

# Action Group Guide

## Welcome to Climate Solidarity

This guide gives step-by-step instructions to setting up and running a Climate Solidarity action group.

All Climate Solidarity materials including the menu, detailed activity sheets, hotspots, before & afters, and further resources can be downloaded from the website: [www.climatesolidarity.org.uk](http://www.climatesolidarity.org.uk)

Climate Solidarity project workers are here to help. Contact details are on the last page.



Photo: Sophia Liang

## Climate Solidarity in a nutshell:

1. **Get together with a few colleagues.**
2. **Find a time to meet.** Ask your manager for time, work within an existing green programme, or simply meet in a lunch break or outside of work.
3. **At your first meeting, pick a topic from our menu.** There are seven choices and something for everyone - food, energy, travel. If you'd prefer to try an activity of your own, let us know.
4. **At each meeting, look at an activity sheet for the topic.** Each sheet has discussion questions, facts and figures, and activities to try at home or in the workplace. Between meetings go away and try the activities. At the next meeting, talk about how you get on, and pick a new sheet.
5. **Meet about six times.** Then you can call it a day, choose a new topic, or get involved in wider change.

# What is Climate Solidarity?

*This can be read out at your first meeting.*

Climate Solidarity is a new sort of union campaign. Its about us as union members, and our colleagues, getting together in 'Action Groups' to take action on carbon pollution.

The world is heating up, just like a greenhouse, because carbon pollution from burning fossil fuels is trapping heat from the sun. This extra heat is leading to changes in weather and climate - with more droughts, floods, storms and rising sea levels.

We can already see some of the effects.

We need to move to a new low-carbon economy. The UK government has already committed to reducing greenhouse gas emissions by 34% by 2020, and by 80% by 2050, and some good initial progress has been made towards these targets. Many other governments around the world are also taking action. However, making such big changes is politically difficult, and will only happen if ordinary people keep the pressure on for change. As well as taking political action, there is a lot that can be done to cut our own carbon emissions.

Cutting carbon pollution can often save us money, strengthen our local communities, and improve our quality of life. This is the first goal of Climate Solidarity. The second goal of the campaign is to take this learning and action to create wider change, in our workplaces and beyond.

***Cutting carbon pollution can save us money, strengthen our local communities, and improve our quality of life.***



Photo: Sophia Liang

Climate change is a trade union issue because it will shape the jobs and industries and politics of this century. Climate change is a trade union issue because it hits the poorest people hardest, both in this country and abroad - for example because of rising food prices and flooding.

Climate Solidarity builds on traditional union strengths and values - it's about working together to make a difference, sharing knowledge and skills, encouraging and supporting each other. The latest research shows that collective action is a very effective way to go towards a low carbon society.

9 out of 10 people already do one or more positive things to reduce their carbon footprint - such as saving energy or reducing waste. Climate Solidarity will help us as a group to work out where we can take the most effective action. We will meet six times to plan actions, take action together, and learn from each other.

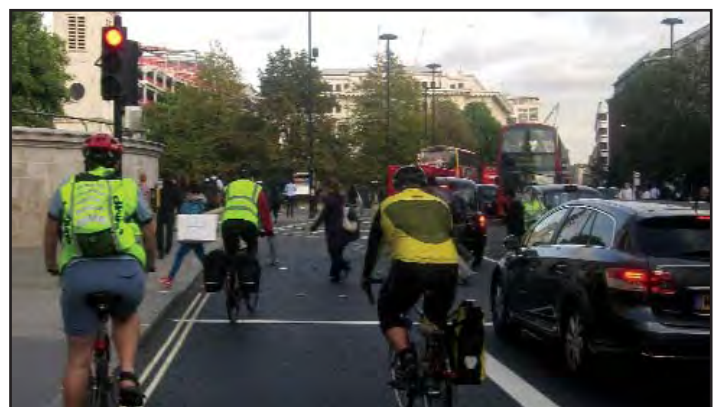


Photo: Danny McL

# Climate Solidarity: meeting by meeting

## Before the first meeting

- Decide how you are going to get people involved - approaching people you know well directly is usually the best option
- Decide a good time and place for the first meeting - keep it short and informal
- Remind people to come along

## First meeting

- Welcome to everyone who has come
- What is Climate Solidarity? Get someone to read out the script on page 2
- Choose a topic from the menu of topics
- Choose a name for the group, can be silly or serious
- Encourage everyone to register on the Climate Solidarity website, and fill out the survey before the next meeting
- Share out the tasks (below) that need doing before the second meeting
- Arrange time and place for next meeting

