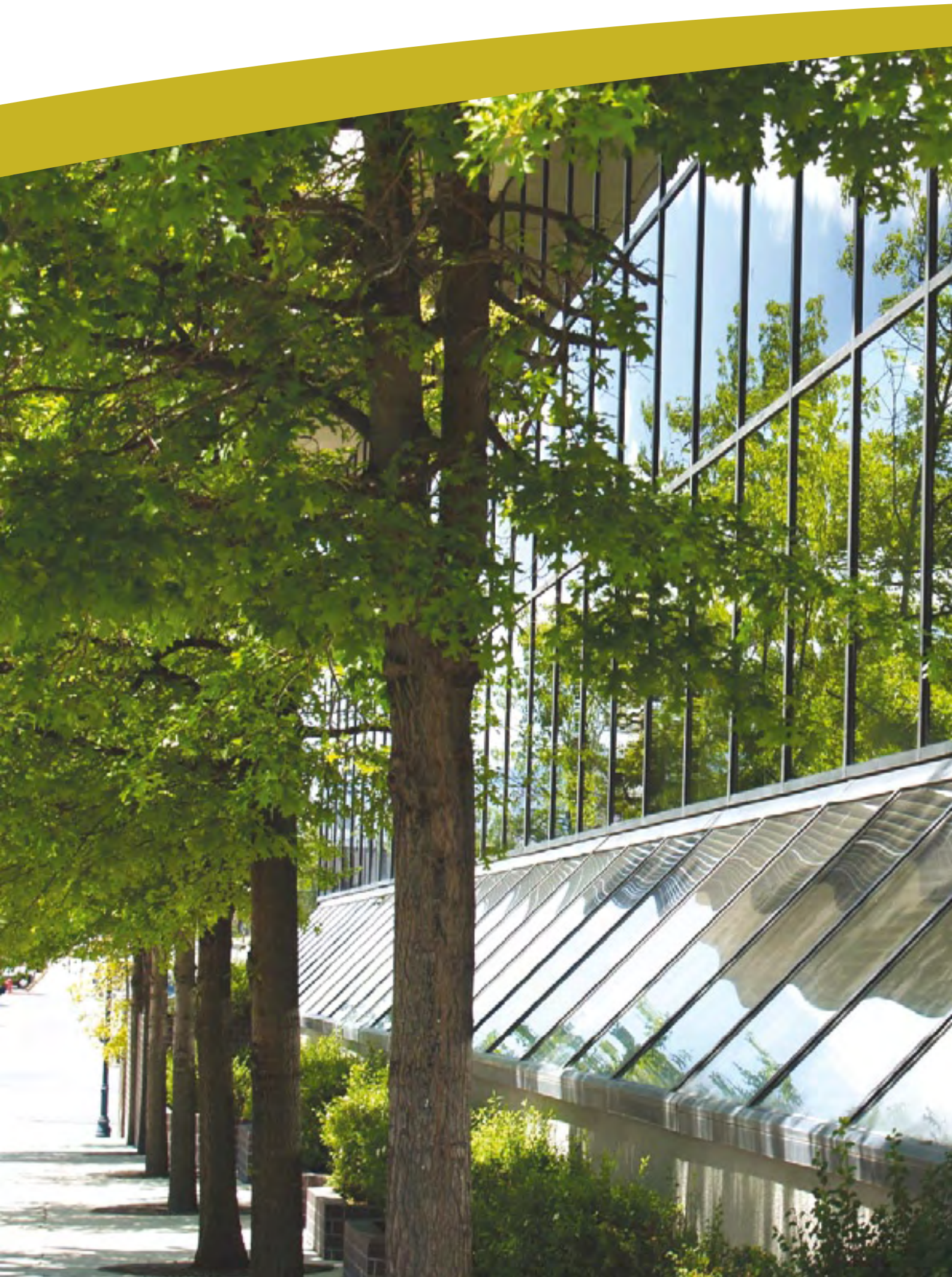


Go Green at Work

A handbook for union
green representatives





Foreword

Climate change presents a challenge to everybody, and the time has come when we must act. Some of the measures needed are straightforward and relatively painless. Others may be more difficult. But unions have to be involved – winning workplace commitment, encouraging reluctant employers, and making sure that far-reaching change is fairly negotiated. Making workplaces sustainable is the key to making jobs sustainable.

Trade unionists have a special insight into the battle against climate change. We understand the power of collective action and believe individuals can best tackle climate change when working together.

Just as we understand the power of the collective in the workplace, we also understand the need for international solidarity. Climate change impacts on us all, and most of all, those in the developing world.

The TUC is supported by the Carbon Trust Networks Initiative, in a project to help our members reduce energy usage and cut carbon emissions.

Together, we can tackle climate change.

A handwritten signature in blue ink, reading "Brendan Barber". The signature is written in a cursive, flowing style. Below the signature is a short, horizontal blue line.

Brendan Barber
General Secretary, TUC

Checklist

Twenty questions when working out how green your workplace is:

1. Has the organisation had an environmental or carbon audit?
2. Has it implemented any recommendations?
3. Are unions involved in progressing environmental decisions? (see p19)
4. Does the employer have an accredited Environmental or Carbon Management System (see p27) which should include a way of prioritising, monitoring and working with staff and union(s)?
5. Does heating or cooling keep workers comfortable without wasting energy? (see p31)
6. Is the workplace properly insulated and draught-proofed?
7. Are the thermostats in the right places and set to the right temperature (19°C for heating, 24°C for cooling)?
8. Are there automatic power reducing features, e.g. motion sensor lights, timers, power downs? (see p36)
9. Are all bulbs low energy? Are all computer monitors flat-screen?
10. Are eco-options for equipment enabled and are staff trained on using equipment in an eco-friendly way?
11. Is all equipment turned off fully when not in use? If not, why?
12. Is there a commitment to buying equipment and goods only when necessary, and sourced from suppliers with good labour and environmental standards?
13. Is offsetting only carried out as a last resort after looking at energy saving, sourcing green electricity, and onsite renewable/CHP generation? (see p41-46)
14. Is there an up-to-date travel plan that promotes low-carbon transport and reduces unnecessary travel, negotiated with the union? (see p47)
15. Are there effective procedures to minimise the use of all resources including energy, paper, raw materials, packaging and disposable items? (see p54)
16. Is everything recycled that can be, and is everything bought recycled where possible?
17. Are water saving measures in place? (see p59)
18. Are the catering arrangements satisfactory or is food over-processed or packaged?
19. Does the organisation know its carbon footprint? (see p80)
20. What key environmental indicators does it publish? (see the 'Research' section)

Contents

2	Taking action
3	How to use this handbook
3	The case for action
5	What can we do?
6	Why is climate change a trade union issue?
10	Union green reps – an overview
15	Mapping workplace environmental concerns
19	Negotiating on climate change
26	Communication
27	Environmental management systems, labelling and accreditation
30	Understanding the issues
31	Heating, cooling, ventilation and insulation
36	Lighting and electrical equipment
41	Renewable energy
45	Offsetting
47	Work-related transport
54	Reduce, re-use, recycle
59	Water
63	Green finance and investment
67	Greener procurement and supply chain
68	Beyond the Workplace – policy and campaigning
72	Resources
73	How to use these resources
74	1. A model Joint Environment and Climate Change Agreement
80	2. Calculating carbon savings
83	3. Running a union 'green' event
86	4. Suggested survey
89	5. Transport review form
92	6. Union green representative appointment form
93	7. Research and sources of further information
95	8. Glossary of terms and jargon buster
99	Sources

Taking action



“It is within our gift, within this generation, to either save or destroy the planet we live on. It all boils down to the choices we make now.”

Frances O’Grady TUC Deputy General Secretary

How to use this handbook

Have you been wondering:

- what union members can do about climate change?
- why everyone is talking about ‘carbon footprints’?
- how workplaces can reduce their energy usage?

If the answer to any of these questions is yes, then read on.

This handbook is aimed at trade unionists who have an interest in the environment, and particularly climate change. It is a practical guide to taking action in the workplace, which we hope will inspire you. The first section, **Taking action**, gives guidance on researching the environmental performance of your workplace and negotiating for improvements, and includes a list of suggested workplace activities (see p11-12).

The second section, **Understanding the issues**, covers tips on specific issues (like heating, electricity, water use or transport). The third section, **Resources**, includes a model agreement that you may like to use, including terms of reference for a Joint Environmental Committee and the union green rep role. It also has a jargon buster, guidance on measuring carbon and energy and putting on green events at work.

This handbook is available to browse online at www.sustainableworkplace.co.uk. You might also want to visit www.carbontrust.co.uk/shrink for additional factsheets, checklists and case studies, including sector-specific information for

most types of employer and details of support for organisations.

This handbook is one of the outputs of the TUC GreenWorkplaces project, which has benefited from the support of the Carbon Trust’s Network programme.

The case for action

Climate change is a growing concern for all of us. We don’t need to be scientists to talk with others about climate change – it’s much more important to talk about our personal experiences and concerns. But, briefly, scientists say that by burning oil, coal and gas (fossil fuels), either directly or while making electricity, we are emitting too much carbon dioxide (CO₂), which is causing climate change. Workplaces burn energy, consume resources and generate waste and travel so they are an obvious place to tackle climate change.

The science is clear

The International Panel on Climate Change (IPCC), the UN's panel of climate change scientific experts, has spent years assessing the scientific evidence from across the world. In 2007 it concluded that "warming of the climate system is unequivocal".

The IPCC also concluded unanimously that the cause of climate change was "very likely" due to increased amounts of greenhouse gas emissions, like carbon dioxide (CO₂) in the atmosphere, which trap the sun's heat. It stated that this was "due primarily to fossil fuel use and land-use change". Greenhouse gas concentrations have increased by nearly a third since the Industrial Revolution.

According to the IPCC, average global temperatures have already increased by nearly 1°C. It might not sound like much, but we are already seeing more extreme weather as a result, including heat waves, hurricanes, floods and droughts. Currently 150,000 deaths a year are attributable to the



effects of climate change, and the 2003 heat wave killed over 2,000 people in the UK alone. The UN predicts that in 2010 there will be up to 50 million environmental refugees.

There is scientific consensus that an increase of over 2°C must be prevented as it would have damaging worldwide impacts and the possibility of reaching a 'tipping point' where devastating, possibly catastrophic, climate change would become unstoppable, accelerated by harm to the ice, seas and forests (which currently absorb or reflect much of our CO₂). Many scientists, like James Hansen (formerly the US chief climate scientist), now think we have less than 10 years to act before it is too late.

Key facts

The Kyoto Treaty requires the most developed countries to cut their greenhouse gas emissions by 5 per cent on average by 2012. The treaty covers six greenhouse gases:

- **Carbon dioxide (CO₂)** – carbon emissions from burning fossil fuels (coal, oil, petrol, natural gas) and deforestation.
- **Methane** – principal sources include livestock and decaying waste.
- **Nitrous oxide** – the main source is use of agricultural fertilisers.
- **Hydrofluorocarbons** – substitutes for CFCs, and used as solvent/cleaning agents, refrigerants, foam-blowing agents, and air conditioning fluids.
- **Perfluorocarbons** – by-products of aluminium production.
- **Sulphur hexafluoride** – a gas used in the electronics industry as an insulator.

About 85 per cent of greenhouse gas emissions are from CO₂.

Why this matters

The UK Government's chief economist, Nicholas Stern, calculated that it would cost one per cent of global income to tackle climate change if we start now. If we don't, the cost of dealing with the results could reduce income per head "by between five and 20 per cent". The report made clear that "business as usual" would lead to "more than a 50/50 chance that the temperature rise would exceed 5°C. This rise would be very dangerous indeed."

There are other reasons why we need to reduce our use of fossil fuel energy. Fuel security is becoming more of an issue, and costs are rising (with some analysts predicting oil at \$200 a barrel in the next few years). This is for several reasons. Oil reserves have already peaked; the output of many existing oil and gas fields (including the North Sea) is dropping and much of the remaining oil is difficult, expensive and damaging to extract. Demand is growing from rapidly industrialising countries like China and much of the remaining oil and gas is in unstable regions like the Middle East, Africa and the former Soviet Union, where arguably, its availability worsens conflict.

The focus of this handbook is climate change, but there are further environmental concerns too. Other

pollutants and toxins are damaging the health of people and life on the planet – and our chances of passing on a pleasant and safe environment to our children. For example, a quarter of the world's population live in areas where air pollution exceeds WHO safety standards, and 90 per cent of the UK's factories are located in the 10 per cent poorest areas.

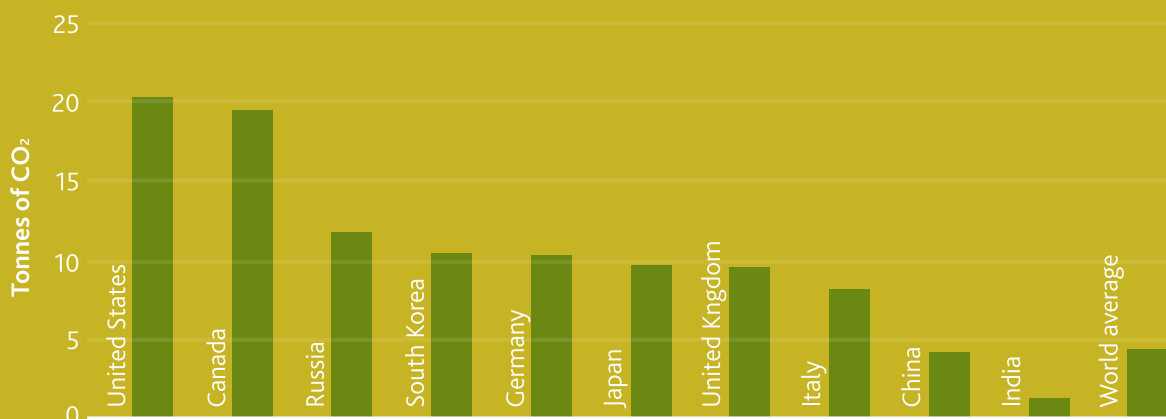
"The roots of environmental injustice directly reflect inequalities in power. It's easier to locate and maintain highly polluting enterprises in communities without power."

Michael Belliveau
US environmental activist

What can we do?

We have to stop rising CO₂ emissions by reducing our use of fossil fuel energy. International action is important, but developing countries like China will agree to limiting their

Carbon emissions per person – top 10 emitting countries, 2005



Source: US Energy Information Administration, 2007

CO₂ emissions only if developed countries, like the UK, also take strong action to reduce their own emissions and adopt more climate-friendly ways of living and working. This is doubly important, as a significant proportion of developing countries' emissions – around a quarter, in the case of China – are generated by producing goods for Western consumers.

“The developing world cannot fairly be expected to take action on climate change until the developed world accepts responsibility for its role in past and present carbon emissions and acts accordingly”

SERA, *Red Green Socialism*, 2007

In September 2006 the Tyndall Climate Centre in Manchester advised that a nine per cent annual reduction in UK emissions was necessary to stabilise the climate, “with drastic cuts by 2010”. UK energy consumption has been increasing by about 1 per cent a year since 1990.

Most governments agree that increasing energy efficiency is key in the battle against climate change. Not only is it the quickest way to reduce CO₂ emissions – giving us more time to reduce our dependence on fossil fuels and also to increase the supply of alternative energy sources – but it would also have huge financial benefits. Workplaces are key places to start making these energy savings. Individuals, unions, communities, employers and governments all have a role to play.

“We do not have to wait for major technical breakthroughs to make deep cuts in emissions. We know that there is already huge scope for change...”

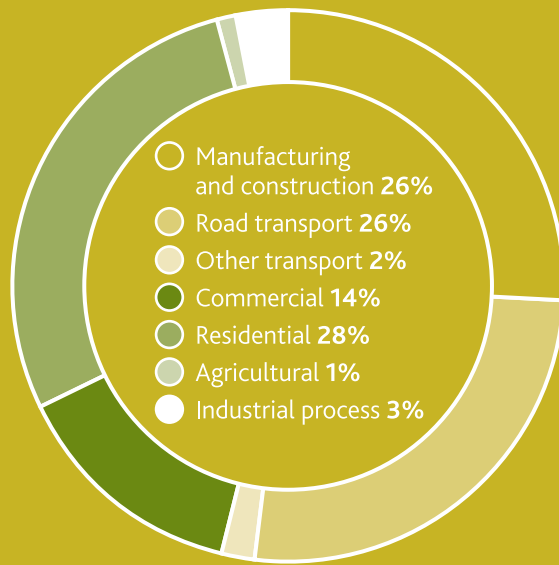
Ecological sustainability is about social justice; it is not about the affluent – the biggest polluters – buying their way out of their obligations. The changes that are needed require a combination of individual and collective action.”

Compass – *The Environment We Inhabit*, 2007

Why is climate change a trade union issue?

Trade unions have a long history of taking action on environmental issues, campaigning for a safer, healthier working and living environment. The workplaces that unions organise – and seek to organise – burn energy, consume resources and generate waste. Over half of carbon emissions are work-related and British companies waste £1 billion of energy every year, so there is huge scope to act. Workplaces are better placed than individuals to install cost-effective measures.

Carbon dioxide emissions
by end user, 2005



“Climate change and environmental destruction are key issues that will impact on the union’s membership and their families across all sectors throughout this century and beyond according to the vast majority of scientific opinion.”

Unite/Amicus National Executive, 2007

“It is within our gift, within this generation, to either save or destroy the planet we live on. It all boils down to the choices we make now.”

Frances O’Grady
TUC Deputy General Secretary

There is a wide range of benefits to unions and workers if environmental matters are included on the collective bargaining agenda:

- Environmental protection benefits everyone.
- Jobs are protected by reducing energy costs rather than staffing costs.
- By investing in improvement of the buildings, processes, equipment and/or staff training, the employer is making a long-term commitment to the future of the organisation.
- Extending the areas of policy and expenditure on which unions are informed and consulted, to include environmental questions.
- Anticipating possible future changes in the organisation, particularly when energy costs are rising.
- Being aware of any external pressures on the organisation, including issues around non-compliance with environmental regulations.
- If organisations achieve cost savings, a proportion could be reserved for rewarding staff directly, e.g. through bonus schemes.
- Alternatively, savings can be ring-fenced for further environmental investment within the organisation, or donated to charities selected by staff. Either of these could form part of a ‘green fund’ overseen by a joint environment committee.
- Action and learning at work can encourage greater energy and money savings at home (helping tackle fuel poverty), and vice versa.
- Healthier, safer workplaces – for example, correct temperatures, improved natural daylight (see p24).
- Improved transport arrangements for workers.
- Organising benefits.
- Encouraging employers to create new, greener jobs.
- More flexible working arrangements.

According to a recent YouGov survey, 70 per cent of workers said they would like to do more about climate change but felt that they needed more support from their employers. Only a fifth thought

A Stern warning

The Stern report states: “The investment that takes place in the next 10 to 20 years will have a profound effect on the climate in the second half of this century and in the next. Our actions now and over the coming decades could create risks of major disruption to economic and social activity on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century. And it will be difficult or impossible to reverse these changes.”

Source: Stern Review The economics of climate change, 2007

their employer was doing enough. The Labour Research Department survey of nearly 700 union reps found that reps were frustrated with the slow pace of action by employers. While most employers (around two-thirds) had begun to address their environmental performance, only one in five had comprehensive waste and recycling policies in place, and even fewer – one in nine – had taken comprehensive action on energy efficiency so far. Over half of workplaces did not provide training on environmental issues and less than a quarter had an environmental management scheme in place. An earlier TUC survey found that 99 per cent of workers supported taking environmental measures at work.

There is much you, as a union member, can do. Unions are in a key place to:

- encourage employers to take action
- ensure employers' public statements on the environment are translated into action in the workplace (not just PR 'greenwash')
- win workforce commitment
- ensure that far-reaching change is fairly negotiated
- make use of existing union rights and negotiate for improved ones.

Recruiting and organising

Union environmental strategies on greening the workplace can bring spin-off benefits by renewing union activity at work, addressing a modern and crucial challenge for working people.

The environment is of major concern to younger people, whose interests are often focused on the subject and who may have low awareness of trade unions, while older members see the environment as a fresh reason to get active again.

This means there is a need for the role of union green representatives (UGRs) to be fully recognised by unions and integrated into their organisation at all levels – workplace, branch, regional and national.

Economic competitiveness and green jobs

Government targets, regulation and market forces are all increasing the pressure for more environmentally friendly products and services. Unions believe that businesses should take a longer-term view of their investment priorities, products and services, and are beginning to use environmental arguments and bargaining strategies to protect the interests of members. The most

stable jobs of the future will be based on principles of environmental sustainability.

The green jobs agenda

Increasingly, companies and organisations are looking not just at how they do things, but at *what* they actually do, carrying out 'full life-cycle analyses' of their products. Some are even looking at moving into different products and services. This is an area that the workforce must have a voice in. These changes have historical precedents. In the mid-1970s trade unionists at Lucas Aerospace, faced with redundancy, came up with an alternative industrial plan to make more socially and environmentally relevant products, including wind turbines and heat pumps, using existing skills and machinery.

There are opportunities for new, greener jobs in all sectors. Renewable energies like wind and solar power, and public transport systems, can create millions of new jobs. *Greening the Workplace*, a 2005 report by the TUC, highlighted Germany, where over 1.5 million people work in environmental technology industries. Of these 200,000 construction workers are employed in a programme that improves the energy efficiency of people's homes, and 200,000 work in renewable energy.

In the US, unions have recently ensured environmental clauses are inserted into trade agreements, along with workers' rights protection. European trade unions have managed to get similar clauses inserted into governments' procurement of public transport rolling stock (see p67 for more on procurement).

"When people say [about climate change solutions] 'this is expensive', they also mean, 'this creates jobs'."

Senator Bernie Saunders
the only Independent (Socialist) Senator in the US
and author of a Climate Change Reduction Bill.

The need for collective, progressive solutions

How will the costs and benefits of efforts to address global warming be distributed? The programmes to deal with climate change can differ widely and there will be job gains and losses in the shift to a low-carbon economy. Unions understand the power of collective action and believe individuals can tackle environmental problems and make a difference best when they work together. This joint approach will help secure long-term investment in green jobs, develop new skills and training strategies, and secure a union voice in dialogue with government and industry.

Global solidarity and environmental justice

There is little chance of peace and growing prosperity among the world's 6.5 billion population while inequalities and injustice thrive. Unions have an obligation to speak out for union members not only in the UK, but also across the world, on fundamental issues of wealth, poverty, and the creation of sustainable economies on our ever-shrinking planet.

Working time policies

Environmental considerations can offer opportunities to ask for more flexible working time policies. For example, in hot weather the TUC recommends allowing staff to work more flexibly, letting them finish early or late to avoid rush hour crushes, and allowing more frequent rest breaks. Night heat is often a problem in heatwaves, meaning disrupted sleep, and policies could be adapted to take this into account.

Flexible hours might also encourage more cycling, as cyclists may be put off by rush hour traffic.

And in the bigger picture it has been argued (for example, by Danish trade unions) that avoiding climate change is about sustainable use of *all* resources, including workers themselves. So tackling the long hours culture in the UK would be more sustainable for *human* resources, as well as energy resources used with late-night use of lighting, heating and equipment. At BAe Systems GMB reps have negotiated a reduction to a four-day week without loss of pay, with the factory using less energy.

Union green reps – an overview

Green initiatives at work often start when someone decides enough is enough, and it's time to change the way people work. This section look at the role of union green reps.

“Trade unions have a unique and valuable role to play in raising awareness and mobilising people to help us address the challenge of climate change. I want to congratulate those Union Environmental Reps who have demonstrated how negotiating skills and experience can be used to support environmental outcomes.”

Joan Ruddock
Climate Change Minister, 2007



Who can be a union green rep?

The short answer is anyone keen enough!

Unions are taking a flexible approach to tackling sustainability issues at work; shop stewards may take the lead, as may health and safety reps, or a new breed of UGRs. The TUC believes that environmental issues should not be 'ghettoized' as, for example, a safety rep's function. In unions like the GMB and Unite, the role of shop steward often includes health, safety and environmental issues.

So unions should be flexible – as long as they ensure that UGRs can raise environmental issues with management, be consulted, and ensure action is taken.

What can a union green rep do?

Just as unions and employers work together to improve health and safety in the workplace, through safety committees where trade union appointed safety reps negotiate with management, UGRs can be elected to champion environmental issues in the workplace. They can raise awareness of green issues in the workplace and ensure that they are included in the negotiating/bargaining agenda.

