, groundwater, soil, air, and also contribute to climate change. It is applied under the Landfill (England and Wales) Regulations 2002 and must be fully implemented by July 2009.

If you are a business that produces any waste you may be affected. Your waste collector, or the disposal site you take your waste to may ask you to do things like separate recyclables. For more information visit: <http://www.environment-agency.gov.uk/business/regulation/31867.aspx>

Other Legislation

The Environment Agency's Netregs service provides information on the environmental legislation applicable to Northern Ireland, England, Scotland and Wales and is available at: <http://www.environment-agency.gov.uk/netregs/>

Current and future legislation for England includes:

- Air Legislation;
- Batteries Directive;
- Chemicals Legislation;
- Conservation Legislation;
- Detergents Regulation;
- Eco-design Requirements for Energy-using Products (EuPs) Directive;
- Energy Legislation;
- Environmental Liability Directive;
- Land Legislation;
- Noise and Statutory Nuisance Legislation;
- Pollution Prevention & Control (PPC) Legislation (including IPC);
- Plant Protection Legislation;
- Radioactive Substances Legislation;

New tax credit for green loss-making companies

From 1 April 2008, loss-making companies are able to surrender to HMRC tax losses related to expenditure on certain environmentally beneficial equipment that qualifies for the Enhanced Capital Allowances scheme and receive in return each year a payment of 19% of the losses surrendered. This payment will be capped at the higher of:

1. £250,000 or
2. The company's total PAYE and Class 1 NICs liability for the year.

This measure may be attractive to loss-making groups which derive little or no current tax benefit from the 100% first year allowances available for this type of expenditure.

The new rules will contain claw-back provisions, which will apply if the relevant equipment is sold within four years and which may require companies to repay to HMRC part or all of any payment received.

For details, see BIS page on Tax Credits: <http://www.bis.gov.uk/policies/innovation/business-support/rd-tax-credits/about>

More technologies to qualify for ECA

Budget 2008 announced that the List of technologies covered by the ECA schemes will be added to.

- Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation;
- Restriction of use of Certain Hazardous Substances Directive;
- Waste Legislation;
- Waste Electrical and Electronic Equipment Directive;
- Water Legislation.

Business reputation

Environmental initiatives may also help to establish or reinforce a positive image for your business with existing or potential customers and employees giving your company a more considerate and caring image. It may also bring you extra custom from businesses with a green ethos.

Working with environmentally respected conservation organisations such as the World Wildlife Fund – who, for example, forge agreements with companies prepared to commit themselves to cutting their emissions of gases - can confer positive ‘brand associations’.

Moving forward with Envirowise

Envirowise offers UK businesses free, independent, confidential advice and support on practical ways to increase profits, minimise waste and reduce environmental impact. It is managed on behalf of UK Government (BIS and DEFRA) by Momenta, an operating division of AEA Technology plc, and Technology Transfer and Innovation Ltd (TTI), a wholly-owned subsidiary of Serco Limited.

Envirowise delivers a valuable government-funded programme of free, confidential advice to UK businesses. This assistance enables companies to increase profitability and reduce environmental impact.

Envirowise’s services have been estimated to have saved UK businesses an estimated £1 billion since 1994 and include:

- A dedicated, free helpline;
- On-site visits delivered by a nationwide team of expert advisors;
- Information resources from case studies to best practice guides;
- Over 200 events a year, from intimate seminars to major exhibitions; and
- An informative website.

Envirowise solutions are driven by the specific needs of individual firms, to genuinely improve their business practices, profitability and competitiveness.

The Envirowise programme is available to any UK business, completely free of charge. For more information call 0800 585794.

The tools and information available from Envirowise have been designed to help SMEs to assess their current environmental performance; benchmark this against competitors or national standards; and to set objectives for change, as well as the benefits that may result. Where appropriate, this information can be used to secure senior management commitment to a waste minimisation or environmental improvement programme.

Envirowise recommends that the following key elements are in place for a waste minimisation or similar programme to succeed:

- A clear commitment from senior management;
- Personnel dedicated to the introduction and development of the programme;
- Involvement from staff at all levels;
- Adequate resources;
- Accurate information to enable the management of the programme;
- The identification of priorities;
- Reliable, credible and timely reporting for feedback, monitoring and targeting purposes;
- Regular reviews to assess progress and set future priorities; and
- Dissemination of the successes of the programme to interested parties.

You may also consider formalising your environmental auditing and reporting procedures by setting up an Environmental Management System in your company, based on standards such as ISO 14001 or the EU’s Eco-Management Audit Scheme (EMAS).

These systems can be implemented using the new British Standard BS8555, which includes environmental performance evaluation and is suitable for smaller businesses. To keep up with developments in this area, sign up for the Environment Agency’s free online newsletter, ‘Business Environment News’:
<http://www.environment-agency.gov.uk/business/news/default.aspx>

Free Green Audits

Envirowise is offering free environmental audits to UK businesses. Any kind of business can apply, but Envirowise can only conduct a limited number.