## Between first and second meetings

- Tell us about your group (contact details on back page) so we can put you on the map and keep in touch
- Download / copy all the materials relating to the topic the group has chosen; each person will need one copy of each sheet
- Sort out any practical matters for meeting two (venue, biscuits..)
- Remind people to come along

## Second meeting

- Have a go at the Hotspot sheet for your topic
- Select which activity sheet you are going to work on first
- Discuss the sheet and plan your action
- Look at the 'Before & After' sheet, if you want to measure your progress
- Ask one person to look out for positive news about people tackling climate change and report back at the next meeting
- Agree the date, time and place of the next meeting

## Meeting 3, 4, and 5

- One person shares positive news about people tackling climate change
- Report back on the actions that you have tried out since the last meeting and share any tips about what works well for you
- Decide which action sheet everyone is going to try next. If you have time, plan together exactly how you will undertake the actions
- Agree the date, time and place of the next meeting

## The final meeting

- Report back on the actions that you have tried out since the last meeting and share any tips about what works well for you
- Decide what you want to do next as a group. There are three options:
  - decide to call it a day
  - pick a new topic and keep meeting
  - get involved in wider change (e.g. engage with your employer on these issues, or join a local or national climate change campaign)
- Whatever you do, celebrate! And tell people about what you have achieved, e.g. in your union or workplace newsletter

## Contact us

Climate Solidarity staff are here to support you in setting up your group. Please contact the project worker for your union.

### Public and Commercial Services Union (PCS)

#### Ben Venables

PCS, 160 Falcon Road, London, SW11 2LN

Tel: 020 7924 2727 ex 2392 (Tues - Fri)

E-mail: [pcs@climatesolidarity.org.uk](mailto:pcs@climatesolidarity.org.uk)

### University and College Union (UCU)

#### Graham Petersen

Trade Union Studies Centre, South Thames College, Carlton House, 27a Carlton Drive, London, SW15 2BS

Tel: 020 8918 7383 (Wed - Fri)

E-mail: [ucu@climatesolidarity.org.uk](mailto:ucu@climatesolidarity.org.uk)

### National Union of Teachers (NUT)

#### Nell Andrew

NUT, Hamilton House, Mabledon Place, London WC1H 9BD

Tel: 020 7380 4859

Email: [nut@climatesolidarity.org.uk](mailto:nut@climatesolidarity.org.uk)

### Communications Workers Unions (CWU)

#### Maeve Kennedy

Tel: 07590 245 269

Email: [cwu@climatesolidarity.org.uk](mailto:cwu@climatesolidarity.org.uk)

For all other enquiries, please e-mail [info@climatesolidarity.org.uk](mailto:info@climatesolidarity.org.uk)

**Climate  
Solidarity**  
*for a just future*

[www.climatesolidarity.org.uk](http://www.climatesolidarity.org.uk)



Climate Solidarity is supported by Defra



Public and  
Commercial  
Services Union



For more info: [www.climatesolidarity.org.uk](http://www.climatesolidarity.org.uk)



# Menu of activities

# Climate Solidarity

for a just future

This menu offers a taster of the seven **Activity Themes** of the Climate Solidarity project. For more details, or to reserve a table, visit our website: [www.climatesolidarity.org.uk](http://www.climatesolidarity.org.uk)

## Waste not want not

No-one likes throwing good food away, yet nearly a third of the food bought in the UK is wasted. This activity looks at ways of shopping, cooking and storage, to reduce the food waste in your home.



Photo:  
Sioux Falls  
Green Project

**Cost: Zero**

**Carbon Saving:**



**Money Saving:**



**Effort:**



## Healthy and local

A low-carbon diet can also be a healthy diet. Learn more about how food choices can make a major difference to your carbon footprint, and explore ways that you can support local food producers.



Photo:  
M C Morgan

**Cost: Zero**

**Carbon Saving:**



**Money Saving:**

**Varies**

**Effort:**



## Get more from your car

Did you know that there are ways that you can save petrol, even without changing your car? A bit of basic maintenance, and adjusting your driving style, can reduce fuel consumption significantly. This activity includes a 'low-carbon MOT' and a 'low fuel driving test' that you can try out with your colleagues.



Photo:  
Nikki Aminor

**Cost: Zero**

**Carbon Saving:**



**Money Saving:**



**Effort:**



## Smarter commuting

Wouldn't it be nice to spend less time, energy and money getting to work? This activity helps you to take a fresh look at all the options, including public transport, cycling, and car sharing with colleagues. You may be surprised to find you have alternatives to the same old grind.



**Cost: varies**

**Carbon Saving:**



**Money Saving:**

**Varies**

**Effort:**



*Photo:  
Adrian  
Short*

## Lower electric bills

Simple actions can really reduce waste. Switching things off, changing when you use appliances, and maybe changing a few lightbulbs can really help make better use of energy in the home. You will work together to practice new habits so that soon you won't even notice doing them.