Their main concern is to agree a joint approach to 'greening the workplace', ideally formalised in a collective agreement and overseen by an employer/union committee that addresses environmental issues.

Where do I start?

You might want to look at training courses first (p14). If you want to start with a few simple actions like putting up posters, or informal discussions with colleagues to encourage them to get involved, then go for it. If you're keen to do more, here are some suggested steps:

1. The first thing you need to do is gather information. See p15 for more advice, but broadly you'll need to:
 - a. Walk around your building at different times of the day using the checklists in this handbook to identify problems and priority areas.
 - b. Ask workers what they think of the working environment. You may want to do this as part of your walk-round, but you should also give workers other opportunities to express their views – e.g. through a survey, meeting, or training session/workshop.
 - c. Ask management for information on current environmental impacts.
2. Establish a forum (e.g. a joint environment committee) or use existing forums (e.g. a health and safety committee) so that union reps can raise outstanding issues with management and get them on the bargaining agenda (see p19).
3. Work with management and other union reps to negotiate workplace agreements on specific environmental issues, including facilities time for union green reps (see p19).
4. Use the **Resources** section to see how your workplace's energy and environmental performance compare with others that are similar. This will give you an idea of what is achievable, and something to compare back with after you've taken action.
5. Work together to implement awareness schemes (see p26), open days (see p83) and training (see p14) to promote actions that staff can take themselves to save energy and resources and improve working conditions.
6. Ask management to quickly implement measures that are low cost (i.e. have quick payback times, of less than a year).
7. Negotiate for investment in longer-term options like more energy- or resource-efficient systems, equipment, machinery and building fabric, or renewable energy generation.

8. Prioritise; consider what issues are most important in your workplace. Don't try to do everything at once.
9. Be careful that a change introduced to solve one problem does not create difficulties elsewhere.
10. Get outside advice where appropriate, and consider whether an accreditation scheme could be helpful.
11. Remember to feed back to colleagues about what is happening, through newsletters, meetings, noticeboards and discussions.
12. Don't worry! You don't have to do all of this – and certainly not all at once, or by yourself. This handbook aims to give you guidance on all the above areas.

There is no specific limit on the number of UGRs – it will depend on the size of the workplace, though if time off is required (see below) this will need to be taken into consideration. By using environmental issues as organising issues you can also encourage involvement from other members.

As stated above, negotiating an environment and climate change agreement, and establishing a Joint Environment Committee, will help ensure roles and responsibilities are clearly laid down. You will be able to get support from union and management colleagues for many of these activities.

Organising

Greening the workplace can't be 'done' to members. Instead you'll need to think creatively about how you engage them in projects or activities.

Encourage members to take on the UGR role, or simply ask them to help with surveys, walk-rounds or distributing publicity about the project in their work area.

Also, think about how you can include non-members in greening the workplace projects. Non-members

often join the union as a direct result of UGRs' positive work on the environment, and may become advocates or activists within. Talking to colleagues about the environment may also give you the opportunity to explain more about trade unions generally. A useful leaflet on the reasons to join a trade union is available from www.unionlearn.org.uk/learning/learn-1979-f0.cfm

Finding out about people's environmental concerns will raise the profile of your union and could also be used to identify areas of strength and weakness for union organisation in your workplace: Where are your members/non-members? Are men more likely to join the union than women (or vice versa)? Are some departments or sections better organised than others, and if so why?

The environment and organising are both important in their own right. If members feel that environmental issues are only being used as a recruitment tool, campaigning will probably be less successful. Every workplace is different, and in planning your greening the workplace project remember to value the environment for its own sake.

What rights do UGRs have?

The short answer is, it depends. In an organisation that formally recognises a trade union, the union's representatives, including shop stewards, health and safety reps, and other lay officials enjoy two key legal rights:

1. Time off with pay to carry out their various trade union duties. Where this relates to negotiations with employers over specific matters, such as pay and conditions, recruitment, work allocation, or representing individual members in grievance and disciplinary cases.
2. Time off to attend union-organised training.

In the TUC's GreenWorkplaces projects, and many other workplaces, unions have been extending

these rights to cover a widening environmental agenda at work.

In addition, health and safety reps enjoy specific rights under the Safety Reps and Safety Committees Regulations 1977. Under these regulations:

- Recognised unions have the right to appoint workplace health and safety reps.
- Employers must set up a joint health and safety committee and consult with safety reps on workplace safety issues.
- Safety reps have a range of rights to investigate health and safety issues at work.

This means that through agreement with the employer the scope of union activities can be extended to cover environmental issues at work, such as energy use, recycling and green travel plans, whether that role is covered by shop stewards, health and safety reps, or formally recognised UGRs, who may be new to union activities.

What's the catch, then?

Despite what has been said above, technically, there is no legal right for a union to elect a specifically green rep and expect the same benefits as other reps have. In other words, the law is lagging behind best practice at work.

The TUC is campaigning for better rights for UGRs, to help them influence the environmental agenda at work. The campaign includes the call for legal rights to paid time off to carry out these functions, and to attend training, through amendments to the ACAS Code of Practice, *Time off for Trade Union Duties and Activities*.

But even without these new rights, many trade unionists have decided to just get on with the job and negotiated new rights to be involved in environmental issues, for employers to formally recognise the role of UGRs, and for voluntary agreements with employers on facilities and

facilities time (time off with pay for training and to carry out their duties).

Reps have also negotiated the creation of new joint environment committees. In most workplaces the bargaining agenda is decided through negotiation, not by law, so there is no reason why environmental issues should not be formally included in the bargaining agenda.

European Works Councils

If you are a union representative in a multinational company that operates in several European countries, there may be a European Works Council (EWC). Your union should be able to tell you if there is an EWC operating in your company and who the UK members are. UK EWC members might take up environmental issues at this level.

Although environmental issues are not listed in the annex of the EWC's directive, which sets out the areas that EWCs should cover, 43 per cent of works councils do discuss them and reach agreements.

Integrating green reps into the union

The relationship between UGRs and their branch or workplace committee, and their access to facilities time, will vary by union. It is up to local branches to resolve these issues, but always seek advice from your union if in doubt. UGRs can best help the union to organise around environmental issues if they are fully recognised by unions and integrated into their organisation at all levels – workplace, branch, regional and national.

Many unions now have conference policies supporting green reps. The 2007 UCU conference made an undertaking to: "Develop the environmental role of union reps and campaign to extend legal rights to paid release for their duties and training." Meanwhile, the 2007 Amicus/Unite conference recognised that "the work necessary

to develop the union's profile in dealing with environmental issues may require workplace representatives to be appointed with a specific remit in this field... environmental issues are an integral part of the collective bargaining agenda."

What do green reps need?

UGRs will require:

- a reasonable amount of time to carry out their functions, e.g. workplace inspections; meetings with management and colleagues as necessary; dealing with relevant paperwork; and communication
- resources to communicate with members e.g. a desk, access to a phone and photocopier, etc. Some of these should already be available via existing union structures and facilities
- paid time off to attend relevant training – including initial training when taking up the post, occasional refresher training to maintain their expertise, and specific training in response to newly identified concerns or key developments in environmental thinking.

There is high-level support for the Government to go further. Alan Johnson MP said: "Unions play a big role in everything from pensions to skills to work-life balance and the impact of globalisation. Climate change and the environment are now so important that unions should have a role there as well. For example, the legal responsibilities of health and safety representatives could be extended to cover environmental protection as well."

Training UGRs

The effectiveness of UGRs depends very much on the training they get. Free training for anyone interested in taking on the UGR role is available through courses provided by the TUC and individual unions. The TUC runs three-day courses at local colleges that are accredited by

the Open College Network. To apply, talk to your shop steward, branch secretary or full-time union official.

Visit www.unionlearn.org.uk for details of courses in your region, or to apply for the new online Union Green Representative course for union reps that need a convenient and more flexibly delivered course.

Getting time off to train

Some union reps have found it difficult to access trade union environmental education courses because of the lack of legal rights to time off for training in this area.

But union reps can and do negotiate with their employer to obtain the necessary time off for environmental training. Check if there is an existing right to time off for union training, as it often gives scope for both new and existing union reps to take a certain number of days.

Green reps – particularly those who have never held a union position before – may also wish to take advantage of other TUC/unionlearn training available, such as the three-day introductory shop stewards or health and safety courses.

Training for everyone

Training in environmental issues is crucial if workers are to understand the issues and take action in the workplace. Most environmental accreditation schemes require employers to demonstrate that key workers have been trained – and also that all workers have been made aware of environmental issues. Where it does take place, good environmental training is often hugely popular, particularly if it makes the connection between people's working lives and their home lives. However the 2007 LRD Environment survey of union reps found that fewer than half of employers had provided any kind of environmental training.

Union reps are in a good place to negotiate for workers at all levels to be able to take part in high-quality, appropriate environmental training – such as full- or half-day briefings for everyone. One option is for your employer to work with your union's education department, or the TUC's Education Department, to put on a joint environmental training course, at either your workplace or a nearby college.

Case study: cutting carbon use at work

At the Department for Food, Agriculture and Rural Affairs office in York, PCS and Prospect reps have undertaken training in cutting carbon at work. Energy initiatives are being discussed through the existing joint negotiating committee (JNC) on site, with management supplying baseline environmental data to the JNC for the first time, enabling them to work out the department's carbon footprint. Management has agreed to negotiate a sustainability policy and unions and management are working together on awareness-raising including 'switch-off' campaigns. As part of this, union reps ran a Going Green at Home training event, which was open for all to attend.



Mapping workplace environmental concerns

Introduction

When developing your GreenWorkplace project you will need to find out the specific environmental concerns of your members or potential members, as well as the wider company or organisation you work for. You will have your own areas of interest to focus on, but some you might like to consider are:

- energy use in buildings (heating/lighting/IT/machinery)
- transport to and for work
- water use
- recycling and reducing waste
- purchasing policy, e.g. use of recycled materials – like paper for photocopiers etc.

See "Understanding the Issues" section for more on all of these areas.

If you ask people just about 'being green' they will often tend to focus solely on recycling and waste as this is highly visible.

Establishing baselines and monitoring progress

To be able to improve environmental performance your organisation needs to be clear where it is starting from, so a key starting point will be establishing a 'baseline' of environmental activities, and of impacts. This will allow you to set targets for action, and check and report progress on a regular basis. This baseline will also form the basis of most environmental or carbon management schemes (see p27).

The quickest way to reduce your workplace's carbon footprint is to save energy, so it's important

to understand exactly how it's being used during your initial survey.

The TUC's online carbon log allows reps to do this in relation to energy/carbon. See p80 for more on measuring carbon impacts.

Identifying the issues

Talk to management

If you haven't already made an approach to management, now is the time. If they understand what you are trying to achieve they should be willing to share information with you.

It is a good idea if 'walk-round audits' (see p17) are carried out jointly between reps and the relevant manager(s), which will give you an opportunity to build relationships and ask questions about what they think the main environmental issues in the workplace are. You might want to carry out other surveys jointly too, or you might prefer to keep these confidential.

To make things easier and more sustainable in the long run, you could aim to negotiate an agreement that energy and environmental information will be shared with the union on a regular basis, preferably at a Joint Environment Committee.

Safety reps have extensive legal rights to information and to monitor whether appropriate actions are taken to address risk. You might also be able to use legal rights under the Information and Consultation Directive. See p72 for guidance on this, and also on how to research what others are saying about your organisation's environmental performance.

Questions to ask (probably not all at once!)

- Ask how the facilities or energy managers think the systems are controlled and maintained and what the issues are – their answers may be different from those the staff have given you.

- Ask managers which key personnel they think are involved with dealing with the environment. Who is in charge of purchasing?
- Ask for copies of energy bills. Are they estimates? You might also want information on water usage and waste.
- Ask for reports that might have been produced, e.g. regular maintenance reports or Carbon Trust or other external expert reports.
- Ask management, or the union health and safety rep, for any health and safety assessments that have been carried out that may be relevant. More guidance on health and safety is given throughout this handbook and on p24.
- Is the company/organisation planning any building or refurbishment work? A major refurbishment is a great opportunity to introduce measures that might otherwise be too expensive or disruptive to carry out. Current building regulations stipulate that if a part of a building is being refurbished consideration must be given to improving its energy efficiency. The CWU is currently working on greening its training college in Oxford, at the same time as carrying out works to improve disability access.
- Are there any relocation plans? Obviously this is a sensitive area, but if the workplace is moving to a new building it is a key time to improve the environmental footprint. Often there is a period of uncertainty before a move, which makes organisations reluctant to invest in capital expenditure, but action taken prior to a move is also worthwhile. It will get people thinking about green issues and make it less likely that areas are overlooked during a move when there are other concerns to consider. You can find a good guide at www.wwf.org.uk/core/about/scotland/sc_0000001900.asp
- Have they considered no-cost and low-cost measures? What is holding back implementation?
- Have they considered fitting automatic energy-saving features like motion sensor lights in

low-use areas, and automatic power down of equipment after working hours? These are popular with staff and increasingly widely implemented. They are also often recommended in Carbon Trust expert surveys.

- Are they considering longer-term measures? Employers may have had cost assessments done in the past, but with the spiralling fuel costs of recent years, such sums might look different now.

See **Understanding the issues** for more ideas on specific areas.

Walk-round audit

UGRs carry out periodic walk-round inspections of the workplace to check for outstanding issues, similar to those carried out by health and safety reps but with a significantly different focus. These aim to identify the key areas where energy is being wasted.

Your walk-round doesn't have to cover the whole workplace at once, but it could interest your colleagues in saving energy and encourage them to get involved and do walk-rounds of other areas.

It's a good idea to do a joint walk-round with the workplace manager responsible for facilities/energy. Your union may already do joint health and safety inspections so you could adapt that model, making sure that any problems are noted down for prompt action by a named individual and/or raised at the Joint Environment Committee.

A full checklist is available at www.sustainableworkplace.co.uk and mini-checklists are included in the **Issues** section. General points to watch out for are:

- energy being used unnecessarily
- controls and switches that are not clearly labelled
- indications of energy waste e.g. workers opening windows when the heating is on, or wearing light clothing in the middle of winter.

You will also want to find out how much power is being used overnight. Much of this will be due to

lighting or equipment that should be off. If possible, walk round the building late at night or early in the morning to see what has been left on and where, or work with management to take readings last thing in the evening, and first thing in the morning. Does the amount of energy used overnight surprise you?



Ask colleagues

- Talk to workers and get them to suggest ideas and discuss possible solutions, as well as raising issues.
- Remember to find out what workers on different shifts, and contract workers, are thinking: they may have valuable information, particularly if they are in the building out-of-hours.
- Consider doing a survey – a suggested starting point is on p86. Or you could design a survey on a specific issue, using the checklists in this handbook. When designing a survey remember that someone is going to have to analyse it. Try to ask no more than five or six questions. If you give people mostly yes/no or multiple-choice questions that makes it easier to complete and analyse. But always give people a chance to make 'any other comments'.

Questions to ask

- What do they think the main environmental issues are? What solutions can they think of? What do they think of your ideas?
- Are there issues about workplace comfort, or health and safety, that are related to the environment? What are they?
- Have there been environmental initiatives in the past? What do they think of them?
- Who do they think would help deal with environmental issues (including heating, transport, etc.)?
- Do they know when to turn things off? Are they sure they are completely 'off'? Often people are not quite sure whether something is really off, whether they are allowed to turn it off, or whether someone else will come round and do it.
- Do people understand how, and when, necessary controls and switches should be adjusted? You might need to ask more specific questions like:
 - When do they adjust the controls?
 - Why do they adjust the controls (e.g. to increase comfort or work efficiency)?

Compare how management thinks systems work, with how staff think they do. Is there a difference? This is valuable information that management may not be aware of, as colleagues may be more willing to raise concerns anonymously through you than directly with managers.

You can use the information gathered to negotiate for change, and to raise awareness.

Case study: Energy walk-rounds

The TUC's GreenWorkplaces project has been training reps to carry out energy walk-rounds in their workplaces and to adapt existing Carbon Trust energy audit checklists that tend to be aimed at managers, and used them for union purposes. An example of this adapted checklist can be found at www.sustainableworkplace.co.uk.

The Labour Research Department publication *The Environment and Climate Change – A Guide for Union Reps* gives examples of reps that have used imaginative methods to take action. Unite/T&G reps at the North West Institute of Higher Education said the union had taken part in an environmental audit of waste products and their disposal. A CWU rep at the Royal Mail had used health and safety risk assessments to raise environmental issues. A PCS rep at Revenue & Customs reported that reps had served a Union Improvement Notice over poor heating and air quality.

It is important to do walk-rounds a different times of the day, e.g. at busy times, at lunchtime, at the end or before the start of the working day when you would expect to be using less energy. Try to do follow-up walk-rounds to measure progress at least quarterly, e.g. when the clocks change or at the beginning and end of the heating season. Such inspections could also take place in response to specific concerns or complaints.

Negotiating on climate change

This section includes advice on negotiating an environment and climate change agreement, setting up a joint committee, and making a business case for environmental action. There is also a section on the benefits union involvement can bring, whether or not the employer has already recognised the importance of environmental action.

Setting up a Joint Environment Committee

To make environmental changes will require staff and management time and commitment. A joint union-management committee can provide the necessary oversight, structure, and mechanism for staff involvement. Some reps have established standalone environment committees; others have adapted existing committees like health and safety by extending their terms of reference and personnel. If an organisation is seeking to get accredited for its carbon or environmental management system, it will need to set up such a committee anyway.

Find out who is responsible for environmental policy and practice. This will frequently be more than one person and could include managers responsible for facilities, environment, health and safety, corporate social responsibility/PR, and possibly human resources (especially if they also look after travel). There may already be a working group, which could be a basis on which to build. All these people, as well as union reps, will have important information about environmental issues.

Information is linked to commitment, because people at all levels are more likely to act if they understand the financial and environmental impact of measures. It's a good idea to ensure the committee is clearly agreed on who has responsibility to make information available.

Commitment from the top and the grassroots is important. Your committee is likely to need appropriate union representation, operational managers and a senior champion with commitment to green issues as well as the clout to get policies and procedures changed – and money spent where necessary. Similarly, if there are senior shop stewards who are not themselves UGRs, they should be involved.

If cost savings are achieved, companies could ring-fence them for environmental projects within the organisation, or donate to external environmental projects. This 'green fund' could be overseen by the Joint Environment Committee, so that staff are involved in the decision-making. The fund could also be used to give a bonus to staff pay, as another way to incentivise staff to meet targets.



Negotiating a joint environment and climate change agreement

Negotiating an environment and climate change agreement, either as a standalone agreement or within an existing agreement, can help:

- secure employer commitment to environmental action, not just policies on paper
- ensure that environmental plans or strategies reflect what members want, not just what management wants

- ensure that workplace green projects and initiatives support the wider work of the union in the organisation.

You can negotiate with the employer a separate joint environment and climate change agreement, or include it within existing arrangements for union recognition and facilities time, or as part of a general agreement over such core issues as pay and conditions, or health and safety. It will very much depend on what is right for your workplace, and your union's policy and practice.

Your union's full-time officer or organiser should be able to help you negotiate an environment agreement, and you can also get support from your union's environment policy officer and/or the TUC's GreenWorkplaces project leader.

If your organisation is seeking an accredited environmental management scheme, then a signed-off joint environment agreement with terms of reference that include continually improving environmental performance, and an outline of roles and responsibilities of the key players, will be useful evidence.

You could negotiate a Joint Environment and Climate Change agreement around the model on p74. This can be tailored to meet the needs of your members, the policies of your union, and the context of your workplace.

A joint environment and climate change agreement can include some or all of the following:

- a commitment from both parties to the environment, employee involvement, and continuous improvement
- the number of UGRs and how the union will appoint them
- the amount of permitted paid time off for UGRs to carry out their duties, and undertake training
- facilities for UGRs such as a room to conduct interviews, use of telephone, email, web, noticeboards and so on
- mutual roles, responsibilities and procedures for dealing with issues
- clear objectives and monitoring policies
- the establishment of a joint environment committee comprising equal numbers of union and employer representatives
- links to health and safety, statutory risk assessments, and other policies and structures
- the undertaking of environmental and energy surveys and audits
- regular promotional activities regarding the environment
- right to information on energy and environmental issues.

If you do negotiate an agreement on any environmental issue, be sure to send a copy to www.lrd.org.uk so that others can benefit from your good practice.

Case study: setting up a Joint Environmental Committee

PCS reps at the Land Registry have a Joint Environmental Committee that has discussed and implemented a range of measures. These include using toilet tissue and hand towels made from recycled paper, saving electricity with low-voltage lighting, tinted windows, no air conditioning and temperature-controlled heating. Workplaces have posters up about water, windows and electricity use, and staff are encouraged to turn off computers and photocopiers. Chill machines use mains water rather than bottles.



Making the business case for action

The Carbon Trust estimates that most businesses could easily save 20 per cent of their energy costs through simple, low-cost measures. There are many persuasive arguments you can use when negotiating for environmental changes at work. The **Understanding the issues** section gives tips on specific areas, like heating, waste or transport.

When you go to meet management it is important that you are well prepared. See **Research** on p72 if you want help finding out more about the environmental issues affecting your employer.

Benefits to employers

Employers who recognise that improving their energy efficiency and environmental impact is

At the British Museum, PCS, Prospect, T&G and FDA started a GreenWorkplace project through a staff survey and by holding a joint union/management environment day that was attended by a quarter of the workforce, from curators to cleaning staff. The Carbon Trust expert who attended commented that this compared favourably with management-only events, which normally attracted 5–10 per cent of the organisation. The survey identified staff who were interested in training as UGRs; 80 applied, and the first 20 have already been trained by the TUC. As a result, reps have carried out energy walk-rounds in their areas and management has set up a Joint Environment Committee with reps. The British Museum has already made progress in cutting its carbon footprint with a 7 per cent reduction in the cost of electricity bills and a commitment to making a new wing of the building carbon neutral.

an investment for the future, not just a cost, will benefit in a number of ways.

Reduce overheads

Increasing energy efficiency will impact positively on energy costs, consumables, waste management and disposal, water bills, hardware, and transport bills.

The DTI has recently found a "strong and significant relationship between energy efficiency and labour productivity". The most economically productive firms are also those that are most energy efficient.

Increase sales

Customers, other businesses in the supply chain, and government all prefer companies with a clean, green record.

The top priority for companies over the next few years should be the environment (Annual Mori poll of public attitudes to Corporate Social Responsibility, October 2006).

Reduce insurance premiums

In sensitive sectors, such as the chemical and pharmaceutical industries, insurance companies now require environmental audits to be carried out before they will provide insurance cover. This trend is spreading to other parts of industry as environmental pressures, including the threat of legal action, intensify.

Attract green investment

Increasing numbers of investors invest only in businesses that have environmentally responsible policies, whether for purely ethical reasons, or for financial reasons. Fund managers are coming under increasing pressure from lobby groups and the people whose money they manage.

Almost 80 per cent of the FTSE 100 companies have identified climate change as a business risk, according to the CarbonNeutral Company.

Attract government subsidies and reduce taxes paid

Taxes

Workplaces that reduce their environmental impact can save tax in a variety of ways. These taxes are designed to incentivise improvements by accounting for the 'external' costs to the environment of certain activities. The main ones are:

- the Climate Change Levy, a tax on non-domestic energy users; there is a variety of exemptions based on industries adopting good environmental practice, and revenue is also returned through lower national insurance contributions and support from the Carbon Trust
- fuel duty, vehicle excise duty, and air passenger duty
- the Landfill Tax
- Enhanced Capital Allowances (ECAs), which allow businesses to invest in energy and water-efficient technology and write off the cost against taxable profits – see www.eca.gov.net

Subsidies and grants

There is a range of incentives available for organisations interested in installing energy-efficient equipment, buying renewable energy generation (including combined heat and power – CHP), and other environmental measures. These include:

- Small and medium-sized enterprises (under 250 employees) may also be eligible for an interest-free energy efficiency loan of between £5,000 and £100,000, repayable over a period of up to four years. See www.carbontrust.co.uk for more details.
- If you work in the public or voluntary sector, your organisation might also be eligible for funding from the “partnership for renewables” and grants of up to £1 million from the Government’s Low Carbon Buildings Scheme. See the Department for Business, Enterprise and

Regulatory Reform (BERR) website for details – www.berr.gov.uk/energy/sources/renewables

- Schemes do change and new ones are constantly being added. Check the Carbon Trust and BERR website for all the latest information.