Eligible companies will receive a report summarising the advisor’s findings, which will include an action plan to help you prioritise where to focus your effort, savings targets, and references to other Envirowise publications and software that will help with your implementation plans.

An alternative is to pay for an audit: the Institute of Environmental Management Assessors (IEMA) website has details of registered environmental assessment firms at www.iema.net

The Enhanced Capital Allowance Scheme

The Enhanced Capital Allowance (ECA) scheme was introduced in April 2001 and is designed to offer sizeable environmental tax breaks to business by providing 100 per cent first year allowances for spending on energy-saving technologies, water conservation technologies, low carbon dioxide emission cars and natural gas, biogas and hydrogen refuelling infrastructure. This enables a business to write-off the whole cost of the investment, which can provide a helpful cash flow boost.

The scheme aims to encourage businesses to invest in plant and machinery that lowers carbon emissions. The designated technologies have a wide application across businesses, enabling a wide range of businesses to make energy-saving investments maximising the benefits to the environment.

Schemes available that qualify for ECA are:

- Energy-saving plant and machinery
The Energy Technology List currently includes 14 qualifying classes of energy-saving technology and over 13,000 energy-saving products. The qualifying technologies that attract the ECA are:
 - Air-to-air energy recovery;
 - Automatic monitoring and targeting equipment;
 - Boilers;
 - Combined heat and power;
 - Compact heat exchangers;
 - Compressed air equipment;
 - Heat pumps;
 - Heating ventilation and air-conditioning zone controls;
 - Lighting;
 - Motors and drives;
 - Pipework insulation;
 - Refrigeration;
 - Solar thermal systems; and
 - Warm air and radiant heaters.
- Low carbon dioxide emission cars and natural gas, biogas and hydrogen refuelling infrastructure
Enhanced Capital Allowances are available for capital spending from 17 April 2002 to 31 March 2013 on:
 - New cars with carbon dioxide emissions of not more than 120gm per kilometre driven for use in their business;
 - Natural gas and hydrogen refuelling equipment at refuelling stations.

- Water conservation plant and machinery
The Water Technology list includes the following technologies that attract the ECA:
 - Cleaning in place equipment
 - Efficient showers
 - Efficient taps
 - Efficient toilets
 - Efficient washing machines
 - Flow controllers
 - Leakage detection equipment
 - Meters and monitoring equipment
 - Rainwater harvesting equipment
 - Small scale slurry and sludge dewatering equipment
 - Vehicle wash water reclaim units
 - Water efficient industrial cleaning equipment
 - Water management equipment for mechanical seals
 - Efficient membrane filtration systems

More information is available from www.eca.gov.uk

Useful Links

Defra: Climate Change Agreement
www.defra.gov.uk/environment/cc/Intro.htm

Defra: Waste and Resources Action Programme
www.defra.gov.uk/corporate/delivery/landscape/bodies/waste-resources-action-programme.htm

Enhanced Capital Allowance Scheme
www.eca.gov.uk

Environment Agency NetRegs (Regulations)
<http://www.netregs.gov.uk/netregs>

Environment Agency
www.environment-agency.gov.uk/business

Envirowise
www.envirowise.gov.uk

Green Business News (IT)
<http://green.itweek.co.uk>

Green Businesses (Tourism)
<http://www.green-business.co.uk>

Waste Watch
www.wastewatch.org.uk

Guide on how to calculate your carbon footprint

The Carbon Trust (www.carbontrust.co.uk) has published a guide for businesses and other organisations which explains what a "carbon footprint" is and how to calculate it. The Carbon Trust is a private company which was set up by the Government to advise businesses, public authorities and other organisations on how to reduce their carbon dioxide emissions. The guide is available at www.carbontrust.co.uk/publications/publicationdetail.htm?productid=CTV033

A "carbon footprint" is the amount of carbon dioxide a business or organisation generates. Carbon dioxide emissions are usually associated with power plants and industrial activities but all businesses and other organisations (such as offices, retailers, banks, insurers, hospitals, schools and local authorities) emit carbon dioxide, whether directly or indirectly. For example, offices need electricity for lighting and to power computers and other equipment. So, the more electricity they consume, the more electricity needs to be generated to meet that demand. And since most power plants use coal or gas, they are a significant source of carbon dioxide emissions, which in turn is the main culprit in climate change.

A large number of businesses and organisations have announced that they are planning to reduce their carbon footprint and in some cases become "carbon neutral". It is therefore important that businesses and organisations use similar methodologies when calculating their carbon footprints so as to make it easier to compare them.

Further Information

This publication is for general interest - it is always essential to take professional advice on specific issues.

We believe that the facts are correct as at the date of publication, but there may be certain errors and omissions for which we cannot be responsible.

Acknowledgment

¹ The Department for Business, Innovation & Skills (BIS) was formerly known as the Department for Business, Enterprise and Regulatory Reform (BERR) and before that was called the Department for Trade & Industry (DTI).

² © This publication is based partly on information published by Business Link and the Environment Agency and Crown Copyright therein in duly acknowledged.

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