**Cost: 0 - £50**

**Carbon Saving:**



**Money Saving:**



**Effort:**



*Photo:  
Andres  
Rueda*

## Lower heating bills

Does your heating system just do its own thing and burn up cash? Together we can learn how to take control of our home heating system – to master the boiler, room temperatures and the thermostat – to make sure you get heat exactly when and where you want it. You will cut carbon and save money too.



**Cost: Zero**

**Carbon Saving:**



**Money Saving:**



**Effort:**



*Photo:  
R. Cao*

## Cosy home

Work with friends and colleagues to do some basic DIY to make your house more efficient and comfortable. You will learn how to do your own draftproofing and insulation, and how to keep the costs right down. This is your chance to get done all those things you've been meaning to do for years.



**Cost: £25 +**

**Carbon Saving:**



**Money Saving:**



**Effort:**



*Photo:  
Rakka*

## **Activity pack:**

# **Waste not Want not**

No-one likes throwing good food away, yet nearly a third of the food bought in the UK is wasted. This topic looks at ways of shopping, cooking and storage, to reduce food waste. It mainly focuses on changes in the home, but there are plenty of activities that you can try with colleagues, such as a 'just enough takeaway' and a 'pot luck lunch', and some suggestions about cutting food waste at work.

## **Activity sheets:**

**Shop Smarter**  
**Portion Size and Meal Planning**  
**Left Overs**  
**Good Storage**  
**Composting Food Waste**

**Convenor notes**  
**Group plan**  
**Hotspots**  
**Before and After sheet**





# Activity:

## Shop smarter

### What you need to know

#### Supermarkets are designed to get you to spend money on things you don't need

It is hardly surprising that big business spends their money to get us to spend ours. However, what this means is that we often end up with more food than we want or can eat, which makes food waste much more likely. Throwing food away before its even cooked is just money in the bin.

Supermarkets spend a great deal of money researching consumer behaviour, and designing stores to maximise the amount you buy. Some of the more obvious tricks include putting essential items like milk and bread towards the back of the store so that shoppers have to travel through more of the shop to reach them. Common impulse buys like chocolate are put near check outs. Two for one offers have proved incredibly successful in shifting stock. Promotions are placed on the ends of aisles. And so on...

More subtly, large supermarket trolleys encourage you to drop extra things in, even when you just went in for one or two items. There is a lot more about supermarket psychology online.

#### Discussion questions:

- How often do you go shopping for food? How much time do you spend?
- Do you use a shopping list? Why / why not? What would help you to make one?  
If you use one, does it work for you?
- What would remind you to check your cupboards and fridge before you go shopping?
- Do you sometimes buy something and when you get home find that you already had it?
- Do you buy reduced items, or two-for-one, and then wish you hadn't?
- Does anyone in your group shop online - do you think you waste more or less food as a result?

### What you will do:

- Plan your shopping.
- Concentrate on buying exactly what you need.
- Think carefully about how to use special offers.

### What you will gain:

- Spend less time in the shop.
- Stop wasting time dashing out for something you forgot.
- Lower your shopping bills.
- And....reduce food waste.



Photo: M C Morgan

### Planning works

Extensive research shows the best way to ensure that you don't end up with cupboards full of food going off is to plan your weekly meals and shop accordingly. However, even if you can't be that organised, there are plenty of ways that you can help ensure that you get more of what you want, and less of what you don't.

## Action points for this month

These actions are mainly for the home. If you know the people in your action group well, you might want to pair up and work together on how you plan and shop, or even go shopping together - perhaps sharing a car. Of course, its also important to get your family involved. As a whole Action Group, discuss what you do now, agree to be smarter shoppers for a set period, and then report back on what works for you.

### No-plan planning

- Get a special note pad, or a blackboard or marker board in your kitchen to write up the things you need to buy as soon as you think of them (or as soon as you empty a bottle or jar) - this is the basis of your shopping list.
- Check your cupboards and refrigerator before you do your shopping, so you know what you already have, what needs using up quickly, and what you need to buy - complete your shopping list as you do this.
- Remember to take your list with you every time you go to the shops; think of it as being as important as your money and keys.

### Real control

Plan the meals for your family for one week. Start by checking your fridge and cupboards to see whether there is anything that needs to be used soon - this will give you a start for your menu. Add in your other favourite meals, and don't forget to miss out meals if you are going to be away, or eating out, or getting a takeaway. List all the ingredients that you will need for the week that you don't already have in. Add any non-food essentials that you are running low on. Shop for just what is on your list.

## In the shops

These tips can work for a single trip, but you are more likely to see the benefits if you try them for several weeks.