Employers can get advice on energy saving and find out about various local, national and international funds that might be available to their particular sector by contacting the three main relevant government agencies, the Carbon Trust (energy), Envirowise (waste and water), and the Energy Saving Trust (transport).

Emissions trading

Heavy industrial employers can sell spare emissions permits if they improve energy efficiency, through the EU Emissions Trading Scheme. From 2010 emissions trading is also being extended to large service sector employers. (See p24 for more on this). In the future, as permits reduce and the price of carbon increases, these permits are likely to operate more like a tax – in 2007 the Stern Review estimated the true cost of the environmental damage of a tonne of carbon \$85, though current carbon prices are considerably lower than this.

Gain certification

Well-established voluntary accreditation schemes like EMAS, ISO14001 and EEAS can help a company demonstrate its environmental commitments. There are also awards and prizes for organisations that go the extra mile on environmental issues. See p27 for more on accreditation.

Improve staff retention, morale and productivity

A feel-good factor in the workplace and a more comfortable working environment that staff have some control over will attract employees.

Employees want to work for clean, safe, caring and innovative companies, and potential recruits are

starting to question companies' environmental performance.

Improve the value of the workplace building

More than 75 per cent of respondents to a recent survey said they were willing to pay more to occupy premises that were environmentally friendly.

Comply with legislation and prepare for new laws

European law lays down a framework of regulations that affect business, based on the principles that:

- preventative action should be taken
- environmental problems should be corrected at their source.
- the polluter should pay for environmental damage.

EU Directives and Regulations cover water quality, waste disposal, industrial air pollution, vehicle emissions, pollution from large combustion plants, environmental impact, access to environmental information, liability for damage caused by waste, environmental audits, and landfill waste.

In the UK these measures are enshrined in the Environmental Protection Act 1990 and a variety of other laws – 751 laws and growing, according to the Environment Agency in 2007!

Resources

See Business in the Community's website for more help with making the business case www.bitc.org.uk

Making the case for trade union involvement

There is clear evidence from the Carbon Trust that most businesses could save a fifth or more of their energy bills through low-cost measures.

But in order to do this it is vital that workers on the ground are involved. After all, staff will not be able to deliver changes if they don't understand, and support, the reasons why they are being introduced. Opportunities will be missed if staff don't have a chance to influence decisions.

Trade union reps' involvement is also critical to improving environmental performance.

The TUC's GreenWorkplaces projects show that UGRs can be important allies in promoting the importance of energy saving and environmental issues. They, and other trade union reps, are ideally placed to use the standing and structures of the trade unions to directly influence and develop the thinking and actions of their members, and others, in respect to environmental matters. UGRs will have the confidence of their membership and the union involvement will give added reassurance to employees. UGRs are trained in their role and are a source of useful in-house advice for employers. For this reason, employers have generally been supportive of the work of UGRs.

"The involvement of the TUC, working with our employee representatives, is playing a significant part in helping to raise staff awareness and good energy management."

Paul Brooks

Director of Environment, Corus

Case study: Friends of the Earth

Unite/Amicus reps at Friends Provident have been developing energy-saving initiatives through the Joint Negotiating Committee, including changing the IT systems so that computers and monitors no longer need to be left on at night (which alone is projected to save 184 tonnes of CO₂ a year). Management agreed an on-site training course for 20 green reps. These reps have gone on to set up Green Teams in their departments. Reps ran an energy roadshow, attended by over 300 members of staff. Reps were delighted at the response, stating it was “the most interest we’ve ever had for a union stall”, with staff “queuing five-deep through the lunch hour”.



In the run-up to 2010, there will be an extra incentive for employers to work with unions to ‘go green’. From 2010 about 5,000 large public and private sector organisations, mostly in the service sector (including supermarkets, government departments and large local authorities) will be brought into emissions trading, through the Carbon Reduction Commitment (CRC). The government has recognised the role of environmental reps in making the CRC work, stating:

“Government wishes to emphasise the importance of employee engagement and training as a core part of a robust carbon management and reduction strategy. Government recognises that leading organisations support and enable staff to actively contribute to energy management through a variety of approaches. Such approaches include, for example, joint environmental committees involving

employees; staff awareness and energy training initiatives; and – in those cases where a trade union is recognised for collective bargaining purposes – taking forward energy and environment issues within the scope of such agreements.”

Using health and safety arguments

Some environmental issues are covered by health and safety law in the UK, though not as extensively as they could be. The main legislation is the Health and Safety at Work Act 1974 (HASAW), which imposes a duty of care on employers to protect workers and members of the public. As noted earlier, the HASAW, and regulations under it, also give accredited union health and safety reps the right to be consulted through joint health and safety committees or similar arrangements, and to inspect workplaces for breaches of health and safety.

Other health and safety law explicitly touches on workplace environmental issues that have an impact on the wider world, including:

- the Workplace (Health, Safety and Welfare) Regulations 1992, which deal with working environment issues including ventilation and temperature
- the Control of Substances Hazardous to Health Regulations 2002 (COSHH), which governs the prevention and control of chemicals, carcinogens, biological agents, and dusts.

Another reason to ensure the environmental and health and safety roles work together is that they tend to be closely aligned on the management side, with the facilities management team (possibly with a separate energy manager in a large organisation) often having day-to-day operational responsibility for health and safety. Engaging these people in a Joint Environment Committee is key.

As stated, you should be clear that current legal protection for health and safety extends to environmental considerations only in limited ways.

Nonetheless, some of the following ideas may be of interest to you if you want to make the links:

- Greater autonomy, less stress – having more control over workplace environment is proven to reduce stress, and improve comfort. When combined with education about climate change and energy, greater control can also result in significant reductions in energy use. Low levels of user control over heating, ventilation and lighting are thought to contribute to 'sick building syndrome' (SBS), as is little daylight, poor air quality, and excess heat.
- Improved air quality – promoting natural ventilation and reducing toxic load, including use of chemicals, will improve air quality in workplaces. Minimising air pollution from industrial processes and carbon-based transport will generally also result in reduced CO₂ and other greenhouse gas emissions as well as benefiting communities living nearby, including workers themselves.
- Workplaces that maximise the use of natural light are more pleasant places to work. Current health and safety legislation calls for maximum daylight "as far as reasonably practicable".
- Daytime working is better for people's health and safety and results in less energy use for lighting and also heating. For example, in the US the cleaners, union in a northern city negotiated for buildings to be cleaned in the daytime, resulting in more social, healthier working hours for the cleaners without loss of pay, and a reduced energy bill at night.
- Uncomfortably hot workplaces can be caused, or worsened, by inefficient equipment, or simply equipment (including lighting) that is left on when it doesn't need to be. The wasted energy takes the form of excess heat. The Display Screen Equipment Regulations require that "equipment belonging to any workstations shall not produce excess heat which could cause discomfort to operators or users". For more on heat and health and safety at work see p21 and also the TUC factsheet Temperature At Work – Heat.
- Low carbon options are active options – for example, encouraging colleagues to cycle and walk to work where possible. Or policies that encourage people to get up and move around to talk to colleagues, take regular breaks and proper lunch breaks, and to turn off monitors, lights and other equipment while they do – giving themselves and the equipment a break.
- Environmentally friendly food tends to mean healthier food, and vice versa. In other words, fresh – even organic – food, rather than highly processed and/or packaged food or food that has been sitting in refrigeration, transport or storage for a long time.

Employers will need to work with staff to adapt to climate change, as well as to prevent it getting worse. Hotter weather, especially increased summer heatwaves, means new challenges. Ways of adapting to this could include the negotiation of more flexible dress codes, worker involvement in the design of workspaces, better protection for outdoor workers and drivers and more flexible working time policies.

For an analysis of the longer-term health issues that will be caused by climate change (including rising temperatures, changed rainfall, and more extreme weather) see the 2008 report 'Health Effects of Climate Change in the UK' by the Department for Health. Worrying predictions include increase in infectious diseases, food hygiene issues, poor-quality drinking water, heat exhaustion, stress, sleep problems and mental health problems. These issues will have an impact on all workers, a dual impact on workers who deal with members of the public, and a triple impact on workers in the health and emergency services and other related services.

Communication

Introduction

We all look to others for action (the 'I will if you will' ethos), but messages from the organisation about what it is doing to tackle energy efficiency often become wallpaper. If staff hear a message from the union, they may pay more attention.

Key actions

Communication needs to be two-way, through reps, meetings, events, committees, surveys and newsletters. Several of the GreenWorkplaces project reps have set up regular e-newsletters, and we have encouraged all reps to use a survey to establish colleagues' concerns.

Make sure that members and non-members alike are aware of your successes, and of the role the union has played in greening the workplace. Union-led initiatives around the environment and climate change add value to the union card and are a great showcase for the positive work that unions do. So publicise what you do:

- give union environmental work a high profile through posters, noticeboards and newsletters
- use your union's logo on all environmental materials
- make sure communication with membership is two-way, for example using surveys based on checklists in the **Understanding the issues** section to establish colleagues concerns. (See p17 for advice on this, and p17 for a sample survey).

Designing communications

An important rule is that no one should be made to feel guilty; the focus should be on removing barriers to green behaviour.

Doom-laden imagery and descriptions of worst-case scenarios about climate change may just make people feel hopeless and push them into denial and despair. Focusing on what could happen if we do take action, and on saving things that people care about could be more effective – for example, images of people and of natural beauty rather than melting icebergs and drowning polar bears.

Workers want facts and targets they can understand, that focus on a particular area, that can be updated, and that are personally meaningful and tangible. For example, UGRs at the British Museum explained that the workplace produced 10 times more CO₂ than all their homes and personal lives put together, and set a target to reduce this by 10 per cent. At the TUC, green reps got figures on night-time electricity consumption in their building and, through publicising these figures, halved night-time consumption over 18 months.

See www.sustainableworkplace.co.uk for a selection of template posters, newsletters and other presentation material you may like to adapt or use as they are that have been developed by the Carbon Trust/TUC GreenWorkplaces project.

COIN (the Climate Outreach Information Network) runs excellent training on how to talk to people about climate change and is also working with Ruskin College to provide training for trade union members. www.coinet.org.uk. Its courses are inexpensive and your branch may be able to help with costs.

Expressing energy use

Are you going to express energy use/savings in terms of KWh, tonnes of CO₂, balloonfuls of CO₂, numbers of cups of tea, numbers of medium sized power stations, or simply in cash? Using cash is probably the most easily understandable to everyone, and some will be motivated by the idea of saving the organisation money, or will make the connection with protecting their own jobs.

Others may not be, though, and may be more motivated by the environmental impacts. For help in working out energy use and CO₂ emissions, see **Calculating carbon savings** on p80.

www.sustainableworkplace.co.uk

Another approach is to convert your workplace's energy use into something else – preferably something like people's carbon footprint at home, or the energy used to make a cup of tea or run a TV. Estimates vary but it is generally thought that the average household produces 10 tonnes a year of CO₂ from energy use and transport. You might find the following useful:

www.carbontrust.co.uk/energy/startsaving/posterfactcalculations.htm

See the environmental 'footprint' of your own lifestyle at www.redefiningprogress.org.uk
www.actonCO2.direct.gov.uk
www.carboncalculator.com and encourage colleagues to do the same.

Finally, don't forget to publicise your successes!

Environmental management systems, labelling and accreditation

See also **Calculating carbon savings** on page 80.

Introduction

Trade unions should encourage employers to enact a firmer environmental policy than the legal minimums, particularly by working towards an accredited Environmental Management Scheme (EMS). EMSs are a way for organisations to manage 'continual improvement' of their environmental performance, by measuring the current situation ('baseline'), setting targets, and monitoring progress. For employers, they help cement the advantages of taking action listed in **Making the business case for action**, see p21. For unions, they can be used to help maximise staff involvement and ensure information is accessible, both of which are a key part of all good accreditation schemes.

Although some EMSs do give the option of self-certification, they will have much more credibility if they are externally audited, as recommended by DEFRA.

The activities suggested in this handbook will help build up a valuable dossier of evidence that can go a long way to help the organisation achieve accreditation for its EMS.

In the LRD Environment Survey of Union Reps 2007, only a quarter (23 per cent) of reps reported that their workplace had an environmental management scheme.

Common accreditation schemes

ISO14001 – www.bsi.global.com

Accreditation under this scheme:

- requires a public commitment to continuously improve its impact on the environment
- does not prescribe specific measures – rather the employer has to determine the best environmental measures for itself, and set this out in a public policy
- requires annual external verification of the process, but not of the results
- recommends involving staff as good practice.

There are six main steps in achieving ISO14001

- policy
- objectives
- targets
- implementation
- monitoring/audit
- review – feeds back to policy.

EMAS – www.emas.org.uk

An EU-wide standard, EMAS incorporates ISO14001 and has two main additional requirements:

- an annual public statement of progress
- the active involvement of employees – “... the active involvement of employees in the organisation and appropriate initial and advanced training that makes active participation in establishment of an environmental system. Where they so request, any employee representative shall also be involved.” (EC761/2001)

According to the Environment Agency “overall environmental management is better under EMAS than under ISO14001, driven largely by better performance monitoring, documentation control,

and reporting environmental performance”, though it adds that ISO14001 is better than an informal system, which in turn is better than no system at all.

The Acorn Scheme – www.iema.org.uk

The Institute of Environmental Management and Assessment (IEMA) has developed a scheme that breaks down an EMS into six steps (in line with BS8555). The final step enables organisations to get full ISO14001 or EMAS accreditation.

Organisations can work through these steps at their own speed and without obligation. If they like, they can get Acorn accreditation from IEMA once they have worked through one or more steps, to recognise progress made. IEMA also produces a useful series of workbooks that outline the requirements and how to work through them.

Energy Efficiency Accreditation Scheme – www.thecarbontrust.co.uk

EEAS is rather different from the above schemes, though it can complement them. It is more focused on results, not just process, and focuses specifically on energy use. It is managed by the Carbon Trust. The cost includes expert energy efficiency consultancy and the expense will normally be recouped within a year.

Organisations that are not ready to go for EEAS accreditation can still get free support from the Carbon Trust to set up a carbon management programme. Typically, this includes the following steps:

- understanding the organisation’s carbon emissions footprint
- developing a business case for change
- developing a strategic framework to manage carbon as an ongoing activity
- introducing methodology to prioritise carbon-saving projects
- preparing a detailed carbon-saving implementation plan

- monitoring the impact of the programme and quantifying the benefits
- integrating carbon management into existing business practices.

The EEAS is likely to be adopted by many of the larger service sector employers (public and private) as it forms a key part of the Carbon Reduction Commitment Scheme, mandatory from 2010.

Other accreditations

In London, organisations can also sign up to the Green Buildings Scheme and Green Procurement Code, both run by the GLA.

“Environmental Management Systems are increasingly important in enabling businesses to improve their environmental performance systematically”

Baroness Young
Head of the Environment Agency

To get an EMS up and running will require some staff or management time, whether or not external consultants are brought in for additional expertise. However the amount of time depends very much on your workplace – for a small workplace, there is a new EMAS Easy scheme (launching in the UK in 2008), which suggests accreditation can be achieved in as little as 10 days.

Union activities that could help towards accreditation

- Establishing a Joint Environment Committee, or adapting an existing committee like health and safety (so long as its terms of reference include oversight of the EMS). Most approaches

to getting an EMS up and running, suggest the setting up of a project team or similar.

- A signed-off joint environment agreement with terms of reference that include continually improving environmental performance, and an outline of roles and responsibilities of the key players.
- Surveys or audits that have been completed by as many staff as possible, showing their views on the organisation’s environmental performance. See **Resources** pp86-91 for templates.

A management system, or a collective agreement?

There should be a complementary relationship between a union-negotiated collective agreement, and any EMSs. A collective agreement could state that an appropriate EMS will be introduced/maintained, with the right of staff to be involved and influence choices. From a union point of view, any EMS should include clearly laying out the ways of working with the union, staff, and UGRs. This could include negotiating an environment and climate change collective agreement and setting up a Joint Environment Committee. The existence of such union and staff involvement will strengthen any EMS and can form an important part of the evidence the employers uses to gain accreditation.

Additional Resources

www.netregs.gov.uk explains environmental regulations in plain language, and has a good section on the various environmental management schemes (EMAS, ISO14001, etc).

www.epaw.co.uk/ease.html Written with the aim of fulfilling the ‘training’ requirements of ISO14001.

Understanding the issues



Heating, cooling, ventilation and insulation

Introduction

While replacing your office with a state-of-the art, super-insulated, naturally ventilated building may not be realistic in the short term, there's plenty to be done in all workplaces to save energy on heating and cooling, and to create a more comfortable, healthier and safer working environment.

According to the Carbon Trust, up to 60 per cent of a workplace's energy costs can be due to heating and hot water, but all too often workplaces are over-heated or over-chilled, or waste lots of energy through poor insulation, or inadequate or wrongly set thermostats, timers and controls.

Employers are legally obliged to safeguard the health, safety and welfare of employees under the Health and Safety at Work Act 1974 and health and safety regulations, and to consult safety reps on health and safety matters (including temperature, humidity, ventilation, lighting, and use of electrical equipment). Therefore environment and safety reps can work together to bring about changes.

Key actions

- Ensure workers are clear about when to turn things off.
- Ensure timers and thermostats are correctly set.
- Negotiate for longer-term options like better insulation.
- Negotiate an agreement on issues like temperature.

Identifying the issues

Ask colleagues

- Are thermostats and other controls clearly labelled?
- Do people understand how the temperature should be adjusted?
- Are there particular times of the day, week, or year, or work process, when temperature is a problem? Too hot? Too cold? Both, at different times?
- Are there draughts?
- Are reports of problems with maintenance to the building (e.g. damp, holes) dealt with properly?

Walk-round audit

- What temperature is it in different parts of the workplace?
- Are there enough thermometers?
- Are necessary controls and switches clearly labelled?
- Where are the thermostats? Are they near heat-generating equipment or by a draught?
- What temperatures are they set to?
- Are there holes and draughts, especially around windows, doors and skirting near workstations? For a quick test try sliding a 1p coin between a window and its frame.
- Do windows close properly?
- Are radiators and other heating and cooling outlets blocked by furniture or equipment? This could be dangerous as well as inefficient.

Ask management

- Ask for copies of the health and safety risk assessment, which must take account of the regulations mentioned here governing temperature (as well as lighting, etc).

- When are the current heating and cooling systems planned to be upgraded? The Carbon Trust recommends first taking measures to insulate and improve the building fabric. You may then need less heating or cooling plant.
- Are any other works being planned to the building fabric? Many measures are more less disruptive and more cost effective if carried out in conjunction with other works.
- How does your facilities manager think the systems are controlled? For example:
 - Are necessary controls and switches clearly labelled?
 - Do people understand how, and when, they should be adjusted?
 - At what times are automatic timed controls (for example, heating, power downs and standby mechanisms) set to come on and go off? Does this match the times when the building is most occupied? Are these checked regularly and at different times of year, e.g. holidays, when the clocks change? Usage patterns will change over time.
- Ask for copies of maintenance reports that have been done – for example, on the boiler, air conditioning, or building fabric.

Key facts

- Turning down the thermostat in the building by just one degree and will save 10 per cent on heating costs and CO₂ emissions.
- More than a quarter (26 per cent) of safety reps identified high temperature in the workplace as a key current concern, and more than a third (34 per cent) were very concerned about either hot or cold temperatures.
- Equipment and lighting left on creates a surprising amount of heat. In air-conditioned offices it can typically take twice as much energy to remove the heat generated by office equipment as it takes to run the equipment.

So saving energy used by equipment will save energy twice in an air-conditioned workplace – and will make other workplaces much more comfortable. Leaving things on overnight in summer is a particular problem, as the workplace won't have time to cool down.

- Effective ventilation is essential to provide 'fresh' air, control temperatures and remove stale or contaminated air. But it's possible to satisfy comfort requirements and reduce energy costs. Making the most of natural cooling can delay the point at which air-conditioning systems are needed, or even prevent the need for them altogether.
- According to the Carbon Trust, a typical naturally ventilated open-plan office creates the equivalent of 79kg of carbon dioxide per square metre every year, while a typical air-conditioned office creates 151kg. Energy efficiency measures can reduce these figures by at least a third.



Raising awareness

Where colleagues do have some control over their environment, they can be encouraged to use it, for example by:

- turning radiators off before opening windows
- adjusting clothing (if dress codes permit).

Negotiating for change

Quick wins

Good housekeeping

- Changing the time of heating controls, if this doesn't compromise on comfort (if a building takes more than an hour to heat up, the heating system or insulation is probably inefficient. Similarly, most buildings should retain heat for a while after the heating is turned off.
- Closing curtains and blinds overnight will help insulate the workplace from unwanted heat gains or losses.
- Windows or other openings on opposite sides of the building will set up a flow of air to provide cooling, if it is cooler outside than inside. Ventilating the building by opening windows on opposite sides of the building, or by leaving windows open at night time, is very effective, so long as it doesn't cause a security risk.

Low-cost measures

- Adding or improving loft and cavity wall insulation is extremely effective in making the work environment more comfortable, and it is the single most cost-effective measure most employers can take, with payback times of between one and four years, according to the Carbon Trust.
- Even simple draught-proofing can make a huge difference to heating costs and comfort.
- Reduce draughts. Install and maintain plastic strip curtains over doorways and refrigeration units.

- Fit individual thermostats or radiator controls to allow greater personal comfort and potentially, greater energy efficiency.
- Ensure you have horizontal blinds and angle them in the daytime to throw light on to the ceiling, and to keep out unwanted heat and glare while retaining the natural light.
- Pot plants will freshen the air and brighten the working environment.
- Stick-on plastic window films are available to reduce heat and glare.
- External doors can be a major source of heat loss and discomfort from draughts. Keep external doors closed where possible.
- Where large vehicular access doors are left open, energy saving options include:

Longer term

- Separating people and vehicles. Give personnel their own entrance so the large doors can remain shut for longer. This can also contribute to better health and safety.
- Fitting rapid-roll doors, vehicle entrance lobbies or inflatable air locks to vehicular access areas.
- Install more controls to ensure energy is not wasted on heating or cooling unused spaces.
- Heat-reflective glass and external shades (that let in winter sun but keep out the higher summer sun) are options.
- Avoid large glass areas, which can cause glare, over heating in summer and heat loss in winter.
- Fit double or triple glazing with energy-efficient glass. Windows are the greatest source of heat loss in many buildings, partly as they are often very draughty. Replacement windows must be at least double glazed under building regulations (unless the building is listed or in a conservation area) – and triple glazing is particularly good for exposed sites and where windows are on the northerly facing walls.
- State-of-the-art natural ventilation systems are also an option – a good example is at the Open

University's offices in Milton Keynes, where they were found to increase staff comfort.

- Where there is space, another option is a garden area or trees planted outside your workplace – this can provide natural shading and insulation for buildings, improving comfort and reducing heating and cooling costs, in some cases reducing indoor temperatures by up to 4°C. Deciduous trees planted outside south-facing windows are perfect – they minimise 'solar gain' during the hot summer months, but allow natural sunlight through during the bare winter months. There are many other benefits – a pleasant place for staff to sit and relax, a very visible 'green' commitment to visitors to the workplace, better habitats for wildlife (particularly if you chose plants that attract insects and birds, and organic gardening), and they can even use compost generated from food waste, and rainwater collected in water butts.



Alternative roofing – A green roof, where plants are grown on the roof, has many environmental benefits. It can insulate a building, help prevent flooding by reducing rainwater run-off by up to 50 per cent, and attract wildlife. See www.livingroofs.org for more information. Alternatively, if the roof is being replaced, solar PV tiles might be worth considering.

Super-insulation – In Sweden, there are many workplaces that are so well insulated they require no additional heating at all.

Case studies: reps working for change

Union reps across the private and public sectors have negotiated environmental improvements. The following examples from the Labour Research Department survey in 2007 indicate the range of measures union reps have been involved with.

CWU reps in BT have supported the company's Working for a Better Environment project, which identifies areas within the company's estate that would benefit from a revamp and additional facilities. Reps emphasise progress has been made on some sites, but with thousands of premises, this is not uniform. Reps have negotiated policies to monitor the workplace environment and asked for improvements in temperature control, heating and air conditioning. They have made sure there is adequate and appropriate signage displayed so that the workers can understand what to do. Additionally the project has looked at other areas, too, like installing waterless urinals on some sites, labelling light switches, and installing lights that turn themselves on and off and self-adjust for light level.

Don't forget the floor – Insulating the floor is often forgotten but nearly 10 per cent of heat leaves a building this way.

Heat recapture – The Met Office heats some of its workplaces through waste heat recaptured from the computer server rooms. Special fans can also be installed to circulate hot air back down to occupied levels.

Install a more efficient boiler – or, better still, renewable energy heating like solar water,

combined heat and power, ground pump or heat re-capture (see **Renewable energy**, p41).

Myths and facts

Turning thermostats up and down will not change the temperature any more quickly. They should be correctly set and then left alone. Make sure there's a gap or 'dead band' between heating and air-conditioning control temperatures of about 4°C to make sure you don't end up with both systems running at once.

Wider issues

Trade unions have campaigned on fuel poverty for many years. Fuel poverty means needing to spend more than 10 per cent of your income on fuel bills, which is affecting a rising proportion of the country. The Energy Saving Trust has information on home insulation schemes that can make a big difference. For more information on this see www.sustainableworkplace.co.uk

Health and safety issues

Heating and cooling are vital for worker welfare. People who aren't comfortable are unable to work at their best, and at the extremes, overheating or chilling can be dangerous. The Workplace (Health, Safety and Welfare) Regulations state that, in enclosed workplaces, employers must provide effective and suitable ventilation. Employers must ensure that the indoor temperature is "reasonable" during working hours, and supply a sufficient number of thermometers to enable workers to determine the temperature in any workplace inside a building.

The approved code of practice says that workrooms should normally be at least 16°C for most types of work. Although a maximum temperature is not specified, a workplace must be "adequately thermally ventilated" and that the "excessive effects of sunlight on temperature shall be avoided". The Chartered Institute of Building

Higher education colleges have introduced improvements in temperature control. At the Science and Technology Facilities Council (formerly the CCLRC), a new high efficiency heating system was introduced after the Carbon Trust carried out an audit. At the North East Institute, a computer controlled central heating system has been installed.

Unite (Amicus) reps at NHS Borders said a high efficiency boiler system had been introduced, which recovered waste heat from the incineration plant. FBU reps on Tayside report the introduction of some double glazing and other heating improvements in fire stations. Prospect reps at UKAEA Dounreay said heating was controlled automatically throughout the year.

PCS reps at HM Revenue and Customs served a Union Improvement Notice after concerns were raised about poor heating and ventilation, and poor air quality. Reps have also involved the Health and Safety Executive to bring about the necessary improvements.

Services Engineers recommends the following temperatures for different working areas:

Heavy work in factories	13°C
Light work in factories	16°C
Hospital wards and shops	18°C
Offices and dining rooms	20°C

The WHO says that a workplace temperature over 24°C is too warm, and reps can use these figures to negotiate better standards than those laid down by law. The TUC and unions are continuing to press the Government for a maximum workplace temperature.

Resources

- See www.sustainableworkplace.co.uk for an energy walkround checklist adapted from the Carbon Trust.
- The TUC publication *Hazards at Work* contains essential information on the health and safety aspects.
- The Carbon Trust, a company set up by the Government to promote a low-carbon economy, has also produced a number of information sheets that deal with the environmental aspects of workplaces. It can provide further advice, or perhaps an interest-free loan to help with the costs of improving your building fabric.
- TUC factsheet Temperature at Work – Heat www.tuc.org.uk/h_and_s/tuc-12183-f0.cfm
- For more information, see www.carbontrust.co.uk/energy/startsaving/tech_heating.htm
- www.cibse.org
- London Hazards Centre factsheet Air, Light and Temperature www.lhc.org.uk/members/pubs/factsht/47fact.htm

Lighting and electrical equipment

Introduction

Lighting and electrical equipment account for a high proportion of energy use in the workplace.

According to the Carbon Trust, office equipment is the fastest growing energy user in the world of work, consuming 15 per cent of the total electricity used in offices. This is expected to double by 2020. There are also associated costs that are often overlooked, such as from ventilation and air conditioning.

Most of the energy-efficiency measures in this area cost little or nothing and the savings can be significant – 15 per cent a year on average without any capital investment.

Lighting and equipment can have an impact on the health, safety and welfare of a workplace as well as its environmental impact. Equipment and lighting can generate high levels of heat and affect air quality, vision, and noise.

Key actions

- Ensure workers are clear about when to turn things off.
- Ensure 'standby', eco-friendly or low-power options are enabled, and set up properly, and staff are fully trained in their use.
- Negotiate for automatic options like motion sensor lights in low-use areas, and automatic power down of equipment after working hours.

Identifying the issues

Walk-round audit

- Are lights, computers or other equipment on where they're not needed?
- Is the workplace arranged to make best use of natural light or is it blocked by furniture, equipment or blinds?
- Are light switches labelled?
- Are large banks of lights controlled by only one switch?
- Are light bulbs energy efficient?
- Are windows, skylights, and light fittings clean and well maintained?
- Are the energy saving features on computers and other equipment enabled?

Ask management

- What policies are in place to save energy used by equipment?
- Does whoever is in charge of purchasing take energy usage into account?

Ask colleagues

- Are energy-saving features set up? Do they know how to use them properly?

Key facts

Prioritise. For example, the energy use breakdown for office equipment, in order:

- 1 computers and monitors (use nearly half of all office equipment energy in a typical office)
- 2 photocopiers
- 3 printers
- 4 fax machines
- 5 vending machines.

Switching equipment off out of hours and enabling standby features will reduce running costs and prolong the lifespan of equipment.

British manufacturing would add £2–£3 billion to profits if environmental best practice were made standard. This amount could double if savings from the cost producing materials that end up as waste were included.

Raising awareness

Raise awareness of what ought to be switched off and when, using posters and stickers to label switches and lights. The Carbon Trust has printable sticker sheets and posters on its website (see **Resources**).

To save energy on a computer, go to 'start' 'control panel' 'power options' (on most PCs). The IT team may be able to set this up for the organisation as a whole, though some options might not work on networked systems.



Negotiating for change

Quick wins

Good housekeeping

- Arrange the workplace to make the best use of natural light. Angling blinds to throw light on to the ceiling will reduce glare and heat, but keep the light.
- Make sure the last person to leave at night switches off. Encourage cleaners to switch off, or to remind anyone still working to do so.
- Work with staff, and IT and facilities managers where appropriate, to make sure energy use features are set up and used properly.
- Consider changing shift-work patterns to enable better use of natural daylight.
- Make sure equipment is fully switched off overnight, and don't turn them on until you really need them. Even standby consumes energy.
- Make sure the standby is set properly if it's automatic; or, if it's manual, make sure everyone knows how to use it – put a large notice on or near the machine.
- When the equipment is installed, managers should ensure that:
 - a. automatic energy-saving features are activated, and not disabled (as is often currently the case)
 - b. the time periods for equipment to enter standby mode is set in consultation with staff over how frequently the equipment is used and people's working patterns. (No point having a standby if no one can be bothered to use it!)
 - c. if the energy saving features are manual rather than automatic, they are properly explained to all staff and signs are put up as reminders

- Ensure equipment is well maintained – it will be more efficient and will last longer, and in some cases this will be a legal requirement for health and safety reasons anyway. Keep equipment free from obstructions and clean filters and fans regularly to prevent overheating and possible failure.

Low-cost measures

- Replace standard light bulbs with energy-efficient ones. Low energy light bulbs last up to eight times longer than standard ones, and use only a fifth of the energy.
- Fit simple plug-in 7-day timers to as much equipment as possible, especially communal equipment such as photocopiers, printers, vending machines and water coolers. By avoiding night-time and weekend energy waste, timers can reduce energy costs by up to 70 per cent, particularly if machines don't have, or don't use, standby modes.

Longer term

- Look at purchasing policies, and make sure running costs/energy efficiency is taken into account when buying new equipment, and also the needs of the user. See p67 for more on negotiating an eco-friendly purchasing/procurement policy.
- Replacing machinery, plant and equipment with energy-saving alternatives attracts tax breaks. New IT equipment (computers, monitors, printers) should be TCO labelled, showing that it meets good standards of energy use, environmental impact, and ergonomics. The TCO is a Swedish trade union and its standard has become the leading international standard – most companies now produce TCO-labelled equipment. The label is made more stringent every few years so, for example, a TCO'05 label is better than a TCO'99. Other standards include EnergyStar (for IT) and A++ to F ratings (for white goods like refrigerators), as well as industry-specific standards.

- Flat screens only use about 20 per cent of the energy of conventional ones.
- It's also possible to install sophisticated electrical control systems that can power down different areas of the workplace, or particular systems at different times. Some of DEFRA's offices now have automatic IT power downs at 7pm (which also discourages unpaid overtime!) and UGRs there are negotiating for this to be extended to all sites.
- Install time switches, movement sensors or daylight-linked controls to reduce unnecessary lighting, especially in areas of low use.
- A general upgrade to your lighting systems could make a big difference. See the Carbon Trust's factsheets on lighting for more information (see **Resources**).

Myths and facts

- Fluorescent lights don't wear out more quickly or consume more electricity when turned on and off.
- An IT monitor can account for a large amount of a computer's energy consumption – up to twice as much for the old-style ones. Monitors should be turned off if users are away from their desk for more than 10 minutes. Some people may not realise that turning the monitor off does not

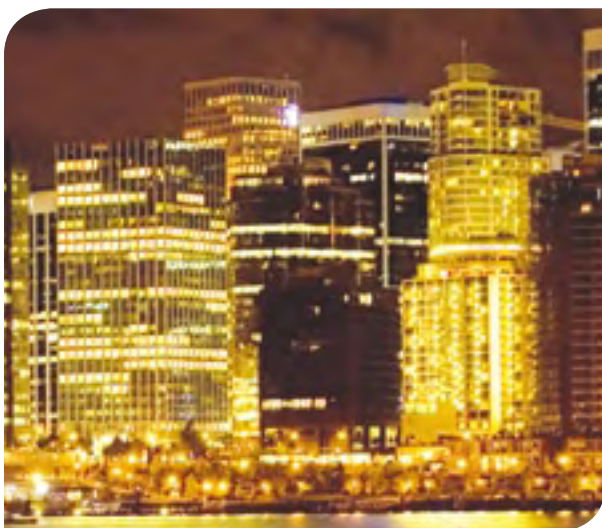
affect the work on the computer, so you could carry out an awareness campaign on this.

- Screen savers don't save energy and can actually use more energy than a full screen of work. They were originally designed to protect the screen from getting 'burnt' but modern screens don't need them. Set your screen saver to 'none' or 'blank screen'. Options on how to do this vary – talk to IT and let everyone know how to do it.
- A personal computer uses around only a second's worth of energy on start up, so it always saves energy if it is turned off fully when not in use. This needs to be balanced with convenience, and also the effect on the life of the computer. However, according to computer manufacturers you can switch off your computer up to three times a day, for example for lunch or long meetings as well as at the end of the working day, without reducing its lifetime.

The health and safety link

The Workplace (Health, Safety and Welfare) Regulation 8 states that employers must ensure that every workplace has suitable and sufficient lighting, which should be natural light, "so far as is reasonably practicable". The TUC recommends maximising the use of daylight (while minimising glare). From a health and safety point of view, it is best to have individual controls, task lighting for reading, and fairly dim, general office lighting for computer work.

Health and safety law also deals with equipment in the workplace. The Health and Safety (Display Screen Equipment) Regulations 1992 lay down the minimum health and safety requirements for work with all display screen equipment, from computers to CCTV. Reducing the amount of time that computers and monitors need to be used/are switched on, may have a health and safety benefit. HSE research found that more than half of those using monitors were unhappy with the air quality and temperature in their workplace, and those who



spent 75 per cent of their time in front of a monitor were the most likely to suffer health problems like RSI, visual impairments and stress.

The TUC recommends that intensive display screen equipment work should be limited to a maximum of 50 per cent of daily working time, and workers

and reps should be involved in job design. Even if this is not possible, the recommendations on rest breaks must be strictly adhered to, and if necessary, extended.

Case study

At Scottish Power's office in Motherwell, Prospect, UNISON and Amicus have supported a number of initiatives including a staff awareness day and staff survey. These activities identified volunteers to take part in a training workshop for Green Reps. A committee has been set up, and actions taken since include installing lighting controls and a Solatube, mobile phone and Christmas card recycling, installing water-saving hippo bags, and the creation of an environment intranet site and web-based energy monitoring and reporting system. As a result, the office reduced its energy use by 51,218KwH compared with the previous year. This is a saving equal to 22 tonnes of CO₂.

At higher education institutions New College, Durham and the London School of Economics, movement-sensitive lights switch on and off automatically. Unite (T&G) reps at the Port of Tilbury report that all external lighting is operated by light sensors. FBU reps in Tyne and Wear said that there is a lights out policy in fire stations to save energy.

In the US, the SEIU union (which represents cleaners) has negotiated for cleaning shifts to take place during the daytime, eliminating the need for night-time lighting and meaning the cleaners have more sociable hours.

At the TUC's headquarters, green reps launched an awareness campaign, working through the

Joint Environment Committee, which resulted in night-time (i.e. mostly wasted) electricity use being halved.

At a Corus site in Wednesfield, Community union instigated a joint carbon reduction seminar involving senior management, Community and Unite stewards and the Carbon Trust. Following this, a joint union-management steering group was set up at the site and further training is planned. The training is projected to save 5 per cent of energy use in the immediate term (through improved monitoring and behaviour change) and a further 10–15 per cent in the longer term (through behaviour change and low-cost investment). Community is working with the company towards an organisation-wide Joint Environment Agreement.

An early example of union involvement in energy saving was demonstrated by Prospect reps at the Scottish Agricultural College in Edinburgh. Inspired by an energy saving workshop, members persuaded the college's Environment Committee to undertake a range of energy-saving measures. The results led to major cuts in electricity bills, followed by other initiatives in waste management and energy efficiency.

Resources

www.carbontrust.co.uk Useful factsheets include Energy management (GIL136), Energy use in offices (ECG109), Office equipment technology overview (CTV005), and Assessing the energy use at your industrial site (CTL002). The site includes stickers and posters you can use in the workplace (look under employee engagement).

The TUC's **Hazards at Work** contains useful information on the health, safety and welfare aspects, particularly

Chapter 45, Workplace health, safety and welfare

www.tuc.org.uk/h_and_s/workplace_health_safety_and_welfare.cfm

A purely health and safety focused checklist is here:

www.tuc.org.uk/h_and_s/workplacechecklist.pdf

Chapter 25, display screen equipment

www.tuc.org.uk/h_and_s/displayscreenequipment.cfm

www.eca.gov.net Find out what equipment, plant and machinery is eligible for tax breaks.

www.tcodevelopment.com

See also **Calculating carbon savings** on p80.

Renewable energy

Introduction

Renewable energy is energy that comes, not from finite fossil fuels, but from naturally replenished sources such as wind, sun, water, ground heat, and biofuels like wood, crops and organic waste.

Workplaces are some of the best sites for renewable energy generation. They are less likely to be in residential or very scenic areas, where planning permission can be difficult to obtain. They can install renewable energy on a larger, more efficient scale, and by building renewable energy on or near the site ('decentralised energy'), a lot of the problems associated with centralised power generation (losses in transmission, impacts on wildlife) can be avoided.

The cost of renewable energy, and the technologies that generate it, have fallen dramatically in recent years. This means the length of time it takes to repay any investment and start saving money (the 'payback time') is a lot quicker than it used to be, particularly as oil and gas costs continue to rise. There is also a wide range of financial help available to organisations – see p22.

From a trade union point of view, renewable energy has other benefits besides the obvious environmental ones: it can create more jobs on site or in the UK renewable energy industry, and the investment a company makes is a good indication of its greater commitment to the future of the company.

Before installing renewable energy, an organisation should do what it can to reduce its energy use first of all. There is no point generating lots of 'green' electricity if it is then wasted.

The Carbon Trust recommends looking at energy efficiency and generating renewable energy alongside each other, as part of an overall energy

audit. See www.carbontrust.co.uk for more information.

Key actions

- Reduce wasted energy first.
- Read through this short guide and think about whether your site might be suitable.
- Ask colleagues for their views.
- Use the business case arguments below to push for investment in renewable energy where appropriate.

Negotiating for change

Benefits of having renewable energy on site:

- reduces CO₂ emissions
- supports the market for renewables, helping them to become more affordable
- demonstrates the business's commitment to the green agenda
- saves money. Although there is an initial investment required, financial support is often available and the saving on using less fuel will 'pay back' within a few years – or quicker, as oil prices continue to rise. Businesses that get their energy from renewable sources are also exempt from the Climate Change Levy
- more financial certainty: easier to predict future energy costs
- greater energy security – an independent source of power makes the organisation less vulnerable to power cuts and supply problems
- employers can sell any spare electricity back to the national grid – in future this may be at a premium price, too.

Quick wins

Passive solar

- The most readily available form of renewable energy is 'passive solar' – in other words,

designing the workplace to use natural light and warmth from the sun wisely.

- Thoughtful consideration of how the sun, shading and natural ventilation is used, in consultation with both experts and the workforce (preferably together), can make the difference between a pleasant and productive working environment, and one that is miserable. This issue will become increasingly important as the climate warms.

Renewable electricity tariffs

- Switching electricity supply to a 'green' tariff from one of the major suppliers, or a specialist 'green' supplier (e.g. Ecotricity, Good Energy) is a quick and easy way of appearing to 'go green'. However, because there currently is not enough 'green' (i.e. renewable) electricity to meet the demand of consumers and business, what is really needed is more sources of renewable energy.
- It's much better if organisations install their own renewable energy generators, whether in the form of wind turbines, solar hot water, or ground heat pumps.
- See under 'wind' for the ecotricity scheme which can help business to provide, and benefit from, new sources of renewable power, even if their own site is not suitable.

Combined heat and power (and cooling)

Combined heat and power (CHP) is not in itself a renewable energy, but is a more efficient way of generating heat and electricity, typically using a third less fuel than conventional sources.

Electricity is generated on-site and waste heat captured for space heating, water heating, industrial processes, or also cooling/refrigeration.

Most CHP is powered by natural gas but there are also growing numbers of CHP plants powered by biomass like wood or gas from waste (see page 44).

CHP is particularly suitable when the workplace needs both heat and power, ideally round the clock (or for at least 4,000 hours a year), for example leisure centres, hospitals, manufacturing, or where there is scope to use the heat for nearby homes.

Wind power

Wind turbines produce electricity by capturing the natural power of the wind to drive a generator. Large turbines can be seen around the UK countryside generating electricity to feed into the national grid, but small-scale turbines are also available to generate electricity on-site for individual businesses.

Large (1–2 megawatts MW) machines are being used in industrial estates, smaller (<1MW) ones have already been installed at businesses in the UK. Bigger wind turbines produce much more power than smaller ones, due to greater windspeeds higher up – doubling the windspeed produces four times more power.

Well-sited wind turbines generate electricity for around 80–85 per cent of the time, though not always at full capacity, and are designed to have a useful life of about 25 years.

Wind power can be an important source of jobs – for example the Vestas plant on the Isle of Wight employs over 500 people manufacturing turbines.

Is my workplace suitable for wind power?

Is the workplace in a windy area (e.g. a coastal area, on the windy side of a hill, not surrounded by tall buildings) with an average wind speed of at least 5 metres per second? You can get an estimate from the British Wind Energy website www.bwea.com/noabl



'Buying-in' wind power

Ecotricity runs a 'merchant scheme' where it builds, owns and operates a wind turbine at the workplace (or in a different location, if the site is not suitable). There is no capital outlay by the organisation, but it must commit to buying the electricity over a minimum period (usually 12 years).

One of the first such schemes is operating at Ford Dagenham, where two 85m high turbines provide all the energy needed to produce all Ford's European diesel engines.

Solar water heating

Active solar water heating uses fluid-filled collectors, usually on the roof of a building, to capture and store the sun's heat and uses it to heat water. It is one of the cheaper forms of renewable energy.

As long as there is a suitable site (normally, a S, SE or SW facing roof) for the panels, it will save energy year round, and may even be able to meet all your organisation's hot water needs in the summer months. It should always be considered when a boiler is due to be replaced or installed, or even when it is not.

Biomass/Biofuel

Biomass is plant matter (such as wood and straw), which absorbs CO₂ as it grows, and then releases it when it is burned. Some biomass can be used to make liquid fuels – for example, diesel from rapeseed oil, or ethanol from sugar. There is, however, increasing concern that growing biofuels causes deforestation and also pushes up food prices as agricultural land is converted.

Your workplace boilers and your workplace vehicle fleets could potentially be run off biomass. The more sustainable forms of biofuels for any workplace to use are ones that come from nearby, and which are grown without the use of large amounts of fossil fuels and fertilisers during cultivation. The most environmentally friendly of all is organic waste matter that would otherwise be sent to landfill, such as waste wood, straw, food, or used vegetable oil. These wastes can also be rotted down (rather than burned) to produce 'biogas'.

Ground source heat pumps

Below ground, the temperature is a constant 10–14 degrees. Ground source heat pumps take heat from under the ground and use it to heat or cool your workplace.

They are not strictly a renewable source of energy, because they require electricity to extract and make use of low-grade heat, but they produce four or five times the amount of heat energy for every unit of electrical energy needed.

Solar PV (photovoltaic) electricity

Solar PV cells convert sunlight into electricity using a material such as silicon.

Solar energy is produced only during the day (though it can be stored in batteries) and also varies in output due to cloud cover. Therefore, it is probably more suitable for workplaces in the sunnier areas of the UK, though as technology improves and costs come down, this may change.

Solar PV cells can be arranged in panels on a building's roof or walls, or even integrated into the roof tiles themselves. They should always be considered if a new roof or building is being constructed, or even if not.

"I'd put my money on the sun and solar energy. What a source of power! I hope we don't have to wait 'til oil and coal run out before we tackle that."

Thomas Edison (1847–1931)
inventor of the light bulb

Hydropower

If your workplace happens to be sited near a fast-moving stream or river, it may be possible to use it to generate electricity. Small ('micro') hydro schemes have the potential to generate significant amounts of electricity, and do not have the same environmental impacts as large-scale hydropower, which can disrupt wildlife.

Wider issues

There is a huge potential for more renewable energy generation in the UK. We have the best wind and water renewable resources in Europe, but at present we lag behind many other European countries in developing them.

In order to meet overall climate change targets, the Government has a legal obligation to meet an EU target of 15 per cent of all our energy needs to come from renewable energy by 2020, a target it has admitted it is currently struggling to meet.

Resources

www.carbontrust.co.uk advice and support on renewables including information on combined heat and power, wind energy and solar power, and interest-free energy-efficiency loans.

www.r-e-a.net renewable energy industry body

www.berr.gov.uk/energy/sources/renewables/ government website

www.nef.org.uk a charity promoting better use of energy to counter climate change

The Combined Heat and Power Association – www.chpa.co.uk

British Wind Energy Association – www.bwea.co.uk

More on the wind power merchant scheme – www.ecotricity.co.uk

Solar Trade Association www.greenenergy.org.uk/sta/index.html

Biomass Energy Centre www.biomassenergycentre.org.uk

Ground Source Heat Pumps Association (More on ground source heat) www.gshp.co.uk

British Hydropower (Guide to micro-hydropower schemes) www.british-hydro.co.uk

National Energy Foundation (educational charity promoting energy efficiency and renewables) www.nef.org.uk

Renewable Energy Association (Industry body for renewable energy producers) www.r-e-a.net

Offsetting

Introduction

The idea of carbon offsetting is to cancel out the carbon released by an individual or business, by paying for reductions elsewhere. For example, paying for someone else to install energy efficiency measures or renewable energy. Another well-known route is paying to plant or protect trees (which absorb CO₂ in their lifetimes).

Although offsetting can fund worthwhile schemes and also raise awareness, there has been criticism that some offsetting is ineffective or not well regulated.

So it's vital to look at reducing emissions through cutting energy use and using more climate-friendly energy sources before considering offsetting – the previous sections give more guidance on this. If your organisation is already doing all that... then read on.

Key actions

- Calculate your organisation's carbon footprint (see p80).
- Reduce energy use (both direct and indirect, e.g. products purchased), using the guidance in this handbook.
- Consider high-quality offsetting projects, or funding investment in renewable energy for your own organisation.

Why do I keep hearing about carbon offsetting?

In this country, voluntary carbon offsetting has received a lot of publicity, with high-profile events claiming to go 'carbon neutral'. For example, the 2005 Gleneagles G8 summit claimed to have offset

the carbon cost of the event by funding sustainable development projects in Africa.