- On any '2 for 1' offer, ask yourself: "will I really use (or freeze) the extra before it goes off".
- Buy your foods loose where possible to avoid buying more than you need. Pre-packed vegetables often contain enough for many meals, and may go off before you've used them.
- On perishable foods, check the use-by date before you buy it. If you need a later use-by date check at the back of the store shelf.
- Chilled food often has a short 'use by' date, and sometimes cannot be frozen either. Check the label carefully, and ask yourself when it will be eaten.
- Concentrate on getting everything on your list, and then getting out.

## Suss out your supermarket

On a shopping trip, take note of all the things that you think your supermarket does to try and get you to buy more. As well as special offers, this might include floor layout, lighting, smells, sounds, use of colour, arrangement of the product on the shelves, and so on. Compare notes with others in your Action Group.

## Reporting back

Do you feel like a smarter shopper? What works well for you? Is it having a list and a plan, or just changing your behaviour in the shop, or a mix? Can you shop smart without these things? Do you have tips to share with other Action Group members?

## Making wider change

Supermarkets are not the only way to shop. One alternative is a food coop. These are mutual structures that pool ordinary people's buying power to get good food at a lower price. You might want to see if there is a food coop in your area, and advertise it in your workplace, or even consider setting up your own.. See [www.foodcoops.org](http://www.foodcoops.org) for more.

# Activity:

## Portion size and meal planning

### What you need to know

#### Size matters

'Portion size' is the amount you put on a plate. Getting portion sizes right is a key way to reduce leftovers and food waste. Putting the right amount on the plate also helps you and your family not to overeat, and to stay healthy. Its also very easy to over-order when you get a takeaway - getting just the right amount will cut waste and the cost.

#### Filling up

It can be tricky to estimate the exact amount of food you need (though see below), so its natural to cook a bit extra just in case, so that no-one goes hungry. Its this extra bit that will probably become leftovers, or food waste. Its better to cook a bit less, and if necessary fill up on things like bread, cheese and fruit.

### What you will do:

Practice cooking the right amount.

Practice ordering the rights amount when you eat out or take away.

### What you will gain:

Lower shopping and takeaway bills.

Healthier diet.

And less food waste.



Photo: Michael Sarver

### How to be an expert estimator

For things like potatoes and broccoli, all you need to do is picture that amount divided into portions on the final plates. Cook the amount you will serve. However, food like rice or pasta which swells up in cooking is harder to guess and its very easy to cook too much. To get it right, you really either need to weigh it (75g-100g pasta; 50-75g rice), split a full pack into portions (e.g. 500g pack of pasta = 5 portions) or find something in your kitchen as a measure (e.g. 1/4 mug of rice = 1 portion). If you get it exactly right once, you'll be able to estimate better in future.

### Where to find out more

There is lots more information on all aspects of this topic, including perfect portions, left over ideas, recipes, and shopping tips at

[www.lovefoodhatewaste.com](http://www.lovefoodhatewaste.com)

### Discussion questions:

Do you often have unserved food left over after a meal ?

Do you or your children leave uneaten food on their plates?

Do you save food leftover on people's plates, or do you ever eat it yourself?

How often are you unable to finish everything you ordered at a takeaway, café or restaurant?

And if you do make or order too much, do you ever find yourself eating more than you really want to avoid wasting it?

## Action points for this month

### Tricky quantities

As an Action Group (or in your family), brainstorm a list of the types of food that you often have leftover in the saucepan or on the plate. For each tricky food, find out from a recipe book, [www.lovefoodhatewaste.com](http://www.lovefoodhatewaste.com) or another member of the group, how much you really need to cook. Make sure that you cook that food in the next few days, and put your new knowledge into practice.

### Zero plate waste

How people eat at home is a very personal issue. Every family will have its own patterns and ways of doing things, and there is already loads of government information to tell us what we should and shouldn't eat. However, if you do want to tackle food waste at home, research has shown that one of the most important things is to put the right amount of food onto plates - so people have enough to eat, but there is zero plate waste. This may mean serving less to start with, and your family coming back for seconds if they want them. As a family, work out how you can move towards zero plate waste.

### A 'just enough' take-away

This is something that you could do as a family, or which the Action Group could do together. Get menus for your favourite take-away and agree an order. As a family or group, try to work out exactly how much you will actually eat and finish. This might mean only ordering main courses and no starters, or sharing main courses, or sharing chips or whatever. If you are unsure, get less than you think. Order the take away and see whether you are right. Can you finish every last bit between you, with everyone feeling that they have had the right amount and not too much? Now you know how much to order next time.

### Reporting back

Share your experiences and feelings about these actions. What did you try? What worked? What are the barriers and obstacles? Do you think you will continue? What would help?