Companies offering offsetting services to the public, where you can pay a fee to offset the cost of a holiday flight or your car travel, are increasingly popular, and businesses are feeling the pressure to be seen to do the same.

Benefits

Good carbon offsetting programmes can have benefits by:

- raising awareness and understanding of an organisation's carbon impact
- paying for energy-efficiency measures for people in poorer, usually developing countries
- leading to overall reductions in emissions (if done properly)
- promoting the idea of 'the polluter pays', which has been a long-standing demand of the environmental movement.

Problems

A licence to pollute?

Paying for greenhouse-gas reducing projects to cancel out our own polluting activities seems straightforward, and its very simplicity is part of the appeal – just pay someone else to take care of it.

There's a danger that it simply provides an excuse not to take action to cut back on polluting activity, and possibly doesn't even lead to an overall reduction in emissions, because it just pays for schemes that would have happened anyway. And, perhaps more fundamentally, we can't cancel out all the effects of pollution through offsetting.

No regulation

There is no single accreditation scheme for voluntary offsetting schemes, which means it's

very hard to know whether your offsetting is really having the impact you thought.

Tree planting schemes in particular have come in for a lot of criticism. Trees take a lifetime of growth to absorb carbon, and they also release that carbon again if they are burned or rotted. Large plantations may also limit biodiversity, and push local communities off their land.

Choosing a scheme

The UK government has launched a voluntary standard for schemes – see **Resources** below.

The cost of offsetting can vary dramatically, but cheaper schemes are likely to have compromised on some of the areas below. A failed scheme will mean no environmental benefit, and potentially damage to your company or organisation's reputation in the process.

The Carbon Trust suggests you look for a scheme that deals properly with:

- **Additionality** – proving the scheme funds work that would not otherwise have happened.
- **Verification** – checking the work was carried out, and had the carbon impact that was promised. There are a number of different third-party verification systems in place for offsetting schemes – see the Carbon Trust guidance for details.
- **Permanence** – preparing for risks, such as the trees burning down or the project failing in some way. For example, insurance, or a range of different kinds of projects in different countries.
- **Leakages** – acknowledges and deals with carbon impacts that the project causes indirectly, such as displacing damaging agricultural practices to another area.
- **Double counting** – has a clear accounting system, to make sure emissions aren't double-counted.

[Adapted from The Carbon Trust's detailed guidance on developing an offsetting scheme, see **Resources**.]

Making your own offsetting scheme

One alternative to dealing with offset providers is to 'do it yourself' by making your own investments in clean technologies. For example in 2007 the TUC offset the carbon impacts of its annual Congress by investing in renewable energy at the Tolpuddle Martyrs Museum, which is installing solar water heaters.

Resources

The Carbon Trust guidance on developing an offsetting strategy. www.carbontrust.co.uk/publications/publicationdetail?productid=CTC621

DEFRA UK government information on offsetting, including a voluntary code of practice with standards for offsetting schemes. www.defra.gov.uk/environment/climatechange/uk/carbonoffset/index.htm

Work-related transport

Introduction

As commutes get longer, and roads get more congested, finding greener ways to get to work and to travel for work are questions of workers' well-being as much as of environmental benefits. Workplace relocations can also have a big impact on how easy it is for people to travel to work.

A travel plan looks at all the travel generated by your organisation in order to reduce its environmental impact. It might combine measures

to support walking, cycling, public transport and car sharing with the management of workplace parking. It can also look at action to reduce the need to travel, such as telecommuting, and can cover both commuter and business travel.

Unions have already been instrumental in pushing employers to introduce plans, and in making sure that proposals offer real benefits to staff. The Department for Transport (DfT) has guidance and support for introducing Green Travel Plans for workplaces.

Key actions

- Negotiate with your employer to introduce a strategic green travel plan.
- Make sure any proposals affecting transport have clear benefits for employees.
- Don't forget travel *for* work, as well as *to* work – for example fleet management and business travel.

Key facts

- Transport is a key environmental issue, accounting for 28 per cent of UK carbon dioxide emissions (excluding aviation).
- Aviation currently makes up at least 5.5 per cent of the UK's CO₂ emissions – but these emissions have approximately twice the impact because they take place high up in the atmosphere. (source)
- Cars alone make up nearly 13 per cent of total UK carbon emissions, with HGVs accounting for 5 per cent, light vehicles 3 per cent and railways 0.4 per cent.
- Commutes are getting longer – from an average of 35 minutes in 2003 to over an hour in 2007. That's an average of 47 working days a year.
- On average, regular cyclists add over 2 years to their life expectancy, have the general health of someone 10 years younger, and are 50 per cent less likely to experience depression.

- A survey of trade union reps found that three out of five workplaces (61 per cent) had not yet taken any action to promote greener transport options.

Identifying the issues

A sample travel plan survey is included on p89 of this handbook and another one is available from the DfT's Essential Guide to Travel Planning, which also has many ideas and suggestions that union reps can use to support members and notes on making a business case for introducing travel plans to a sceptical employer. Also see p80 for help working out the travel 'carbon footprint'.

Workplace travel plans

Making it work

Successful travel plans need wide support to succeed. They need to be seen to be fair, be backed by concrete support for change from the company, and be clearly communicated, including listening and responding to concerns.

The DfT recommends setting up a working party or steering group to make sure the travel plan gets the right input and support across the organisation. This could be a Joint Environment Committee or a standalone committee, but either way it would need to involve the facilities manager, personnel manager, union rep, fleet manager, communications manager and managers of any departments whose work generates business mileage.

The guidance suggests that employers need to determine which transport alternatives workers could be prepared to use. Gathering the right data is vital to support this, such as:

- site audit
- staff discussion group
- local transport information
- relevant resources, such as car sharing databases
- staff travel survey

- business travel data
- mapping where staff live.

Negotiating for change

Travel plans can enable an organisation to reduce the impact of travel and transport on the environment, while also bringing direct benefits to employers and to staff. Travel plans based on best practice have the potential to address real problems faced by union members in travelling to work.

These are:

- **Lost time** – absorbed in traffic jams, where no other activity can be pursued.
- **Costs** – especially for low-paid workers.
- **Safety** – on roads; using/waiting for public transport; and walking.
- **Stress** – induced by congestion, mechanical failures, poor driving conditions.
- **Health impacts** – from emissions and from inadequate physical exercise.

Travel plans will work best when workers know that their concerns are being listened to, and if the plan does not give privileges to more senior staff. Discussions and publicity about the plan should answer the questions "what's in it for me?" by setting out the benefits to individual members of staff, including:

- fairer systems, with financial or other incentives for sustainable travel available to all staff, including those without access to a car
- assured parking for those with most need to access a vehicle
- a less stressful options for travel to work,
- opportunities to build healthy exercise into daily life
- reduced journey times to work
- reduced travel costs, or even eliminating the need to run a car

- the possibility of greater working time flexibility or working from home

Car use

UNISON stewards responding to a survey warn that the most contentious elements of travel plans are normally where employers have large uncontrolled car parking that staff use.

The criteria for access to car parking should be based on job requirements and transport needs – not seniority. Employers should provide an appeals process for individuals who believe they are particularly disadvantaged by any scheme of car parking charges and restrictions.

Workers issued with permits might include people who:

- have a mobility problem
- need to use a car in the course of their work (but consider whether a car pool could be an alternative)
- are car sharing
- work out of hours
- have no realistic alternative, e.g. no bus route and too far to walk
- have responsibilities as carers (e.g. dropping off children) that cannot be met using available public transport.

Charges can be made more acceptable by:

- making it clear that parking revenue will be used to pay for improving other travel options
- setting parking fees on a sliding scale so that higher earners pay more
- offering a travel allowance or redeemable vouchers; staff can then choose whether to spend the allowance on parking or save money by using other forms of transport
- offering staff a compensatory one-off income adjustment at the introduction of charges.

Workers should expect, and be offered, a combination of financial, and other incentives to use alternatives to sole car use BEFORE they are presented with additional costs such as parking fees.

Promoting bike use

If you need to persuade your employer to invest in promoting cycle use you could point out that:

- Cyclists avoid parking and congestion charges
- Six cycles can be stored in the space of one car parking space.
- Cyclists are less likely to be held up in traffic.
- Cyclists are healthier (see pg48).
- There is a range of ways employers can promote cycling that also attract tax breaks that were introduced in 1999, including;
 - Bicycles and cycling equipment made available for employees to use to get between home and work, or during lunch breaks or for local meetings.
 - Interest-free loans of up to £5,000 for purchasing bicycles, season tickets, motorcycles etc. – www.cycletowork.org.uk – employees can get up to 50 per cent off the retail price by buying a bike through their employer, as the money is taken pre-tax, saving on income tax, VAT and national insurance.
 - Workplace parking for bicycles.
 - Employees who use their cycles for business travel can claim capital allowance on a proportion of the cost of the bicycle.
 - Employers can pay staff up to 12p per mile tax-free for using their own cycles on business travel.
 - Employees can claim tax relief of 12p per business mile if their employer does not provide payment.

Other workplaces have taken initiatives like organising bike rides as social events, installing showers and changing rooms (which also benefits non-cyclists), providing cycle repair and cycle training during work time, setting up 'bicycle user groups', or running activities during Bike to Work week in June.

Other tax incentives

Employers can reclaim tax on:

- Works buses with 17 or more seats that are used to bring employees to and from work.

- General subsidies to public bus services used by employees to travel to work, as long as employees' journeys are not already subsidised.
- Employers can pay tax free for alternative transport to get car sharers home in emergencies, when working late and in other exceptional circumstances.

See **Resources** for more information from HM Revenue and Customs.



Travel for work

Travel may also be an essential part of a worker's job. In this case there are many things that can be done to reduce the environmental impact

- Switch fleets to 'greener' vehicles, for example smaller, electric or hybrid vehicles – see www.est.org.uk/fleet and see p44 for information on biofuels.
- Give training to drivers on 'greener' driving techniques.
- Make sure any essential car user allowance rewards energy-efficient cars.
- Promote the use of public transport, cycling and walking where this is an option.
- Promote the use of train travel rather than flying for short-haul business trips.

Reducing unnecessary meetings through telephone and video conferencing can reduce long hours as well as travel emissions. If your meeting or event is necessary, check out www.oursouthwest.com/SusBus/gevents.html for ways of reducing its impact, and ensure travel directions to your workplace give public transport directions.

The T&G Union at Wincanton Logistics negotiated for all drivers to have training on fuel-efficient driving. While other employers have carried out similar training, the union involvement was particularly important in ensuring training was also given to night shift workers too.

Green staff travel plans – bargaining checklist

1. Do your research (see **Resources**) to make sure you're not outmanoeuvred and can take the initiative on negotiations if necessary.
2. Raise awareness among members about the more beneficial kinds of Green Staff Travel

Plan packages that can be achieved and the reasons why reducing car use is important.

3. Where there is a proposed change to one aspect of travel-related terms and conditions (for example, car parking fees), this is an opportunity to argue for a coherent, well-developed travel plan, rather than piecemeal measures introduced under the guise of 'green' policy.
4. Where employers are initiating a travel plan, seek to be closely involved through its development.
5. Make sure you get clear agreement on terms of reference at the start of travel plan negotiations, which assure staff that the aim is to produce a travel plan with benefits to workers as well as to employers and the environment.
6. Ensure employers understand that if they want to have a real impact on car use, the most effective measures will include financial incentives.
7. Make sure you get to see anonymous data resulting from staff travel surveys.
8. Union branches and members can call their transport authority to account if public consultation on local transport plans has been inadequate and/or local views are not properly reflected in the plan.
9. Remember that this is a great opportunity to raise the union's profile.

Source: Adapted from UNISON, Bargaining for Better Green Travel (see **Resources**)

Case studies: on your bike (and feet)

University of Brighton

The University made improvements for staff travel after UNISON union reps took up the issue as part of their environmental campaigning.

The University is spread over sites in Brighton, around 4 miles apart, meaning staff have to travel once they are at work. The union successfully negotiated for padlocked, covered cycle storage, with the same key available for every site to assist travel between them. The University also agreed to fund interest-free cycle loans and season ticket loans, and to promote cycling events such as National Cycle Week and a sponsored 'bike to work day'. Finally, 10 minutes 'changing time' is granted as part of core flexi-time.

University of Birmingham

University staff can get a bike and equipment tax free, and get the bike coded by campus security. The Bicycle Users Group provides information about cycling on campus and locally, including the locations of cycle racks and showers on campus, safety and security advice, and cycle maps. Staff can buy subsidised safety and security equipment,

There is an annual season ticket loan and the University is also part of Travelwise, which provides savings for those who stop using their car to travel to work. For example, staff are entitled to a 50 per cent discount on the cost of their first season ticket. The University runs a free bus service for staff and students who travel between the Selly Oak and Edgbaston campuses.

The South West of England Regional Development Agency

The South West Regional Development Agency (RDA) has developed a green travel plan in conjunction with PCS union reps that won the 2006 Energy Savings Trust/Observer Newspaper Award.

Video conferencing has saved around 13,000 business miles per year. Lockers for walkers and cyclists have been installed in several South West RDA offices. Remote access to the Agency's computer network allows many staff to work flexibly and reduce car mileage.

Where an employee has to make at least two business trips a calendar month, the Agency provides a car user allowance, which is more generous for cars with lower CO₂ emissions.

A standard Agency mileage rate of 40p per mile is paid to those who do not receive the car user allowance. A public transport mileage rate of 25p per mile is paid where journeys can reasonably be done by public transport.

Staff who agree not to bring a car into Bristol city centre for work receive an annual financial incentive, paid on a monthly basis on top of their salary.

To encourage car sharing, a guaranteed ride home will be provided for staff who share a lift into work with a South West RDA employee.

Legal and General

The Legal and General travel plan was triggered by parking problems after a staff relocation. The company offices are on an edge-of-town site and the travel plan covered car sharing as well as

cycling, walking and dedicated shuttle buses. Around 500 staff now car share each day, a quarter of the workforce.

After consultation with the staff union Amicus, management assigned everyone one no-parking day each week. Although some staff were unhappy, the firm made space for staff to raise questions about the rules with their managers and, crucially, the new rule was applied equally to absolutely everyone, right up to the managing director.

The scheme makes parking so much easier that people now complain when it is suspended during holidays. Every car displays a sticker that shows which day it is not allowed to park. The rule is enforced by a security firm that patrols the car parks and can issue fines.

Car sharers can park any day and have their own car park, avoiding congestion. Matches are made through an online database set up by the council. The firm offers a guaranteed lift home to cover emergencies.

Resources

See www.sustainableworkplace.co.uk for further travel surveys you can use, and information on travel and 'carbon footprinting'.

Department for Transport website provides its Essential Guide to Travel Planning, and its own travel plan www.dft.gov.uk/pgr/sustainable/travelplans/work/essentialguide.pdf

HM Revenue and Customs factsheet about tax incentives to support workplace travel plan measures www.hmrc.gov.uk/green-transport/travel-plans.htm

PCS and the green bargaining agenda www.pcs.org.uk/shared_asp_files/GFSR.asp?NodeID=917227

UNISON, Bargaining for Better Green Travel www.unison.org.uk/acrobat/B3212.pdf

www.act-uk.com Association for Commuter Transport

www.sustrans.org.uk the UK's leading sustainable transport charity

www.ctc.org.uk National Cyclists Organisation

Cycling to Work: A Beginners Guide – Rory McMullan, Green Books

www.bettertransport.org.uk campaign for better, more environmentally friendly public transport (formerly Transport 2000)

Organisations in London can get free support from TfL to set up a sustainable travel plan, saving both themselves and staff time and money – see www.anewwaytowork.org

Reduce, re-use, recycle

Introduction

Recycling is often the first thing colleagues will think of when asked how 'green' their workplace is – after all, the contents of bins are there for all to see before they head off to landfill. A 'reduce, re-use and recycle' approach to products at work will protect the planet by using fewer scarce resources and generating less waste.

Workplaces generate 250 million tonnes of waste a year in the UK alone. That's 10 times more than all household waste put together. So whatever you do to reduce waste and recycle at home, there's the potential for a much bigger impact in the workplace.

It makes business, as well as environmental, sense too. Waste is estimated to cost UK industry at least £15 billion per year – equivalent to some 4.5 per cent of turnover. Much of this money could be saved, quickly and simply in many cases, through waste minimisation.

Lots of materials produced in workplaces can be recycled and, although in some cases it can cost money to segregate, sort and arrange waste to be collected, in other cases it can save money.

Union involvement will be key to successful waste reduction and recycling as it will help to get workers on the ground 'on board' and involved in any schemes, as well as identifying issues.

Key actions

- Audit the amount and types of waste your workplace is producing.
- Look at ways to reduce the amount of resources your workplace is using, including cutting the use of disposable items.

- Think about ways you can make sure things like computers, furniture and mobiles phones can be re-used.
- Push for improved recycling schemes and ensure the union and workers are involved in setting them up
- Longer term, consider setting up an ambitious 'zero waste' targets.

Identifying the issues

- To manage waste effectively, the first step is to measure it. Find out what are the major waste streams (raw materials, water, packaging, time, etc). Are things being wasted?
- Are paper, plastic, cans, glass and all other major waste streams routinely recycled?

Key facts

Waste disposal

An LRD survey of union reps in 2007 found that, although around two-thirds of employers had taken some action on waste reduction and recycling, there was still a lot more to be done, with only one in five having taken 'comprehensive' action.

Most UK waste still ends up in landfill sites. Apart from concerns about running out of space, and toxins entering the soil and water as waste rots in landfill, it creates methane, a greenhouse gas more powerful than carbon dioxide. Methane emissions from biodegradable waste in landfill account for 40 per cent of all UK methane emissions and 3 per cent of all UK greenhouse gas emissions.

Scarce resources

All products use scarce resources throughout their life cycle – in their production, transportation and use, as well as when they are disposed of. The world's resources are finite – the oil used to create plastics and energy, the ancient rainforests that have been destroyed for paper, the minerals that have been mined for metals, etc. Large amounts of energy is also

used in their extraction and production. Currently, on average 93 per cent of production materials are never used in the final product, and 80 per cent of products are discarded after single use.

Currently, the UK's paper use equates to cutting down a forest that would cover the whole of Wales, every single year. As well as providing habitats for wildlife, trees stop climate change by absorbing CO₂. All the primary rainforests in India, Bangladesh, Sri Lanka and Haiti have been destroyed already.

Negotiating for change

According to Envirowise waste can cost 4 per cent of business turnover, so there is plenty of scope for businesses to save money, as well as improve their environmental performance.

Unions need to be involved to win workforce commitment, push reluctant employers, and make sure that the workforce is consulted about any changes. UGRs will also have lots of shop-floor experience of where waste is being generated.

It costs organisations money to dispose of any kind of waste – whether it is the fee paid for normal waste collection or, in the case of larger organisations that produce a lot of bulky waste, a landfill tax. Landfill Tax is currently £32 per tonne and will rise by £8 a year at least until 2010/11.

Since October 2007 all businesses are required to treat their own waste before passing it to landfill sites, under the Landfill (England and Wales) Regulations 2002. Businesses themselves, or a certified contractor, now have to change the waste in a way that will make it more compact, easy to transport, and able to be recycled.

So, while some forms of recycling collection need to be paid for, there's scope to reduce the amount spent on general waste collection. And if there is an integrated effort to reduce waste, as well as improving recycling, then there should be cost savings on two fronts – less resources needed to be bought in the first place, and less money needed to cart it off to landfill.

Large organisations (public, private and voluntary sectors) can get a free, confidential, Government-funded Envirowise audit to help with waste minimisation and resource efficiency. This will highlight immediate savings by identifying low-cost, high-value solutions, an action plan to help prioritise where to focus efforts, savings targets and references to other Envirowise publications and software that will help with your workplace's implementation plans. Smaller workplaces can get telephone advice.

Reduce, re-use, recycle

Reducing the amounts we use in the first place is the most effective way to cut waste, followed by making sure things are re-used where possible, or recycled.

The waste hierarchy



Reducing waste

A number of organisations have been imaginative in getting across how much is wasted, e.g. by piling up paper in the lobby or even emptying out people's bins into clear plastic bags to show how much recyclable waste is going to landfill. Make sure this is done in a light-hearted way – anything that makes people feel 'got at' is likely to backfire.

UNISON's Water at Work campaign pushes for all workplaces to have tap water available for drinking for all workers, so that people don't have to rely on bottled water or canned drinks from shops and vending machines. Think of ways to encourage people to use re-usable cups and plates instead of disposables.

If your workplace manufactures goods, can you persuade the employer to reduce the amount of packaging? Unite/T&G shop stewards in Argos distribution in Bridgewater have begun negotiating with management to reduce the amount of packaging used in their products. In South Korea there are now laws to combat 'empty space' in packaging, and food is not allowed to have more than two layers of packaging.

Paper is the most obvious candidate for reducing and recycling in many workplaces. The UK is the fifth highest consumer of paper and cardboard in the world using more than 11 million tonnes of paper and cardboard every year, and only recycling 40 per cent of this. Getting IT to set printers to default to printing on both sides is one of the easiest ways of reducing use.

At Friends Provident sites in the south-west of England, waste bins were removed from under people's desks and central recycling bins installed. Amicus union reps were happy with the move, as it got people moving around, taking screen breaks and interacting.

Procurement and purchasing

A good way to minimise waste is to have a well thought through purchasing strategy. This could include using recycled or re-used goods where possible. Other areas could include using wood that is FSC certified, and buying longer-lasting, better-made, refillable or re-usable products like pens, cups, plates, and cutlery. Disposable products are often sold as 'convenient', but is it really convenient to keep buying products and packaging that you just throw away?

See p67 for more on procurement.

Re-use and recycling

For guidance on improving recycling schemes, visit www.wasteonline.org.uk, www.recyclenow.org, www.envirowise.gov.uk and www.nisp.org.uk

In industrial settings, a pioneering government initiative has been set up to enable industrial waste to be sold, swapped and recycled between companies – see www.nisp.org.uk

Other forms of waste that can be sold to raise money or can raise money for charity include:

- Aluminium – www.thinkcans.com
- Some 60 million inkjet cartridges are used each year, but fewer than 10 per cent are recycled. 15,000,000 mobile phones are discarded in Britain every year, creating 1,500 tonnes of landfill. Oxfam can take them www.oxfam.org.uk
- Computer recycling schemes will take usable computer equipment for refurbishment and re-use, and will usually have policies in place to make sure your company data is effectively wiped www.computersforcharity.org.uk
- See if a local furniture recycling organisation can pass on usable furniture – see the Furniture Re-use Network. www.frn.org.uk Your local freecycle network can also be a great way of finding a home for (often surprising!) items to local users, including community groups www.freecycle.org

Ideally waste should be segregated at the point of disposal – this makes processing it more effective, more environmentally friendly, and less hazardous. Workplaces are well placed to install segregated waste collection facilities such as different bins.

Remember to 'close the loop' and get those responsible for purchasing, to buy recycled products. See p67 for more on procurement.

Dealing with concerns

Recycling schemes vary by area, and may be council or privately run, but a good one should answer questions such as – exactly what can and can't be recycled (for example, only some paper schemes accept cardboard), how it needs to be separated, and where the waste is handled (to put to rest any concerns about it ending up in rubbish dumps, shipped round the world, and/or dealt with in dangerous condition). It should also tell you how much recyclable waste you have produced (and therefore, not sent to landfill).



For example, in South Somerset Council's recycling scheme:

- Paper is made into new newspapers and magazines at a paper mill in Kent.
- Cardboard is made into envelopes and cardboard in a card mill in West Somerset.
- Glass is used for new glass bottles and jars, aggregate for road construction, glass fibre and water filtration in a recycling plant in Harlow, Essex.
- Plastic bottles are made into fleece jackets, park benches and compost bins in various recycling plants in the UK.

Recycling creates 10 times more jobs than traditional waste disposal, according to recycling social enterprise EMERGE. It is important to find out where waste ends up, to make sure these are good quality jobs with proper health and safety protection, and also to segregate waste as well as possible before it goes off to recycling to make it less hazardous.

The waste industry (both traditional and recycling) is hazardous for workers both in the UK and overseas, with UK accident rates four times the national average in 2001–2.

Doesn't it use more energy to recycle products?

No – recycling saves energy. Current UK recycling of paper, glass, plastics, aluminium and steel is estimated to save more than 18 million tonnes of carbon dioxide a year, compared to using virgin materials (equivalent to 14 per cent of UK transport sector emissions).

Case studies: reducing landfill

The TUC reduced its landfill waste by 40 per cent in 18 months by UGRs raising awareness and negotiating for improved recycling facilities. This was measured simply through monitoring the number of large bins that used to be filled for collection each day and how this had gone down. A 'stationery amnesty' was organised during an office re-organisation, with staff encouraged to put back the stationery they had tucked away, reducing the amount that needed to be ordered. Waste was also reduced – for example conference facilities now have jugs of tap water rather than glass bottles, and catering packaging in the canteen and at tea points was reduced considerably. UGRs also worked out how much paper the office was using by finding out how much was ordered every year (three million sheets!) and used this simple message on posters to encourage everyone to think before they printed, as well as giving advice on double-sided printing and copying, which is now the norm.

A Labour Research Department survey in 2007 found a huge variety of recycling schemes in unionised workplaces, involving a wide range of materials – not just white paper.

A UCU rep at University College London (UCL) described recycling in her workplace: "Some wastes are sent for re-use. Toner cartridges may be sent for re-manufacture and some furniture may be accepted for re-use by Procurement Services. Computers are donated to Computer Aid International for refurbishment and shipment to developing countries, and gas cylinders may be refilled by BOC. Some companies operate a take-back system of packaging or of catalogues, but this is a local arrangement. UCL provides direct recycling streams for paper and for bottle glass, although the potential for other streams is constantly under review. "Other waste streams are subject to increasing levels of pre-disposal

conditioning by the waste disposal contractor. Batteries are removed from the hazardous waste stream and sent for recycling, and fluorescent tubes are processed to recycle the mercury content. Similarly, the shreddings from confidential waste are sent for paper recycling and the domestic waste is sorted to remove metal and other recoverables."

A Unite (T&G) safety rep at GlaxoSmithKline said its recycling included metals graded and reused, with the rest sold for scrap; used solvents recovered via distillation process; exact packaging quantities dispensed for use; waste solvent burned in its own boiler system to create steam for site heating and hot water; and paper and plastics sent to a recycling plant.

Unite (T&G) reps at the North West Institute of Further and Higher Education in Northern Ireland have been involved in negotiating a new policy for waste management and recycling, including guidelines on ordering green products and doing waste audits. A full-time post has been created to facilitate this.

UNISON reps at the National Grid have been involved in formal consultations on the environment at the National Safety, Health, Environment and Security Forum. The National Grid is ISO14001-approved for waste segregation and recycling of road spoil.

Unite (T&G) reps reported that Scottish & Newcastle brewery has a "total recycling process" and overall environment strategy, which covers energy usage, purchasing of materials, and water usage as well as external contractors.

At Kemfine UK chemical plant, Unite (Amicus) reps reported that waste treatment takes place at its own plant. Metal for scrap as well as paper and cardboard is collected for recycling.

Resources

Envirowise free help and advice on waste reduction for businesses and workplaces.
www.envirowise.gov.uk – the site includes a new waste calculator

DEFRA, Waste Strategy for England 2007
www.defra.gov.uk/environment/waste/strategy/index.htm

www.wasteonline.org.uk

www.recyclenow.com

www.recycle-more.co.uk

www.nisp.org.uk

www.freecycle.org

www.fonesforsafety.org.uk

Water

Introduction

Water-hungry modern lifestyles and climate change mean that even a rainy country like the UK is experiencing water shortages.

Most of us don't have much of an incentive to reduce our water use, particularly at work, as our supply is unmetered and unmeasured. However, cutting water wastage is vital to protect our environment, both locally and globally. It could also save your employer money, cutting costs in an area most employees will be glad to see reduced.

Most workplaces could reduce their water use by as much as 20–30 per cent with free or low-cost measures. Read on to find out more about the quick fixes, and some of the larger-scale solutions for reducing water use.

Key actions

- Find out how much water your organisation is using, and how much it's paying in water supply and waste water charges.
- Persuade your employer that taking a systematic approach to reducing water use will pay off, and get help from programmes such as Envirowise.
- Look at technical fixes that can save water.
- Run an awareness campaign to help staff change habits in ways that will save water.

Identifying the issues

The Government's Envirowise programme and its Big Splash scheme (see **Resources**) provide support for businesses and organisations to tackle this issue. These include monitoring tools for working out current and baseline water consumption, and help and advice in working out which actions will be the most cost-effective in your workplace.



Key facts

Changing lifestyles and economic development mean that global water use grew twice as fast as population in the last century. At the same time, climate change in the form of disappearing glaciers, reduced rainfall and increased flooding seriously threatens clean water sources.

Rivers and lakes do not respect national boundaries; the World Development Movement estimates that as many as four billion people live in areas with potential conflict over water.

An LRD survey of union reps in 2007 found that nearly three out of five workplaces (57 per cent) had not yet taken any action on water conservation. (source – LRD Environment survey 2007).

Toilet and urinal flushing accounts for 63 per cent of water use in the average office block.

UK effects

At present, in the UK we each use something like 150 litres per day, and that's increasing.



We think of Britain as a wet country but, according to UK water charity Waterwise, the densely populated south-east of England has less water available per person than Sudan. Large-scale drought is already occurring in the UK, with the lowest rainfall, groundwater and reservoir levels for decades.

Water and energy

Purifying water, storing, heating and moving it around to businesses and homes is an energy-intensive business, as is processing sewage, so water use also has an impact on carbon emissions too.

This is especially wasteful when you consider that much of this water is processed to drinking-quality standards only to be flushed down the toilet.

Reducing waste

Reducing wastage of water needn't be difficult or expensive – many of the ideas opposite involve nothing more than a small change of habits. Fixing a small thing can have a surprising impact – a tap dripping twice a second would waste 10,000 litres over the course of a year.

If you work for a public body, the Water Act 2003 means it is also under a legal obligation to conserve water.

The bottom line

Water supplies cost money in water, waste water and fuel bills. According to Envirowise, a site that hasn't previously looked at water use could make savings of up to 30 per cent on its water and effluent bills, simply by implementing no-cost and low-cost measures, and this could increase to 50 per cent through capital investment.

Awareness raising

The water company supplying your workplace should have water-saving information leaflets and even posters encouraging people to conserve water. These can be used as part of your awareness-raising campaign in the workplace.

Negotiating for change

Quick wins

Good housekeeping

- It seems obvious, but leaks and drips are common, and easy to fix. Ensure people know how to report leaks so that they can be dealt with quickly, rather than assuming someone else will do it.
- New toilets must now have a 6-litre tank, but older-style units will be using 8–13 litres per flush. If your urinals are flushing automatically three times an hour they could be using as much as 200,000 litres a year, much of that at night or at weekends.

Low-cost measures

- Fitting a 'water hippo' device is a simple way of reducing the amount of water used each time the toilet is flushed. At PCS headquarters, water savers were installed in all 41 toilet cisterns, saving 1 litre of water every flush. The union calculates that if each toilet is flushed just three times a day, the savings would be 32,000 litres of water per annum. The Whinfell Forest Center Parcs holiday village saved over 1,000 m³ of water a year by fitting cistern volume adjusters, saving 1 litre of water per flush to 740 toilets, and leading to savings of £756 per year in sewerage costs.
- A simple garden water butt can collect rainwater for re-use on plants and gardens.

Longer term

- Employers should be encouraged to adopt these systems, particularly if bathrooms need

improving anyway. The Workplace (Health, Safety and Welfare) Regulations state that suitable and sufficient toilets must be provided, adequately ventilated and lit, kept clean and maintained in an orderly condition.

Taps and washing

- Some employers have installed push-button taps, which turn off automatically, or spray taps, which use less water, but give the 'washing' feeling of a larger volume.
- Water-saving controls can be retro-fitted, or new facilities can be installed. Options include rainwater and shallow flush systems, automatic infra-red controls, or even no-water toilet systems, such as water-free urinals, which use a special liquid to filter urine, and composting toilets.
- Larger-scale rainwater and greywater (waste from sinks, showers, washing etc.) capture water for re-use. Legal and General HQ in Brighton installed rainwater harvesting systems on its roof as part of a brand new eco-building that was designed in consultation with Unite/Amicus environmental reps.

Case studies: saving water

CWU reps at BT have supported BT's Working for a Better Environment project, which has included the introduction of waterless urinals at some sites, and CWU reps at Royal Mail have supported similar efforts as part of a wider project to save water. PCS reps have supported similar installations at the Department for Work and Pensions, and at a number of other workplaces. The Health and Safety Executive uses collected rainwater to flush toilets.

Wider issues

World Water Day takes place in March every year, organised by UN-Water, the United Nations agency responsible for working towards 2002's water-related Millennium Development Goals.

This could make a focus for awareness-raising campaigns, making the link between water waste in your workplace and access to clean water worldwide. You can find out more about international water campaigning on the End Water Poverty website www.endwaterpoverty.org

Health and safety issues

The Workplace (Health, Safety and Welfare) Regulations state that an adequate supply of wholesome drinking water should be provided for everyone at work in the workplace. The code of practice states that drinking water should normally be provided from the mains supply.

In recent years there has been a big increase in the use of water coolers in workplaces. Unfortunately, some drinks machines have been found to contain harmful bacteria, including *E.Coli*. And contamination is difficult to eradicate if it gets into vending machines. The large bottles used in water coolers, weighing nearly 20kg, can also cause manual handling injuries. Therefore the best health, safety and environment solution is to provide tap water from the mains.

If this is not possible, at least suggest your workplace reduces waste by installing mains-fed water coolers instead. As well as the increased convenience and energy saving of getting rid of the heavy plastic bottles, these cost less than half as much to run. See the UNISON campaign www.wateratwork.org for more information and posters.

Resources

Envirowise Government scheme to support businesses and organisations in improving their environmental performance. Includes useful tools to help work out and monitor water use in your workplace, and to compare use with others in your sector. www.envirowise.gov.uk/watertools

Environment Agency water- saving advice, including specific advice for different sectors, such as agriculture, hotels, schools etc.

www.environment-agency.gov.uk/subjects/waterres/

Energy Saving Trust the 'compare and buy' tool compares the water consumption of different of appliances. www.energysavingtrust.org.uk/energy_saving_products

Waterwise UK charity dedicated to reducing water wastage. www.waterwise.org.uk

Water @ work UNISON campaign for tap water in the workplace, including posters www.wateratwork.org



Green finance and investment

Introduction

Millions of pounds are invested in the stock markets on our behalf in the form of pension funds and other investments. How can we make sure that they're not funding pollution, exploitation or human rights abuses?

Concerns about compromising investment returns, and therefore people's pensions, may have held back trustees in the past. But there is now agreement among investors, business people and campaigners that dealing with the consequences of climate change makes business sense as well as ethical sense.

The increase in the proportion of pension fund trustees elected from the membership means that there is plenty of opportunity for unions to influence how pension funds choose to invest.

Key actions

- Find out what your pension fund is already doing on socially responsible investment.
- If you're a pension fund trustee, use **Resources** to push forward initiating, or developing, a socially responsible strategy including a policy on engagement with investee companies.
- If you're not a trustee, look at ways of influencing your pension fund's board, through member-nominated trustees, or via your organisation's Environment Committee.

The problem

Most people don't think of themselves as investors in the stock market, but a huge proportion of investments are held through our savings, pensions, insurance and banking. This means that money may be invested on our behalf in industries of which we might personally disapprove, or in companies that are failing to take action on climate change.

Solutions – what is responsible investment?

When most people think about 'ethical investment' they will most likely think about keeping investments out of certain areas. Choosing to put your money into an ethical fund could allow you, for example, to avoid certain sectors such as mining or logging, or to avoid investing in countries with a poor human rights record.

This approach is problematic for a pension fund, which is looking after the pensions savings of a very large number of people, who will have different opinions on what they wish to avoid, or the best ways of encouraging change in a sector.

A broader responsible investment strategy is one that takes into account environmental, social and corporate governance issues when making investment decisions. This doesn't just mean withdrawing from or avoiding companies or sectors, but engaging with them to push for change, and taking part in shareholder activism – attending AGMs and voting on relevant issues.

The UN launched its six Principles of Responsible Investment in 2006, developed by an international panel of investors. Within a year over 200 major investors in 25 companies, accounting for over \$10 trillion of investments, had signed up www.unpri.org/principles/ UK signatories include the BBC and BT pension funds.

Pension funds

According to the Ethical Investment Research and Information Service, UK pension funds control more than a third of the shares on the UK stock market. This is likely to grow, as more people are automatically opted-in to company schemes under new legislation. The TUC, with others, is lobbying to ensure that the new Personal Accounts pension scheme, due in 2012, adopts a responsible investment approach to managing its funds.

Their size means pension funds are particularly important in pushing for changes in company behaviour. New rules increasing the number of member trustees on the board of UK pension funds mean that there is a lot of scope for union members to speak up and make a difference.

Why trustees need to care about ethical issues

A pension fund trustee has an overriding 'fiduciary duty' to promote the best interests – normally interpreted as the best financial interests – of scheme members. This has often led to a concern that taking environmental or social considerations into account might be inappropriate if it led to the fund having less money to pay people's pensions.

Pensions are working on a relatively long timescale, and with increasing consensus on climate change we have to acknowledge that it's not in any pensioner's best interests to retire into a world ravaged by climate-related destruction.

More immediately, there's increasing agreement that it's a pension fund's duty to invest in companies that are dealing most effectively with the risks (and business opportunities) created by climate change. The Government's 2006 Stern Report warned that global warming could shrink the UK economy by 20 per cent. The environment is clearly not a 'non-financial' issue.

Climate change – the risks to businesses

Regulation – Governments are bringing in emissions reduction targets, particularly in high-emissions industries such as energy generation and telecommunications. Businesses that aren't on top of this risk penalties, and losing out in the face of competition.

Physical – Some sectors, e.g. agriculture, insurance and real estate, will be more directly physically threatened by climate change, such as flooding or droughts.

Reputation – Companies that are not seen to take action could suffer a consumer backlash.

Litigation – High-emitting companies could face lawsuits for the consequences of climate change.

Competition – Companies that take action may be more competitive, either by cutting costs or improving profits, or by making themselves more attractive to customers.

*Adapted from: **A Climate for Change, a trustee's guide to understanding and addressing climate risk.** www.carbontrust.co.uk/climatechange/investors/pension.htm*

This means that there is increasing agreement that it is a trustee's duty to take social and environmental factors into account. The UNEP Finance Initiative's report *A legal framework for the integration of environmental, social and governance issues into institutional investment* (available on the UNEPFI website – see **Resources**) provides a summary of the legal position in a number of countries including the UK.

And it's not just a question of avoiding risks. A 2007 report by UNEP and financial consultancy Mercer, pulling together a range of research on investment performance, showed that 'engaged' investors got as good, or better, returns as those who were ignoring social and environmental factors.

Information

As well as increasing consensus about approaches to take, such as the UN's principles, investors are getting better access to information to help decision making.

For example, investment bank UBS launched a Carbon Optimised Index, ranking company performance weighted according to its emissions impact. Environmental research company Trucost provides carbon footprint analysis tools, allowing investors to calculate figures for each company and compare with industry benchmarks.

What you can do

First, find out what your pension fund is already doing. By law, all pension schemes must state whether they have any socially responsible investment strategy in their Statement of Investment Principles. You may find this in the paperwork for your pension scheme, or in the Annual Report. If not, you can contact them directly and ask for this information.

If you're a trustee, use the resources below to inform yourself, and to push for your pension fund to develop a responsible investment strategy.

If you're not a trustee, get in touch with a member trustee and talk to them about this issue, or if you have a Joint Environment Committee (see **Negotiating on climate change** p19) discuss whether this is something that the committee could approach.

Case study: Environment Agency pension scheme (EAPF)

The Environment Agency has the equivalent of about \$2.7 billion invested on behalf of its 18,000 scheme members. As a public sector body dedicated to protecting and improving the environment, publicity about investment in polluting industries was particularly embarrassing and this, coupled with several years of poor investment returns, led to a new policy in 2005 aiming to ensure that investment managers took environmental and other long-term risks into account.

Rather than get involved in the day-to-day investment decisions, the fund selects its investment managers partially on the basis of their experience and expertise in taking environmental, social and governance issues into account.

It monitors investment manager performance and asks managers to explain and justify investment decisions. Rather than screen out companies, EAPF prefers to invest on a positive 'best-in-class' basis and engage with companies on relevant issues through voting and discussion.

Investment managers are expected to engage with companies on the following issues:

- climate change
- emissions and other environmental externalities
- contaminated land and related clean-up issues
- natural habitats and wildlife issues.

Managers report on the issues discussed, the outcomes, actions agreed and timelines on a quarterly basis.

Investment managers are required to vote in accordance with the scheme's corporate governance and environmental policies. Managers have to refer environmental-related resolutions

to the fund itself for a decision. In 2006, the EAPF voted on 49 US company environmental shareholder resolutions – an 80 per cent increase on 2005.

Business banking

While pensions may be the most obvious place to take action on responsible investment, there is a great deal of company money in business accounts.

You could ask your Joint Environment Committee to raise the issue of ethical banking, looking into whether a bank with a very active ethical position

such as Triodos Bank, Unity Trust (which was set up by Trade Unions) or the Co-operative Bank might be able to meet your organisation's needs.

Alternatively, the Committee could look into the ethical and environmental performance of your current provider. The more customers ask for information on these issues, the more likely banks and companies are to respond.

Resources

Carbon Trust – resources for pension fund trustees, including a guide to understanding climate risks, and training materials www.carbontrust.co.uk/climatechange/investors/pension.htm

Fair Pensions – a UK organisation campaigning for responsible investment, providing a best practice guide for pension trustees. www.fairpensions.org.uk/bestpractice/

Institutional Investors Group on Climate Change (IIGCC) – established in 2001, the IIGCC promotes concerns over climate change, as a forum for collaboration between pension funds and other institutional investors. The site includes an investor statement on climate change, which investors can sign up to.

Pensions Investment Resource Centre (PIRC) – research and consultancy on corporate governance and corporate social responsibility issues www.pirc.co.uk

Ethical Investment Research Service (EIRIS) – research organisation providing information on the environmental, social and ethical performance of key companies www.eiris.org

UK Social Investment Forum – brings together banks, investors, charities and others. It has a range of resources on sustainable pensions, including a guide to implementing a long-term responsible investment strategy, developed for Local Authority pension schemes. www.uksif.org/uksif

TUC member trustee network – the TUC works with a network of 1,000 member-nominated pension trustees, providing information, events and guidance. A current theme is promoting the use of engagement by pension funds with the companies in which they are invested as an important driver of responsible investment www.tuc.org.uk/pensions

UN Principles for Responsible Investment – the six UN principles, plus a list of signatories and information about how to sign up www.unpri.org/

Trucost – Environmental research organisation. Its website provides carbon footprint analysis tools to allow you to benchmark company performance within their sector www.trucost.com/carbonfootprint

Greener procurement and supply chain

Introduction

A well thought-out purchasing strategy can help save energy and resources, and support worker's rights. For example, the organisation could commit to buying products that are:

- environmentally friendly across their whole lifecycle – that is, they use low amounts of energy and other resources, and create minimal pollution, in their production, transportation, use and disposal
- socially responsible – that is, they are safe and easy to use, made by workers who have a right to organise themselves into independent trade unions, and with an ethical supply chain.

The policy could also state that unnecessary purchases will be avoided and that, in terms of energy, running costs across the lifetime will be taken into account, as well as the purchase price.

A green procurement policy can promote solidarity with other workers who may have been exposed to environmentally and physically hazardous substances are working in countries especially vulnerable to climate change or in conditions without proper freedom of association.

Green procurement policies can also be designed to support local employment and manufacturing (which will also reduce the amount of energy used in transporting goods).

When negotiating on procurement, you will need to think about whether you support a policy of 'active engagement' with companies that may not currently meet the highest environmental or social standards, but could be encouraged to do so.

Identifying the issues

For specific guidance on energy-efficient purchasing (which can often be offset against tax), see p38, and for guidance on purchasing to minimise other waste, see p56.

Key facts

- An LRD survey of union reps in 2007 found that over half of workplaces (52 per cent) had not yet taken any action to 'green' their purchasing policies.

Negotiating for change

Many organisations already have the basis of such a policy negotiated with the union, for example a commitment to buy fair trade coffee – so this could actually be the starting point from which a wider environmental agreement is negotiated. Many larger organisations may have supply chain policies as part of their corporate social responsibility (CSR) policy, which again could form a good basis, though union involvement is important to ensure these policies are dynamic and enforced, rather than just paper exercises.

In 2007 the government produced a Sustainable Procurement Action Plan, which could be useful to members working in the public sector, or if your employer supplies goods or services to the public sector. The then Environment Secretary, David Miliband, said: "Public sector purchasing power must be harnessed to transform the market for innovative and sustainable solutions to make them more widely available and affordable to others. Procurement is key in tackling climate change and as a Government we must do more and practice what we preach in terms of tackling climate change."

In the longer term, procurement policies could even consider the extent to which an employer 'contracts out' its services or 'non-core' functions – catering, for example. It may be that if services

were brought back 'in-house' it would be easier to enforce environmental, as well as labour, standards.

Case study: transparency

PCS union (www.pcs.org.uk/gw) has good guidance on ensuring that a supply chain is open and transparent about its environmental and social impact. It has also signed up to the Mayor of London's Green Procurement Code, which provides free support with purchasing 'green' products in exchange for committing to reduce environmental impact.

Resources

Sustainable Procurement Action Plan
www.sustainable-development.gov.uk
 PCS guidance www.pcs.org.uk/gw
 Mayor of London's Green Procurement Code
www.londonremade.com
www.oursouthwest.com/SusBus/gevents.html – a guide to working with events organisers and suppliers

Beyond the workplace – policy and campaigning

Introduction

Many of the issues raised in this handbook – from green jobs strategies to rights for environmental reps – may need policy changes. There will be gains and losses in the rapid shift to a low-carbon economy. Trade unions have a leading role to play to secure a fair transition to a low-carbon society:

- because of their responsibility towards the workers they represent
- to ensure that it is not they who bear the brunt of environmentally driven policies
- in the workplace, by engaging workers and employers in building sustainable workplaces
- through the promotion of social justice beyond the workplace and tackling inequality on the national and international stage.

In 2008, the TUC will publish *A Green and Fair Future: For a Just Transition to a Low Carbon Economy*, a groundbreaking report calling for a green and decent jobs strategy that involves trade unions, social protection measures and skills and training initiatives. And we will continue to play a leading role through the ITUC in international discussions on a future post-2012 Kyoto climate change treaty.

Campaigning for change

National action

Many trade unions are now playing an active part in environmental issues through the Trade Union Sustainable Development Advisory Committee (TUSDAC), which feeds in union and TUC policies to shape Government policy. It covers both overall

environmental issues and particular areas such as energy, employment, transport, manufacturing, housing and agriculture; skills and training issues; and a new global climate change treaty. The high level TUSDAC Policy Group is co-chaired by Paul Noon, General Secretary of Prospect, and Hilary Benn MP, Secretary of State for the Environment. There is also a Working Group, currently chaired by Penny Morley of Unite, which carries out the day-to-day policy and coordinating work of TUSDAC.

Influencing unions

Activists can influence their unions by addressing environmental issues in their workplace, and also by bringing them on to the agenda of the relevant conferences or committees, usually via their branch. This may involve drafting, submitting and arguing for motions/remits in support of change.

To help, you could get your union branch to affiliate to an environmental campaign. For example, at national level, UNISON has affiliated to the Stop Climate Chaos campaign (www.icount.org.uk), an umbrella campaign, which PCS also supports. A number of union branches have also affiliated directly to the Campaign against Climate Change, which has a trade union section (www.campaignccc.org/unions.shtml).

Regionally, some unions have set up environmental committees, for example T&G Unite has an environment committee in its London Region and some trades councils have begun to look at the issue, for example the Haringey Trades Council is promoting the UGR role to its members.

The TUC has established the role of Green Union Leaders. Such advocates are senior trade unionists such as general secretaries, who champion workplace environmental issues and use their influence on policy nationally, regionally and sectorally. They can help raise the profile of UGRs in this key area.

Local action

As an individual you can lobby your MP or MEP to do various things on your behalf. However, your influence upon your political representatives may well be stronger if you carry it out through your union branch. Your branch could lobby the local politicians where you work.

International action

Through the International Trade Union Confederation (ITUC), unions participate in the annual UN climate change talks. The 2007 talks in Bali agreed an action plan designed to secure a new climate change agreement to follow the Kyoto Protocol, expiring in 2012. Negotiators have until December 2009 to reach a deal. The ITUC, which has recently set up a climate change task force, backs the IPCC's call for a treaty that secures cuts in global emissions of up to 85 per cent by 2050, to prevent global temperature increases of more than 2°C. This involves further cuts in CO₂ emissions from developed nations, but with all countries required to play a part based on the stage of their economic and social development.