## Making wider change

There is often food waste in larger groups of people. So if you eat out with friends or workmates (such as for a Christmas Party) and you are all splitting the bill, suggest that you share dishes and order less. This works best for meals with dishes that can be shared, like Chinese or Indian.

If planning food for a large event, such as a meeting or party, be careful not to prepare or order too much food. Try to estimate exactly how many sandwiches (or whatever) you really need per person. If you have a regular event where there is food provided, check whether there are leftovers, and reduce the order or catering arrangements appropriately for next time.

At work there is often huge food waste in staff canteens, both on people's plates and from the amounts of food prepared. One way to reduce this is to talk to the canteen manager, find out what kinds of food are being wasted, and to find ways to work together to reduce food waste. There are many ways to reduce this waste: giving people smaller portions, asking them to only take as much food as they want, and providing fewer choices (and maybe more cold options that can keep until the next day). If you would like to take action on food waste at your workplace speak to your trade union green or environment rep and see how your Action Group could help support change.

# Activity:

## Left overs

### What you need to know

#### Microwaves:

Microwave ovens are brilliant for using leftovers. Keep leftovers in the fridge then heat them up in the microwave and serve them as a quick easy meal or a side dish. And if you stored them in a microwave-safe serving dish you can serve them straight to the table with no extra washing up.

#### Salads:

If you are likely to have salad left over from a meal make sure that the dressing is applied on individual portions rather than the whole salad. Salads will last longer if they are free from dressing and they can be a great accompaniment to most meals the following day or as sandwich fillers.

#### Vegetables:

If your leftover cooked vegetables look a bit unappetizing, throw them in the blender and use in your pasta or curry sauce to add nutrients.

#### Rice and pasta:

Cooked rice and pasta can go off quickly if left out - and rice can grow mould. So put leftovers in the fridge straight away or freeze them. Both rice and pasta reheat very easily in a microwave.

#### Potatoes:

Leftover potatoes are always a very useful standby. They can be reheated in a microwave, sliced and fried, or made into a salad.

### Discussion questions:

What do you do with leftovers? Do you bin them, re-use them, or put them in the fridge and freezer and forget about them?

What do you think you paid for the leftovers you throw out?

Do you think people view leftovers as dull or second rate food?

What do you think would make leftovers more appealing to people? Does anyone have any tips or recipes to share?

Do you feed leftovers to pets? Is this a good way to use expensive food?

Do you have a microwave? Do you use it to heat up left overs?

Do you ever have meals or favourite recipes based around using up leftovers?

### What you will do:

Keep track of left overs.

Find creative ways to re-use them.

Bring left overs to work for a shared 'pot luck' lunch.

### What you will gain:

More exciting and varied meals with side dishes and different flavours.

Lots of useful standbys for instant meals.

Major savings of time and money.

And less waste....



Photo: grand grrl

#### Bread:

...can be stored in a plastic bag or airtight container.

Bread freezes very well, so if the bread is nearing its best-before date put it in the freezer to use for toast.

#### Leftovers for lunch:

Leftover meats can be used sliced cold in a sandwich. If your workplace has a microwave you can heat up entire dinner meals for lunch.

#### Food safety:

If food was fully cooked when it was served, leftovers will be fine for three days in the fridge and can still be eaten cold or just warmed up. After three days they should be fully reheated (until bubbling or steaming). Cover leftovers in the fridge and keep them well away from any raw meat.

#### Useful websites

The following websites may be helpful for using up leftovers or extra food lying in the fridge or cupboard.

[www.lovefoodhatewaste.com](http://www.lovefoodhatewaste.com)

[www.notbeansagain.com](http://www.notbeansagain.com)

## Action points for this month

### Systems:

Managing leftovers starts by having a good collection of storage containers. So wash out and keep the best plastic food pots in a designated place.

Aim to store all leftovers from meals and serve them again, either as a reheated part of another meal, or as an ingredient.

Keep leftovers in a designated place in the fridge so that they can be 'front of mind' for re-use.

Every new meal look at your leftovers and think whether they can be included as ingredients or reheated as a side dish.

### Special meals

If there are large quantities of a main dish that could become an entire new meal, put them into portions, label them and freeze them.

Once a week go through the fridge and make a meal of leftovers.

### Lunch Potluck

Get together with everyone else in your Action Group, collect a few days leftovers and bring them in for a 'leftover pot luck' one lunchtime at work. It could be a picnic lunch or even a full dinner if there is a workplace microwave oven to reheat them.

### Making more leftovers

Once you have a good system you can save even more time and energy by deliberately cooking more than you need so that you have enough for another heated up meal. Re-heated baked potatoes and pasta can easily be a quick meal for children.