ITUC General Council, meeting in Washington in December 2008, adopted a far-reaching policy statement and Special Action Programme to tackle climate change.

The 78-member council of trade union leaders from every continent also endorsed an initiative to push forward a 'Green Jobs' agenda as part of the plan, working with the United Nations Environment Programme and the International Labour Organisation.

The ITUC policy statement, published for the Bali conference, calls for urgent action to tackle climate change "as a priority for new trade union internationalism". It also argues that Green Jobs will be the drivers of the rapid shift to a low-carbon economy.

The new treaty should therefore include:

- employment and training policies in both adaptation and mitigation
- social dialogue with trade unions at all levels, from the workplace to national and international tables
- economic development and diversification policies and strategies to help energy-intensive industries invest in cleaner technologies
- 'green' and 'decent' jobs programmes.

What policy changes are unions calling for?

The union movement's policy priorities can be seen in the increasing number of motions that have been passed at some unions' conferences in recent years, calling for policies like:

- Greening the workplace – employers and unions should be encouraged to negotiate on the environment (and it should be included as a collective bargaining issue in the statutory union recognition procedure).
- Statutory facilities time and legal recognition for UGRs.
- Green jobs strategies.
- Improved skills and training for greener jobs.
- More localised production and employment.
- A 'balanced' energy mix, combining renewables, clean coal with carbon capture and storage, and nuclear power.
- Recent extreme weather events in the UK show the challenge our public services and workplaces face in adapting to climate change. In consultation with affiliates, the TUC is developing policies on adaptation and bargaining strategies for the UK.
- A dramatic expansion of public transport and low-carbon vehicle production.
- Social protection for those workers most affected by climate change.

- Solidarity with workers in the south of the UK who will be the most affected by climate change.

The TUC brings together these issues under the theme of a 'just transition'. A just transition means a strategy that involves unions, workers and communities in shaping the transition to a low-carbon economy based on green and decent jobs.

Climate change targets – what are they, and are they strong enough?

In the 2007 Climate Change Bill the Government set a target of a 26–32 per cent reduction in carbon dioxide emissions in the UK by 2020, and a longer-term target of a 60 per cent cut by 2050. The TUC, and green NGOs such as Friends of the Earth, have stated that the latest climate science shows that a 60 per cent reduction by 2050 is not nearly enough and are lobbying government to set an 80 per cent reduction target.

The EU target is to reduce CO₂ emissions by 30 per cent by 2020, subject to a new international climate change treaty.

On renewable energy, our binding EU target is to generate 15 per cent of all energy consumption from renewable sources by 2020. (Just 2 per cent of UK energy is currently generated from renewable.)

What government policies are in place to meet CO₂ reduction targets?

Currently, the main policy (both nationally and internationally) is 'cap and trade'. This means putting a price on the right to emit CO₂ and allowing these rights/permits to be traded between companies, the total number of emissions permits gradually being reduced/capped. The TUC supports the current EU Emissions Trading Scheme (EU ETS), which is the main example of such a scheme, and its extension (for example, to aviation) and tightening up. In the UK it currently covers 1,200 energy-intensive industrial sites.

Additionally, 5,000 large service sector employers – both public and private – will also be brought into a carbon trading scheme, the new Carbon Reduction Commitment, which starts in 2010 and will ultimately become compulsory. Unions are well represented in these large organisations, so that the CRC presents trade unions with a major opportunity to work closely with employers and members to exert their influence over climate change policy, save energy, and drive down greenhouse gas emissions.

Is this enough?

Whether current policies are sufficient to meet the Government's current targets has been the subject of some criticism by environmental campaigners. For example, according to a University College London study, current policies will reduce carbon emissions by only 12–17 per cent by 2020. Most environmental campaigners call for a considerable expansion of energy efficiency measures and support for renewable energy, more regulation of industry and construction, and better public transport provision to help meet targets.

The unions have also argued that the UK is in danger of missing out on major employment and skills opportunities from the renewables and energy efficiency sectors. Many European nations have taken a different approach to the UK in supporting the growth of renewables: in Germany, assisted by its Feed-In Tariff, renewable energy now employs around 200,000 people. The TUC has argued for a 'balanced' energy policy, supporting the development of all low-carbon forms of energy: cleaner coal and gas, renewables (including feed-in tariffs) and nuclear.

Green taxes

The TUC believes that Government budgets should include a commitment to produce an environmental balance sheet of green taxes and expenditure. The TUC has argued that income from 'green' taxes, such as fuel duty and air passenger

duty, should be ring-fenced for spending on environmental projects.

The justification for environmental taxes is the 'externalities' argument – that from society's perspective, too much pollution is generated by those who do not take into account the effects of their actions on other people.

Environmental taxes are actually shrinking. In 2006 Government revenue from environmental taxes was 7.3 per cent of total taxes, compared with 7.7 per cent respectively a year earlier.

Resources

Contact your union for more information on policies – some unions also run courses in politics and campaigning. Two good general resources for environmental campaigning are Friends of the Earth www.foe.org.uk and Seeds for Change www.seedsforchange.org.uk

See www.sustainableworkplace.co.uk for more on union policies on energy and the environment

Resources



How to use these resources

The materials in this section, alongside additional resources including an online tool you can use to measure your workplace's carbon impact, are available at www.sustainableworkplace.co.uk

Resources include guidance on working out the carbon footprint of your workplace, and any changes that you make.

Also included is a sample model agreement. This can be amended for your workplace, using the advice section called **Negotiating on climate change** on p19. There is also a form to confirm the appointment of a union green rep, which may be helpful if you want make the role more formal. See p10 for more information on the role and rights of union green reps.

Two sample surveys have also been included in this section (and guidance on using these is on pp10-15).

1. A model Joint Environment and Climate Change Agreement

Joint statement on environment and climate change

The parties to this agreement recognise that climate change and environmental concerns are among the most pressing concerns facing us all. These concerns have risen up the agenda rapidly in recent years. The [organisation] and [unions] are committed to developing a shared approach to addressing energy and environmental issues through this agreement.

[The organisation], as both an employer and [insert organisation's main function/role e.g. major retailer/manufacturer] commits itself to 'leading by example' among staff and other stakeholders. [The organisation] will comply at all times with relevant environmental legislation and will work to influence the wider environmental agenda with the use of best practice and examples.

[The organisation] notes that energy prices have risen sharply in recent years and are predicted to rise further, and that Government policy is to reduce reliance on carbon-based energy sources and to promote energy efficiency.

With this in mind, [the organisation] aims to:

- reduce [the organisation]'s carbon footprint
- work with staff, management and stakeholders on training and awareness raising
- monitor performance against achievable but challenging targets.

[The organisation] aims to be open and receptive to suggestions from staff and other stakeholders on how it can make better use of energy, reduce its environmental and carbon impact and improve its management of these areas and, in doing so, to reduce CO₂ emissions in line with UK statutory and international obligations. [The organisation] and the recognised trade unions will encourage managers, staff and union green representatives (UGRs) to share responsibility for 'greening' the workplace. As part of this ongoing work and commitment, [the organisation] and unions will support the creation of a Joint Environment Committee (JEC) to engage in constructive dialogue between the employer and the union on how to achieve these goals.

[The organisation] accepts that the necessary changes will not happen all at once but [the organisation] and [the unions] commit to working together on a programme of continuous improvement, backed by regular monitoring of environmental impacts and issues, particularly carbon impacts, which will be reported to the JEC. The proposals formed within this agreement are not an exhaustive list and we will seek to develop this agreement further as our knowledge and experience grows. Such developments will be fed into the production of an annual environmental and carbon action plan (see below).

As part of this strategy, [the organisation] aspires to having all its workplaces accredited for environmental management via (for example) schemes such as ISO14001, EEAS, and EMAS.

About this agreement

This policy is agreed between the management of [the organisation] and union green representatives at [the organisation]. It covers [all sites/specific sites/bargaining units as appropriate] and applies to all full- and part-time employees and workers (including agency and temporary workers).

This agreement does not supersede or take precedence over any existing negotiating procedures or staff-management arrangements other than those specified in this agreement unless specified and agreed in full by the Joint Negotiating Committee (JNC) of [the organisation].

The partners to this agreement agree that any individual grievance arising out of environmental matters shall be subject to the existing grievance procedures.

This agreement shall form an appendix to the existing staff handbook.

Joint Environment Committee – terms of reference

The main responsibilities of the JEC will include reaching agreement on how the following aims can best be achieved:

Environmental impacts

The JEC will consider the environmental impacts of all the organisation's internal operational policies, to identify areas where action is needed to minimise environmental impact, in particular:

- addressing the issues of energy conservation, waste management, and the prevention of pollution
- measuring the total 'carbon footprint' and seeking to reduce wastage, with time-bound targets for continual emissions reductions
- ensuring that those purchasing equipment, heating, lighting, waste systems and other materials take full account of environmental impacts and particularly energy use and support the introduction of environmentally friendly technology

- ensuring that those using equipment and systems seek to do so in a way that reduces excessive consumption of energy and materials and promotes re-use and recycling wherever possible.

More detailed areas of consideration (which could also form part of an action plan) are given below.

Environmental and carbon action plan

The JEC will produce a realistic environmental action plan, which sets goals and targets for environmental improvement within [the organisation], and which forms part of the annual operational plan and includes a specific carbon management element. Where appropriate, the action plan will be developed in conjunction with expertise from local and national organisations including the local authority, relevant trade bodies, the Carbon Trust, Envirowise, Waterwise, etc., building on existing recommendations where some work has already been undertaken with such organisations.

The JEC will also be invited to comment on any externally facing sustainability action plans and policies that are aimed at other stakeholders (for example, customers).

This action plan will include:

- the business case for change
- clear targets that are understandable, tangible and up to date
- a plan for delivery
- a way of prioritising projects, including an assessment of payback times
- responsibilities for delivery; and systems for communicating and monitoring impacts through work with staff, managers and UGRs
- a system for monitoring performance against this action plan.

Employee engagement

The JEC will ensure that all staff are involved in this initiative, by:

- disseminating to staff all information on matters relating to 'greening [the organisation]'
- ensuring all staff are made aware of the environmental agreement and the work of the JEC, including through the website, staff inductions and appropriate training courses and awareness-raising events
- feeding recommendations upwards to the senior management team and reporting back on outcomes.

Energy and environment audits

The JEC will carry out joint energy audits and other 'green' audits using checklists from the *Go Green at Work* handbook, or organisations such as the Carbon Trust, and will incorporate the results of these audits into the Environmental and Carbon Action Plan (see above).

The partners agree that any analysis of environmental issues and impacts (for example, audits) will be undertaken with the full cooperation of all partners, and that such analysis will be solely for the purposes of environmental improvement. Any analysis will not be used in relation to other issues such as pay, performance appraisal, disciplinary procedures, etc.

The structure of the Joint Environment Committee

The partners agree to ensure that [all departments/sites/regional offices] are represented on the JEC, and that member of the JEC are provided with all relevant information concerning the environmental issues within the workplace and their duties/responsibilities as members of the committee.

Although participation by staff will be on a voluntary basis, the unions agree actively to encourage their members to participate fully in all environmental initiatives and opportunities, and encourage union reps and other interested members to put themselves forward as UGRs.

[The organisation] will ensure that [a senior management champion, ideally directors responsible for both facilities/energy management and HR] remains on the JEC, in order that the committee is able to take effective decisions. [The organisation] will ensure that such other management-side representatives attend the JEC on a regular or ad-hoc basis as may be required by the partners, including for example IT and contractor representatives.

Where there are environmental concerns regarding policies that form part of the existing Staff Handbook or other policies negotiated with the JNC (for example, HR policies on working time or home-working policy, the JEC will work with the JNC to address any concerns.

Similarly where there are areas of overlap with health and safety policy the JEC will work with the Health and Safety Committee to come to common solutions.

The Joint Environment Committee will meet at least four times a year to carry out the tasks outlined in this agreement, and will annually agree a chair and secretary, to be alternated between the management side and the union side. Standing items at these meetings will include the Action Plan and quarterly energy usage figures for [the organisation/list of sites as applicable].

Union green reps (UGRs)

[The organisation] recognises that union reps play a key role in encouraging employee engagement in energy and environmental initiatives, and so help develop good practice in energy and

resource use at [the organisation head office and its regional offices], in line with this agreement. They will also assist more broadly in supporting the implementation of [the organisation]'s environmental policies.

UGRs will be allocated reasonable facilities time (not less than [X days per month/X proportion of their working time] plus an additional 10 days of related training per year) to carry out their duties in relation to environmental issues, including attending meetings with management, and with the union, on green issues, consulting with colleagues, attending training, preparing paperwork and materials.

Environmental issues to be considered

The JEC shall consider what action needs to be taken to address the following areas.

Energy use

The partners undertake to work together towards:

- ensuring purchases meet the latest energy and environmental standards, are sourced from suppliers with good employment and environmental standards, and are easy and safe to use
- ensuring eco-options are enabled and staff are trained on using equipment in an eco-friendly way
- ensuring equipment is regularly serviced, and clearly labelled with energy ratings / the amount of energy it uses / whether it can be turned off
- exploring automatic options like motion sensor lights in low-use areas, and automatic power down of PCs after working hours, which are popular with staff and increasingly widely implemented – they are also often recommended in Carbon Trust expert surveys

- ensuring all lighting is sustainable and energy efficient
- ensuring building management systems (BMSs) are optimised for efficient energy use, for example in the timing and local and/or thermostatic control of heating and cooling systems
- the sourcing of electricity from a 'green tariff'
- where appropriate, on-site renewable alternatives in particular solar water heating and combined heat and power (CHP)
- particularly encouraging energy-saving measures in those aspects of the operation that are most energy intensive.

Recycling, resource use and purchasing

The partners undertake to work together towards:

- provision of localised recycling facilities at department or office level
- continually seeking ways to minimise the use of resources including energy, equipment and goods such as non-recycled raw materials including paper and packaging, and disposable items, particularly when new systems, practices or locations are introduced
- purchasing supplies from sustainable sources – i.e. sources that are local where possible, accredited under ISO14001 and preferably EEAS/ EMAS
- increasing the purchase of supplies that are re-used, re-usable, recycled or recyclable (in that order of priority)
- working with suppliers and partner organisations to obtain the lowest environmental impact
- considering the toxicity of products and the health impacts on the workers producing them, before purchasing
- consulting with staff before any major purchasing decisions such as changes to layout,

equipment or systems which may have resource-use implications and could result in wastage if changes need to be re-done or undone

- using outside or community agencies for old or redundant equipment
- implementing low-cost water saving initiatives and investigating payback times and feasibility of larger-scale water saving measures such as low-flush toilets.

Food

The partners undertake to work together towards:

- providing catering options that are locally sourced, and not over-packaged or over-processed (which is very carbon intensive) but where possible are freshly prepared
- ensuring staff have access to facilities that enable them to prepare drinks and snacks in an environmentally friendly way rather than relying on drinks and snacks in disposable packaging (for example, drinking water taps, washing-up facilities for mugs).

Transport

The partners undertake to work together in full consultation with the JNC to design a travel plan that encourages sustainable modes of transport. Such a plan will seek to engage local authority and other local transport providers where appropriate, and will look at options such as:

- a car sharing scheme
- the provision of a low-cost cycling scheme including either a mileage allowance for bicycle users, a tax-free scheme for the purchase of bicycles for work-related use, or both
- fuel performance of car fleet/essential car user schemes
- encouraging the use of video conferencing and teleconferencing

- discouraging the use of air travel, particularly for short-haul journeys within the UK/Northern Europe
- other integrated transport provisions.

Other

Environmental considerations will be given due regard when decisions are made to move, refurbish or improve access to premises, including all regional and satellite offices. Where [the organisation] is a tenant rather than a building owner, it will work with the landlords to ensure environmental considerations are taken into account.

Consideration will be given to the use of plants both inside and outside the working environment (including 'green roofs') to improve CO₂ absorption, air quality, flood risks, natural shading and cooling, biodiversity, and a more pleasant working environment.

Consideration will be given to the ethical and environmental dimension of [the organisation]'s investments including its pension scheme.

Signed – on behalf of [the organisation]

Name and position

Date

Signed – on behalf of [the union(s)]

Name and position

Date

Note: You may wish to include as appendices:

- existing energy and resource management arrangements
- current energy supply arrangements, e.g. suppliers and tariffs currently used
- current energy use monitoring arrangements, e.g. number of meter points, location of thermostats, policies on workplace temperature, etc.
- existing/current 'action plans' in place
- a review of progress against previous action plans where these are already advanced
- current provisions for recycling and other environmental initiatives, including who provides this service and where the recycling is carried out
- current environmental rep contacts and other JEC members.

2. Calculating carbon savings

Measuring carbon and energy

To improve environmental performance, you need to know where you're starting from – you need to make an audit of environmental performance. One increasingly popular way of doing this is to work out the organisation's 'carbon footprint'. This can also be an excellent way of showing that environmental or energy inspections are making a measurable difference.

What is a carbon footprint?

"The total amount of CO₂ and other greenhouse gas (GHG) emissions for which an individual or organisation is responsible" – The Carbon Trust, *Carbon Footprinting – A Guide for Organisations*.

A basic carbon footprint includes the carbon dioxide (CO₂) emissions that the organisation more directly controls, such as:

- heating and hot water use – this releases CO₂ at the workplace by burning fossil fuels like gas and oil
- electricity use – this releases CO₂ when it is generated (75 per cent of the UK's electricity comes from burning fossil fuels like gas and coal).

A more detailed carbon footprint can include the emissions that are harder to control, for example from buying products, and employee transport.

Why measure a carbon footprint?

Finding out the carbon footprint is a useful first step if the union wants to make sure the organisation:

- compares itself to other, similar organisations, or to 'best practice' recommendations
- sets targets to reduce the carbon footprint over time
- reports externally – increasingly, customers and investors want to know what an organisation's carbon footprint is – see p21.
- reports internally
- offsets, if appropriate – see **Offsetting**, p45.

What information do I need to measure a carbon footprint?

Energy use

To work out how much CO₂ the organisation releases through its heating, hot water and electricity usage, you will need to work with management to get information from at least one of the following sources:

- utilities bills (these should be based on readings, not estimates)
- meter readings
- readings from building management systems (BMSs).

It is a good idea if meter reading forms part of a regular monthly energy walk-round (even if a BMS is in place), as it gives the opportunity to observe and report any faults or unusual energy usage. (See p17 for more on walk-round audits.)

Transport use

If your workplace owns or leases vehicles, this will also be a key part of your workplace's basic carbon footprint. To calculate how much CO₂ has been released by the vehicles your workplace owns, you will need to work with management to get the following information:

- the total amount of each type of fuel used, OR
- the total miles travelled in each type of vehicle.

If you want to do a detailed carbon footprint, it should also include emissions from employee travel – in other words, commuting and business travel. To find this out, you will need to work with management to collect the following information from colleagues:

- number of miles travelled
- modes of transport used.

What do I do with this information?

You can input some or all of this information into the Carbon Trust's online carbon calculator, and it will work out for you how much CO₂ the organisation has released. www.thecarbontrust.co.uk The site also has information on how to get expert, sector-specific advice, and a range of useful publications.

What about emissions from industrial processes?

Some industrial or agricultural processes also release greenhouse gases. For example, the manufacture of some chemicals produces methane, and the use of nitrogen fertilizers releases nitrous oxide.

This is a complex area, and you should contact the Carbon Trust for help. However, if you already have this information, you can add it into the Carbon Trust's carbon calculator.

What about emissions from the stuff my workplace buys?

A detailed carbon footprint could also include the energy used in preparing and transporting raw materials, products or services that the organisation buys. This is a new and complex area, and your organisation would need to get expert advice from the Carbon Trust. Starting with a basic carbon footprint, using the information outlined above, will still give a lot of useful information.

What else can I do?

On the TUC's Sustainable Workplace website (see www.sustainableworkplace.co.uk) you can use the 'carbon log' tools to:

- compare your energy use to 'average' and 'good practice' energy use benchmarks in a variety of different workplaces (for this, you will also need to find out the size of your workplace in square metres). This will help you work out which particular areas should be the focus of action or negotiation – for example, is it transport, electricity use, or heating?
- download a transport survey that has been designed to work with the Carbon Trust's carbon calculator, as well as help union reps negotiate for good travel plans
- compare your workplace's carbon footprint to the carbon footprint of the average household
- download spreadsheets to track your workplace's progress over time (i.e. against a 'baseline'), and monitor how activities you have undertaken (like setting up a team of union green reps) have made an impact
- download a simple checklist that you can use in your own workplace, adapted from Carbon Trust checklists by union reps in the GreenWorkplaces projects
- download publicity resources to inform people about the workplace's carbon footprint, and the ways they can make a difference.

If you haven't got any of this information

Use the guidance on negotiating (p19) to persuade employers of the advantages of working with the union on this issue, whether the problem is that the employer is reluctant to hand over information – or that they are not too clear about it themselves!

Other ways of measuring energy

In the meantime if you just want begin to get a sense of electricity use in your workplace, you could buy a simple-to-use plug-in energy monitor for around £15. You can use this to compare how much energy equipment is using when in use (and on standby).

Often, organisations don't have a detailed breakdown of where or when the most energy is being used. One important way round this is to install 'sub-meters' to measure the energy use of a particular part of the workplace.

The TUC green reps found that there was a different tariff for night-time electricity use (very common), so the bills showed clearly how much electricity was being used at night – and that it wasn't much less than the daytime use! Through a programme of meetings and poster campaigns, the reps achieved a 50 per cent reduction in night-time electricity use over 18 months.

Reporting internally – why all this talk about CO₂, anyway?

Helping people to understand the amount of CO₂ released through using energy also helps them to make the link between energy use and climate change. (For more on the link between carbon dioxide and climate change, see p4). However you might also want to express the amount of energy

used (for example, the number of kilowatt hours used) as that is a more familiar measurement to people.

The other advantage of talking about CO₂ is that it enables a comparison to be made across all different kinds of businesses. In the future, more organisations will be legally required to measure their carbon footprints so if union reps and colleagues can get an understanding of this issue now, it will stand you in good stead in future negotiations with employers.

3. Running a union 'green' event

Awareness-raising events such as open days at the workplace have been a very popular feature of the TUC GreenWorkplaces pilot projects.

Planning the event

Consider what scale of activity you want to undertake:

- Do you want an all-day event with speakers and a range of stalls, or a single stall in the canteen over lunchtime? How many people will help? Organising even small events can take a lot of time/commitment (so time for this needs to be agreed beforehand).
- Speakers – if you are having speakers, think about what time will work best – probably lunchtime. Try to keep speeches brief and practical.
- Is there an existing model of workplace activity (either union- or management-led) that might work? For example, has your workplace run events on learning in the past, or does it have a regular 'briefing' session?
- Is it a general 'green' event, or is there a focus on a particular issue, e.g. energy saving, transport, etc.?
- Is there an external 'green' event you could tie in with, such as World Environment Day in June? An Environmental Events Calendar is available at www.sustainableworkplace.co.uk

Talk to management

It is really important to secure support for the event and ensure people will be able to attend – ideally, in company time.

It would be a good opportunity for the management to tell employees about the organisation's carbon footprint and its attempts to reduce it.

See **Making the business case for action** on p21 if management need more persuading to support an event. Point out that experience shows joint union-management events attract more people (see the British Museum case study on p21).

Ensure that a suitable venue will be available and, if possible, refreshments.

Try to make sure the event itself is run in a sustainable way.

If it is a large event, the local or trade press might be interested, particularly if it is part of wider activity (see below).

Talk to the union

The event is a great opportunity to attract new members and activists who may not have realised that the union is interested in environmental issues.

Remember to have membership forms available on the day.

Ask external groups to participate. Even a small event will gain credibility and interest from outside participation, which can also help make the link between work and home. Most 'green' organisations are very keen to reach new audiences, and welcome the opportunity to attend workplaces.

Consider what contacts you already have, for example is there a union member who is also an active member of Friends of the Earth (FOE) or are there close links between management and the local authority?

Whether or not they attend, organisations can usually supply printed materials (and maybe ‘freebies’ like badges, bags, mugs, pencils, posters etc. – even small things can really boost interest and attendance). See p83.

Publicising your event

You may want to ask both union and management for help with publicising.

Depending on your workplace, it may attract the most people if the event is billed very much as a joint ‘union-management’ initiative, with the organisation’s logo and the union’s logo on all publicity materials.

Survey

Running a survey in the lead-up to an event is a really good way of publicising an event. Ask people to return the surveys at the event, if not before.

If you can get a little funding from the employer or union, at the end of the event you could do a prize draw from all completed surveys for a ‘green’ prize.

And/or, if you have managed to get some freebies, you could ask people to complete a survey before giving these away.

See also p86.

Just before the day

Make sure you have enough people to set up stalls, display materials etc. collect names of people who want to be actively involved by talking to people, giving away materials/freebies, carrying out any additional activities, etc.

On the day

People often like being asked to do something immediate, for example:

- fill in a survey
- make a written pledge to do ‘one green thing’ at work
- discover their ‘carbon footprint’ – see, for example, www.actonco2.direct.gov.uk (if you can’t arrange online computer access at a stall, there are paper quizzes available), see p83.

Keep a note of how many people attend, and maybe arrange for photos to be taken, to help promote the success of it afterwards.

Follow-up activities

Consider holding a meeting for those who said they wanted to be involved. This could be the start of a team of union green reps, a Joint Environment Committee, and/or further training, if management is supportive (which they should be, if the day is well attended).

Write up the event, analyse the survey if you’ve done one, and publicise the results to staff and management.

Consider holding similar events in the future. Build on contacts with external agencies – could they provide a speaker for a branch meeting, for example?

An easy follow up, or an event in its own right, could be showing a screening of *An Inconvenient Truth* or one of the other films on the ‘green issues’. See below for a list of suggestions and guidance on running a screening.

Resources

Local Friends of the Earth group – www.foe.co.uk/campaigns/local_groups_and_campaigns/find_group.html

Your local Energy Saving Agency (0800 512 012) has information including grants for home insulation and other energy measures.

Your local council may also have an energy saving team providing similar services.

Your existing energy supplier may be willing to run a stall/supply materials to promote its 'green' tariff and will often have low energy light bulbs and other freebies to give away.

Don't forget to contact the Carbon Trust, the TUC, and Envirowise, all of whom should be able to supply you with factsheets and booklets focused on the workplace environment. Your own union may also have materials on green issues.

Climatex has a list of films about climate change <http://climatex.org/articles/Tools/films-and-dvds>

www.sustainableworkplace.co.uk has guidance on running a screening of *An Inconvenient Truth*.

A paper carbon footprint calculator is available at: www.livingwitness.org.uk/home_files/Personal%20GHG%20calculator.pdf

4. Suggested survey

We are trying to improve the impact that [employer/site] has on the environment. We need YOUR views to help us! Please take a few minutes to complete this survey and return it to [senior steward] as soon as possible, and no later than the Energy Awareness Day on [insert date], to be entered into a prize draw for eco-friendly prizes.

All answers will be treated as confidential – a summary of results will be published but individuals will not be identified. Many thanks for your time.

[Note – some employers and unions may have online survey software that can help, if so, add “If you are able to complete this survey online at [insert web address] it will help us respond to the results more quickly.”]

Name

(this is optional, but needed if you wish to be included in the prize draw)

Department

1. How good do you think [organisation/site] is at reducing its environmental impact? (for example, its energy use, travel, handling of waste/rubbish and water use)

☐ Very ☐ Quite ☐ Average ☐ Not very ☐ Don't know

2. How good do you think your department is at reducing its environmental impact?

☐ Very ☐ Quite ☐ Average ☐ Not very ☐ Don't know

3. How good do you think YOU are at reducing your environmental impact at work?

☐ Very ☐ Quite ☐ Average ☐ Not very ☐ Don't know

4. Do you think any of the following have improved their environmental performance over the past year?

[organisation name]

☐ Yes ☐ No ☐ Don't know

My department

☐ Yes ☐ No ☐ Don't know

Me (at work)

☐ Yes ☐ No ☐ Don't know

5. Are you a trade union member?

☐ Yes ☐ No

6. If yes, how good do think the union is at tackling environmental issues?

☐ Very ☐ Quite ☐ Average ☐ Not very ☐ Don't know

7. Are you aware of [insert organisation name]'s environmental policy?

☐ Yes ☐ No

Thinking about energy use at work, we'd like to know...

8. ONE thing you think you could do at work to be more 'green'?

9. ONE thing you think [insert employer/site] could do to be more 'green'?

And thinking about waste/rubbish, water and travel use, we'd like to know ...

10. ONE thing you think you could do at work to be more 'green'?

11. ONE thing you think [insert employer/site] could do to be more 'green'?

12. Lastly, would you be interested in becoming more involved in making [employer/site] a greener place to work – for example, by attending an on-site training workshop?

☐

Yes

☐

No

☐

Maybe

5. Transport review form

Note – a more detailed transport review form that will allow you to work out carbon emissions, is available at www.sustainableworkplace.co.uk

1. How do you travel to and from work? (please tick appropriate box)

☐

Walking/bike

☐

Public transport

☐

Own car

☐

Company car

☐

Colleague's car

2. If you answered car, what are the barriers that stop you travelling to work:

On foot:

By bike:

By public transport:

3. Is there anything that the organisation could do to make it easier to use a method of transport other than a car?

4. Do you have to travel as part of your working day?

5. How do you make these journeys? (please tick appropriate box)

☐ Walking/bike

☐ Public transport

☐ Own car

☐ Company car

☐ Colleague's car

6. If you answered car, what are the barriers that stop you travelling in your working day?

On foot:

By bike:

By public transport:

7. Is there anything that we as an organisation could do to make it easier to use a method of transport other than a car?

8. Do you have any other suggestions for ways of reducing our carbon emissions through transport?

6. Union green representative appointment form

To [the employer]

Please amend your records accordingly.

Union green representative's details

Name

Work department

Work telephone number

Work email address

Union

Union green representative's bargaining unit

Details of workplace/work departments covered

Name of Branch

Branch Number

Signature of Branch Secretary/Area Organiser

Date

How to use the form

Once the UGR appointment has been ratified by the Branch Committee, the Branch Secretary/Area Organiser completes the details and signs and dates the form.

Branch Secretary/Area Organiser sends copy to the employer as written notification of appointment with explanatory letter if appropriate.

Branch Secretary/Area Organiser keeps a copy for their own records.

Branch Secretary/Area Organiser contacts local [name of union] office to advise that the member is a UGR, and forwards details to the TUC GreenWorkplaces project leader at Congress House.

Branch Secretary/Area Organiser arranges training for the new UGR.

7. Research and sources of further information

Introduction

If unions are to play an active role in environmental issues in the workplace, they need accurate information about the company's environmental performance. A good place to start finding out about this is the company itself.

One way is to adopt a collective environmental agreement to enable the union to scrutinise employer action on the environment. A good collective agreement should ensure that the union has rights to information on the organisation's energy and environmental policies, activities and impacts, and who it is working with to improve impacts (for example, has it had a Carbon Trust audit? etc.).

If you want to do some research in the meantime, here are some starting points:

Voluntary reporting

Until recently most environmental reporting has been largely voluntary. It includes:

- Corporate Social Responsibility (CSR), Corporate Responsibility (CR), or environmental reports, normally available from the company's website, which provide information about the company's social and/or environmental record. Any statements they have made could be helpful in encouraging them to take action.
- If the organisation has an accredited Environmental Management System (EMS), it will have requirements to produce publicly available information about the company's environmental policy and impacts (more information on p27).

- Carbon Disclosure Project – many large organisations voluntarily disclose their carbon emissions in response to requests from investors www.cdproject.net

Compulsory reporting

The Companies Act 2006 states that companies listed on the UK stock market must report on environmental matters and risks (including down company supply chains) where this is “necessary for an understanding of the business”.

The Information and Consultation of Employees Regulations 2004 give employees the right to be consulted over changes that may affect their employment, and to be informed about the employer's activities and economic situation generally. Trade unionists often negotiate for 'environmental concerns' to be included in an information and consultation agreement (which your employer must negotiate, if more than 10 per cent of employees want it).

Other sources of information

The Environment Agency enforces environmental laws and publishes details of 'saints and sinners' www.environment-agency.gov.uk

Environmental Information Regulations 2004 – these regulations give public right of access to environmental information held by public authorities on their own organisation's performance, and information held by the Environment Agency on all organisations. A really good guide is community.foe.co.uk/tools/right_to_know

Environmental and social pressure groups may have concerns about a particular company's environmental practices:

www.corporatewatch.org.uk, www.tjm.org.uk, www.actionaid.org, www.oxfam.org,

www.foe.org.uk, www.greenpeace.org.uk,
www.policyinnovations.org/

Use its excellent 'CORE' search facility to see what a wide range of NGOs are saying about the organisation

Has the organisation signed any climate 'declarations' or 'pledges', or joined any business campaigns or networks on the issue? Industry bodies and trade associations may have useful information on schemes and good practice for a particular industry. Does it seek 'ethical' investment, for example by being listed on the FTSE4Good?

You might also want to google or search specific websites like www.bbc.co.uk, www.guardian.co.uk, www.defra.gov.uk or www.theyworkforyou.co.uk, using your organisation's name, + terms like 'climate change' OR 'carbon' (if 'environment' throws up irrelevant results).

For more guidance on researching company information, see the TUC guide *Researching Companies*, which your union official should be able to provide you with. Your union can also help with research and press searches.

Free TUC publications

The TUC has developed some tools to help UGRs.

On the website www.sustainableworkplace.co.uk union members can:

- sign up for the GreenWorkplaces newsletter, a quarterly newsletter including articles and up-to-date information on union-led GreenWorkplaces activities that is sent to all UGRs on the national TUC database
- request promotional materials for their 'greening the workplace' project, including 'First Steps to a Greener Workplace' and 'How to Green Your

Workplace' – two short booklets with summary information

- produce their own promotional materials using real information from their workplace
- download this guide
- log their progress and download progress reports and presentations to make the case to colleagues and management
- find out about policy and practical developments relating to GreenWorkplaces, in relation to unions, government and employers
- find a collection of weblinks and resources for further research
- join the debate about environmental issues in the workplace, ask questions and get them answered by experienced reps at www.unionreps.org.uk
- Search for an environment course in your region, or sign up for the online course, at www.unionlearn.org.uk

Other useful reading:

The Environment and Climate Change – available from the Labour Research Department, or your union branch.

Easy Eco-Auditing – How to Make Your Home and Workplace Planet-Friendly, by Donnachadh McCarthy.

8. Glossary of terms and jargon buster

(Note – items in **bold** are cross-referenced)

Adaptation Changes to cope with the impacts of **climate change**, for example changing working practices to cope with higher summer temperatures, building bigger sea defences, diversifying crops, increasing irrigation or improving health services.

Base year Targets for reducing **GHG emissions** are often defined in relation to a base year. In the **Kyoto Protocol**, 1990 is the base year for most countries for the major GHGs.

Biodiversity The wealth of life on Earth, from plants and animals to micro-organisms. If biodiversity is damaged (for example if habitats are destroyed or animals become extinct) then the planet becomes more vulnerable to further environmental change.

BMS Building management system. Computerised control of a building's energy use such as heating, lighting, air conditioning, etc.

Carbon an element in fossil fuels, and in **carbon dioxide**. Often used as shorthand for both of these, but when talking about measurements, it is important to be clear whether these are expressed in tonnes of **CO₂**, or of carbon (1 tonne carbon = 3.67 tonnes **CO₂**)

Carbon audit A way of measuring the **CO₂** emissions of an organisation, sometimes only from direct energy use (e.g. energy bills, **fossil fuel** use), often including **emissions** from transport, and sometimes from indirect sources like purchasing of supplies.

Carbon capture and storage (CCS)

Removal of **CO₂** from **fossil fuels** either before or after combustion. In the latter the **CO₂** is extracted

from the fluegas. The **carbon** then needs to be stored (see **carbon sequestration**).

Carbon cycle The cycle in which **carbon** is stored and released between the plants, land, sea, and atmosphere.

Carbon dioxide (CO₂) A colourless and odourless gas formed from the burning of all **fossil fuels**, wood, and from **deforestation** and other sources. All animals breathe in oxygen and exhale **carbon dioxide**, while plants absorb **CO₂** and give off oxygen. **Carbon dioxide** is the major greenhouse gas that contributes to global warming.

Carbon dioxide equivalent Used to compare the different warming effects of other greenhouse gases, including water vapour, which is partly due to the length of time they linger in the atmosphere. For example, over the next 100 years, a kilogram of **methane** has 23 times the warming effect as a kilogram of **carbon dioxide**.

Carbon footprint The total amount of **carbon** emitted by a workplace, individual or household over a year, or by a product during its manufacture or whole life cycle, through its use of fossil-fuel based energy. See **carbon audit**.

Carbon neutral A person, organisation, process or product that has dealt with **carbon emissions** by a combination of reducing them (**energy efficiency**) and offsetting them.

Carbon sequestration Removing **carbon dioxide** from the atmosphere and storing in 'carbon sinks' like trees and oceans (which happens naturally), or pumping it underground in depleted oil and gas reservoirs, coal streams and saline aquifers.

Carbon Trust An independent not-for-profit company set up by the Government to encourage business to adopt **energy efficiency** and low-carbon technologies.

Clean coal See **carbon capture and storage**.

Clean development mechanisms (CDM) Allows developed countries to fund **emissions** reductions in developing countries, and count them towards their own **Kyoto Protocol** reduction targets.

Climate change Long-term trends in the average climate, including temperature and rainfall patterns. The **IPCC** has stated clearly that climate change is primarily caused by human activity.

Climate Change Agreement An agreement between the Government and a business user, whereby a reduced rate of **Climate Change Levy** is payable in return for a commitment by the user to achieve certain predetermined targets (not to be confused with a union-negotiated collective agreement on climate change or the environment generally).

Climate Change Levy (CCL) A government levy on **carbon**-based fuels to promote **energy efficiency**. Businesses that use **renewable energy** can therefore get a reduction or exemption from the CCL. There are also discounts of 80 per cent for some sectors with heavy energy use.

CO₂ see **carbon dioxide**.

Combined Heat and Power (CHP) The generation of electricity on-site combined with the use of waste heat from the generation process.

Contraction and Convergence A model for reductions in global **greenhouse gas emissions** that recognises that in principle everyone on the Earth has an equal right to emit. Starting from the current gross inequality of emissions, it provides for total global emissions to 'contract' while per capita emissions from each country 'converge' at an equal and sustainable level.

DBERR Department for Business, Enterprise and Regulatory Reform (formerly the Department for Trade and Industry). Responsible for energy policy in the UK.

Deforestation Clearing forests, often through burning, to use the land for grazing animals or growing crops, or the wood for fuel. A major contributor to **carbon dioxide emissions**.

Defra Department for Environment, Food and Rural Affairs. Responsible for environment policy and has overall responsibility for **climate change** policy (but see also **DBERR**).

EEAS Energy Efficiency Accreditation Scheme – a UK **environmental management system** focusing on energy use, now managed by the **Carbon Trust**.

Effluent Liquid waste matter that results from industrial processing or sewage treatment.

EMAS Eco-Management and Audit Scheme – an **environmental management system** set up by the EU.

Emissions In the industrial context, emissions are the gases, liquids and solid matter given off by, among other things, factories and motor vehicles. Often used to refer to substances discharged into the air.

Emissions In climate change terms, the release of a greenhouse gas like **CO₂** into the atmosphere.

Emissions trading A system that allows countries or businesses that have committed to **CO₂** reduction targets to 'buy' or 'sell' **emissions** permits among themselves, in theory allowing participants to reduce **emissions** where it is most cost-effective to do so. EUETS is the largest current scheme.

Energy efficiency Using less energy to perform the same function.

Energy Savings Trust (EST) An independent not-for-profit organisation, set up by the Government to promote energy saving in the domestic, community and transport sectors.

Environmental management system (EMS) A voluntary system designed to continually improve the organisation's environmental performance. Examples include **EMAS**, **ISO14001**, and **EEAS**.

Fossil fuel **Carbon**-based underground deposits used as an energy source – includes crude oil, coal and natural gas.

Fuel cells Fuel cells generate electricity by reacting **hydrogen** and oxygen. There are already prototype vehicles running on fuel cells, though so far the technology is very expensive.

Fuel poverty A household needing to spend more than 10 per cent of household income to achieve a warm enough home.

Global warming potential (GWP) See **carbon dioxide equivalent**.

Greenhouse effect the warming of the earth's climate caused by gases in the atmosphere trapping the sun's heat. This has always happened (otherwise the earth would be inhospitably cold) but the effect is increasing, due to increased **greenhouse gas emissions** from human activity.

Greenhouse gas (GHG) emissions Gases released into the open air from human activities such as generating electricity, transport and agriculture. These gases intensify the greenhouse effect, raising the world's average temperature. The main greenhouse gases emitted due to human activity are **carbon dioxide**, **methane**, and **nitrous oxide**. These gases, plus hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride, are all regulated under the **Kyoto Protocol**.

Greenwash Disinformation produced by an organisation to 'look green' in public, when it is actually not doing much for the environment.

Gigawatt hour One gigawatt hour is equal to 1,000 **megawatt hours**.

HSE The Health and Safety Executive – the Government body responsible for enforcing, encouraging and regulating workplace health, safety and welfare.

HVAC Heating, ventilation and cooling.

Hybrid vehicle A vehicle that has both a traditional engine and a rechargeable battery that uses the energy from braking.

Hydrocarbons Chemical compounds that contain only **hydrogen** and **carbon**, for example, **fossil fuels** (e.g. oil, gas, coal) or biomass.

Hydroelectric power Electricity produced by the power of water (often held in dams) driving turbines.

Hydrogen Hydrogen, which occurs in natural gas or water, is not an energy source, but is a way of storing energy, a bit like a battery. Energy is required to separate hydrogen from its source. It can then be used in a **fuel cell** to release the energy.

Intergovernmental Panel on Climate Change (IPCC) The group of scientists gathered by the United Nations to examine the causes and impacts of **climate change** and recommend actions in regular reports.

ISO14001 An international **environmental management system** and standard.

Joint Environment Committee (JEC) A committee to ensure ongoing environmental improvements in the workplace, with both management and union representatives. In some workplaces it may be appropriate to integrate this with the Health and Safety Committee to make a Joint Health, Safety and Environment Committee.

Kilowatt 1000 **watts**.

Kilowatt hour (KWh) The standard measure of how much energy is used, which appears on utilities bills.

Kyoto Protocol The 1990 Treaty set a target of a global 5.5 per cent reduction in **Greenhouse gas emissions** by 2012. These targets have been missed, but countries are currently negotiating a Kyoto phase 2 to start in 2012.

Life-cycle assessment (LCA) An assessment of the environmental impacts of a work process or product through its manufacture, use and disposal.

Megawatt hour (MWh) One megawatt-hour is equal to 1,000 **kilowatt hours**.

Methane (CH₄) – a greenhouse gas released from decomposing waste and farm animals, 23 times more potent than **CO₂**.

MtC Million tonnes of **carbon**.

Mtoe Million tonnes of oil equivalent – another way of measuring energy use.

Nitrous oxide (N₂O) A greenhouse gas that comes mainly from agricultural fertilisers.

ppm or ppb Abbreviations for 'parts per million' and 'parts per billion', respectively – the units in which concentrations of greenhouse gases are commonly presented.

'Polluter pays' principle (PPP) The principle that countries or businesses should in some way compensate others for the effects of pollution that they (or their citizens) generate or have generated.

Precautionary principle Part of the Rio Declaration: "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."

Recycling The reprocessing of waste materials or products for use in their original purpose (closed-loop recycling) or for another purpose (open-loop recycling).

Renewable Resources that can be regenerated relatively quickly.

Renewable energy Energy that is easily replaced or supplied by a nearly infinite source, such as the sun or the wind. Some examples are solar, wind, hydropower and geothermal.

Sustainable development "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (from the classic Brundtland report, 1987).

Triple bottom line Includes environmental and social impacts, rather than the single financial bottom line. Often used in the context of corporate social responsibility (CSR) policies.

TWh One terawatt hour is 1,000 **gigawatt hours**.

Union green rep (UGR) A union member elected to promote the environmental concerns of members, to the employer, and to work with the employer the union and colleagues to address these concerns.

Union environment rep (UER) See **union green rep (UGR)**.

Watt (W) A measure of how fast an electrical appliance uses energy. For example, a 60W conventional light bulb uses energy three times faster than a 20W CFL bulb.

Zero carbon Workplaces or homes that use no **fossil fuels**, only renewable sources of energy. Compare **carbon neutral**.

Sources

- P4 Climate change science – IPPC Climate Change 2007 – *Impacts, Adaptation and Vulnerability – Summary for Policy Makers*
Deaths – World Health Organisation – Climate and Health factsheet www.who.int/globalchange/news/fsclimandhealth/en/index.html and www.eurosurveillance.org/em/v10n07/1007-228.asp
Refugees – www.guardian.co.uk/environment/2005/oct/12/naturaldisasters.climatechange1
Avoiding 2 degrees – www.climate.unsw.edu.au/bali/
- P5 Stern report – www.hm-treasury.gov.uk/media/3/2/Summary_of_Conclusions.pdf
Factories – www.foe.co.uk/resource/press_releases/19990426104607.html
- P6 Wasted energy – Carbon Trust Press Release 29/4/04 "Growing Businesses Throwing Away £1 billion in Wasted Energy"
- P8 A Stern warning – www.hm-treasury.gov.uk/media/3/2/Summary_of_Conclusions.pdf
70% of employees want employers to do more on climate change – www.carbontrust.co.uk/News/presscentre/180308_Employee_research.htm
The Environment and Climate Change, Labour Research Department, June 2007
- P9 TUC Survey, 99 per cent supported environmental measures – www.defra.gov.uk/Environment/tusdac/pdf/prospect_environ.pdf
Green jobs – www.tuc.org.uk/economy/tuc-9996-f0.cfm
- P14 Alan Johnson supporting union green reps – www.guardian.co.uk/commentisfree/story/0,,2071075,00.html
- P21 Relationship between energy efficiency and productivity – www.berr.gov.uk/files/file28177.pdf
Climate change a business risk – global.marsh.com/risk/climate/climate/documents/climateChange200604.pdf
- P23 Businesses willing to pay more for green premises – www.businessgreen.com/business-green/news/2202453/businesses-willing-pay-premium
- P24 Government encouragement for union involvement in 'Carbon Reduction Commitment' and Joint Environmental Committees – DEFRA Briefing paper on Carbon Reduction Commitment, 2008
- P26 Department of Health study – www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4007935
- P28 EMAS better than ISO14001 – www.defra.gov.uk/environment/business/scp/pdf/ems.pdf
- P37 British Manufacturing could increase profits – www.themanufacturer.com/uk/content/2902/Good_housekeeping_pays_dividends?PHPSESSID=5580af0ccb5e6beb2b3509ff80c8f3e3
Energy use breakdown for offices – www.carbontrust.co.uk/NR/rdonlyres/8ED21F85-7B1F-4D04-B230-41D7178BF33E/0/Level1Content.pdf
- P39 Lighting recommendations – TUC *Hazards at Work* Chapter 25, DSE
- P40 Equipment overuse linked to RSI and stress – www.hse.gov.uk/research/crr_pdf/1998/CRR98198.pdf

P48 Transport accounts for 28% of carbon – Defra, e-Digest Statistics about Climate Change

Aviation emissions – www.defra.gov.uk/environment/statistics/globalatmos/index.htm

Car emissions – Department for Transport (DfT), Transport Statistics for Great Britain, www.dft.gov.uk/pgr/statistics/datatablespublications/energyenvironment/tsgbchapter3energyenvi1863.pdf

Commutes – www.guardian.co.uk/money/2008/feb/09/workandcareers and www.nbtn.org.uk/workwise_0108.pdf

Lack of travel plans – source – LRD Environment Survey 2007.

P57 Mapping health and safety standards in the UK waste industry – www.hse.gov.uk/research/rrhtm/rr240.htm

Recycling saves energy – www.defra.gov.uk/environment/waste/strategy/strategy07/pdf/waste07-strategy.pdf

Notes

A thick, teal-colored wavy line that starts at the left edge of the page and curves upwards towards the right, creating a decorative header element.

Notes

“The task ahead of
us is never as great as
the power behind us.”

Ralph Waldo Emerson, 19th century US writer



Published by
Trades Union Congress
Great Russell Street
London WC1B 3LS
Design: RIMA Design
Print: Ancient House Press on 100 per cent recycled stock
March 2008