Photo: Sioux Falls Green Project

## Making wider change

At any work events with food (such as a party or meeting buffet) have a sign encouraging people to take any left over food home, and provide small plastic bags or take away boxes for them. This sends out a strong message about waste, and can really help change behaviour.

Staff canteens often have a lot of prepared and cooked food left over at the end of a meal or the end of a day. Work with canteen staff and your union reps to see how food waste can be reduced. This might include providing and displaying take away boxes for people to save their leftover food, and selling off unsold food to staff at a reduced price. Canteens do have to follow very strict food safety regulations, but if they can cut waste this will save money, which ultimately helps keep prices down for you and your colleagues.

# Activity:

## Good storage

### What you need to know

#### How date marks work

Many people throw out food that is still perfectly safe to eat because they misread the date marks. The following definitions are based on the advice of the Food Standards Agency.

#### Use by – the only really important one

The term 'use by' is used on foods that go off quickly, such as meat, fish, milk and dairy products. These dates are used for food safety, and you should not consume any food or drink past its use-by date, even if it looks and smells fine.

#### Best before

The term 'best before' appears on a wide range of frozen, dried, canned and other foods. It is about quality rather than food safety. After the best before date things might start to lose some of their flavour, but should be quite safe to eat. (The one exception is eggs, where 'best before' should be treated as 'use by').

#### Sell by / Display until

The term 'sell by' or 'display until' is for the benefit of shop staff. It is perfectly safe to consume food past its sell-by date as long as it is not past its use-by date.

#### Safe dates for frozen food

Providing it was still inside the 'use by' date when it was frozen, frozen food will stay safe for at least a year and often longer. 12 million households in Britain are binning good food straight from the freezer because they misread the 'use by' dates and think it is not safe to eat.

*continued overleaf...*

### What you will do:

Share knowledge and tips about keeping food.  
Get your freezer and cupboards in an order that works for you.

### What you will gain:

Understand date marks, and pick up storage tips.  
Maybe find some free meals in your freezer.  
...and cut waste.



Photo: Zak Hubbard

### Discussion questions:

**Freezer:** If you have a freezer, how do you use it?

If you are looking for something can you find it easily?

What do you use it for - easy quick meals, leftovers, bulk meat food deals?

Are there things in there that are UFOs ('unidentified frozen objects')= you don't know what they are, how long they have been in there or what to do with them?

**Fridge:** are there things in there that are inedible or close to going off?

Do you know, reading a label, whether food is safe to eat? When do you throw food out?

Do you know what things you can refrigerate to make them last longer?

**Shelves and cupboards:** Do you have perishable foods (such as pasta, grains, flour, spices) that have not been used for 6 months? How many tins have been hanging around for longer than you can remember?

# How can you extend the life of fresh foods?

## Freezer

Not everyone will want or have the space or money for a freezer, but if you do have one they can really help manage extra food. Most things can be frozen until they are needed. For example raw meat (such as chicken) can be cut into strips and frozen, to be defrosted quickly and used in a stir-fry later. Double cream can be frozen in an ice cube tray and the frozen cubes added directly to sauces. There are lots more examples. Food will keep safely in the freezer for a very long time although the quality and texture will deteriorate in due course. You can also save a lot of time by cooking a big dish, then dividing it into portions to freeze for another day. But this only works if you have a good system to use it up again.

## Fridge

Many things will keep longer in the fridge. Not just milk and cheese, but apples and pears, for example. Check that your fridge is at the correct temperature: between 1°C and 5°C. If it is too cold or too hot food will spoil quicker.

## Dark, cool, dry spaces

If possible, keep any perishable food (e.g. fruit and vegetables) either in the fridge or in a dark, cool, dry space. This might be under the stairs, a garage, or just the coolest cupboard in your kitchen. Sun and other heat will make all food go off much quicker.

## Find out more

You can find loads of storage tips, and even share your own:

[www.lovefoodhatewaste.com](http://www.lovefoodhatewaste.com)

## Action points for this month

**You can do these actions on your own, but why not pair up with someone else in the group to get things sorted.**

### Sort through and use up old food

Go home and go through all your stored food. Throw away anything that is past its use-by date, or otherwise inedible, so that you can make a fresh start. Don't worry about best before dates.

Go through the freezer and find the UFOs. Re-label them with a marker pen and stickers.

Identify all the stored food that needs to be used up soon and make a special place to keep it (for example a shelf in the cupboard, fridge or freezer).

Plan meals to use these things up. You may be surprised at how much 'free' food you find.

### New systems

**Start simple systems, such as**

- a) Keep those special shelves for things that need using next - either new stuff with a short use by date, or existing food that is starting to get a bit tired.

- b) Put all other new shopping to the back of the fridge or cupboard, and bring the stuff already in there to the front. Most people already practice this simple 'stock rotation.'

- c) Keep a marker pen and stickers next to the freezer. Each time you freeze something, label it and put your own 'use by date' on it. Most freezers have a little chart to suggest storage times for different foods. Six months is a good rule of thumb, although many foods will keep for longer with no loss of quality.

### Use it or freeze it - don't lose it

Check your 'use up' shelves before starting to prepare a meal. It may save you having to work out what to cook next. If there is something there that you aren't going to use, and you have a freezer, put it in now (with a label) before it goes off. In the same way, if you have a glut of something (too many pints of milk) why not freeze some straight away?

### Reporting back

Share tips and learning in the Action Group. How does it feel to deal with all the stuff lurking at the back of your cupboards or freezer? Have you bought less as a result? What works for you?



# Activity:

# Composting food waste

## What you need to know

### Food waste is a major climate pollutant

Around 20% of all the UK's climate pollution is linked to the production, processing, transportation, and storage of food. If less food was thrown away, this would make a significant contribution to cutting emissions.

However, there is always going to be some waste from food - like vegetable peelings, and egg shells. Where our food waste goes is also very important. Food waste that goes into your black bin goes to landfill sites where it is dumped. There it will produce polluted water that can work into the ground, and give off methane gas which is a very powerful greenhouse gas, driving climate change. Composting waste - either at home, or through a council scheme - means that the waste doesn't produce this pollution.

### Discussion questions:

**Do you have a compost bin or are you part of a council composting scheme?**

**If you do compost – what methods work best for you?**

**What are your feelings about composting? Does it seem fun and worthwhile; or unhygienic, another chore?**

**Do you know where to buy a compost bin?**

**If you have children, does their school get involved in composting (there are schemes to encourage this)? Do you think your children would be interested in setting up home composting?**

## What you will do:

Learn about different ways to compost food waste.  
Get your own compost bin.

## What you will gain:

A quick way to get smelly food waste out of the house.  
A source of high quality (and free) organic fertilizer or potting mix.  
And - you will make a major contribution to fighting Climate Change.



Photo: John Paul Goguen

## Composting

Compost bins can handle all raw fruit and vegetable leftovers, tea bags, coffee grounds, grass cuttings and other garden waste, and even cardboard. The trick to make effective compost is to get a good mix of 'greens' (quick rotting materials such as vegetable peelings) and 'browns' (slower rotting materials like cardboard). You shouldn't put cooked food, or any kind of meat, in a conventional outdoor compost bin. You can buy compost bins at all garden centres - and many councils offer special reduced price deals to encourage people to compost. Some compost bins are designed to work on paved areas or yards, for people without a garden.

## Wormery

A wormery is a method of composting using special Red Wiggler worms in a container. Food waste and moistened bedding are added, and the worms and micro-organisms eventually convert them to rich compost. Worm composting can be done indoors, or better still in a small outside area, so is ideal for people without a garden.

*continued overleaf ...*

## Bokashi

The Bokashi bucket is like a compost kitchen caddy, only you can put any type of food waste into it – cooked food, raw food, meat, fish or dairy. The Bokashi bucket works by fermenting the kitchen waste and after two weeks the fermented material will be ready to add to your compost heap.

## Green Cone

The Green Cone, like the Bokashi, can deal with both raw waste from food preparation and leftover cooked waste. It breaks down waste into water and other basic constituents, leaving the soil around the Green Cone highly fertile, but with very little solid residue. Its ideal for people who have a garden, but don't want to produce physical compost.

## Where to find out more

RecycleNow is a government-led campaign to help individuals with recycling and composting queries. You will find a wealth of information on their campaign website

Visit: [www.recyclenow.com/home\\_composting](http://www.recyclenow.com/home_composting)

Or ring their helpline: 0845 600 0323

## Action points for this month

### Compost at home

Work together to identify the best home composting option for each person in the Action Group. Check the notes above, contact RecycleNow, and above all share experience within the group. Contact your local council to see whether they provide free or reduced price compost bins. You may want to work together to purchase and install bins. If no-one in your group is already a confident composter, get one or two volunteers to try it and learn the ropes before you all go ahead.

### Alternatives

If you explore home composting and decide its not for you, there may be a council or community run scheme that you could join. See the wider change box below for more information.

### Reporting back

Although setting up home composting shouldn't take long, conventional compost bins and heaps do take a long time to really get going and produce good compost. Compare notes, but be patient.

### Gadget spot

*Whatever sort of composter you have, you will probably want to keep it outside. A **compost caddy** is a sealed container with a special filter that you can keep handy in the kitchen for all your tea bags and vegetable scraps, and just empty when you need to. They start from £5.*

## Making wider change

Many local authorities have now started to collect food waste separately as part of the doorstep service. If this facility is not available in your area, find out if there are any plans to introduce it. Contact your local Friends of the Earth group ([www.foe.org.uk](http://www.foe.org.uk)) or other local environmental campaigning organisations, and work together to push for comprehensive doorstep collections - including all recyclable materials and food waste.

In other areas, communities have taken action themselves, setting up community compost schemes. These take many forms, but might include encouraging people to compost, or setting up collection systems where none exist, for an estate or a block of flats. See: [www.valuingcommunitycomposting.org.uk](http://www.valuingcommunitycomposting.org.uk) for more information.

Food waste at work can be difficult to deal with; the best thing is to reduce the amount of waste, as suggested in other activities in this topic. However, there still may be waste such as apples cores and fruit peel which could be composted. Work through union channels to engage your employer or catering manager to improve the disposal of food waste from on site catering.

# FOOD LOVERS HATE WASTE

## NOTES FOR ACTION GROUP CONVENOR

### General comments

This is a fun topic, with lots of opportunity for social events and creating wider change. It is also one of the activities with the greatest climate change impact. A typical family wastes a quarter of their food, which also means the equivalent of up to one and a half tonnes of carbon dioxide.

For many people, not wasting food has a strong connection to global justice and equality, because so many people in the world still go hungry. This topic would work very well in a workplace where people already understand and support fair trade or other international campaigns.

The general approach is to plan ahead, buy what you need, cook what you need, and then use the leftovers well. However some people have a very strong resistance to planning – it may feel far too much effort, or rather dull and worthy. There are lots of other tips and tactics that you can use to cut waste when buying, cooking and storing food, which don't require any concentrated planning.

### BEFORE AND AFTER, GROUP PLAN

Get everyone to fill in the first page of the **Before and After** sheet during the first meeting. This will give people a fairly clear idea of which activities to focus on, and will probably start a lively discussion!

The **Group Plan** gives an overview of all the activities in this topic. Fill it in as you go along to keep track of the group's progress.

### CHOOSING YOUR ACTIVITIES

There is no ideal order for the activities, so let the group decide. The composting activity is likely to be the hardest (and perhaps the least popular), so you may want to do this last or drop it. You might like to do the leftovers activity sheet early on - especially as the workplace leftover potluck will get lots of attention and may recruit new people to the group.

### SHOP SMARTER

People often have a lot to say about supermarkets, As well as spotting how they persuade us to spend money, share ideas and tips for not buying more than you meant to.

The question of sell by, best before and use by dates may well come up. There is more information on this on the Good Storage sheet if you need it.

### PORTION SIZE AND MEAL PLANNING

The important thing with this activity is for people to think carefully about their own behavior and preferences. For example, some people prefer to have no left overs, and so should focus on getting the amounts they cook exactly right. Others will prefer to cook extra, which is fine as long as they have a good system for left-overs, but they may need to think about how much they put on the plate.

Take aways and meals out often give the biggest opportunity for cutting waste and saving money, as there is often pressure to over-order, or to 'splash out'. However, you can eat take aways every day of the week and not waste food – it is just a question of ordering the right amount.

## LEFT OVERS

This is a popular topic and people may want to do it first. The workplace lunch potluck could be a great social event. Encourage people to share their ideas, tips and recipes, but also emphasise that it's not essential to 'jazz' up leftovers in a new recipe - just reheating the same dish in a microwave is the simplest and easiest meal.

## GOOD STORAGE

Although almost everyone has a fridge, be careful not to assume that everyone has a freezer – many people do not. It can take a bit of effort to sort out your fridge, cupboards or freezer, so knowing that everyone is having a go at the same time can help you to see it through.

## COMPOSTING

This activity may not be relevant to everyone - if you don't have a garden it is more difficult to make your own compost. In the discussion explore carefully how people *feel* about composting. Hearing and recognizing negative feelings and concerns (will it be dirty or smelly or attract rats?) rather than ignoring them makes it more likely to get people on board. And many people get quite 'hooked' on composting once they try it, so it is worth encouraging people to give it a go.

## FINAL MEETING

Celebrate what you have done together so far, and think about next steps.

Fill in the second part of the **Before and After** sheets. Encourage people to be honest. Discuss whether people have noticed any reduction in the amount of food they throw away, or their weekly shopping bill. If you haven't already done so, fill in the final parts of the **Group Plan** as a record of your efforts. Please send us a copy of all the documents to FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, Oxford OX4 1JE. This will help us to learn from your experience, and to evaluate the impact of the whole campaign.

## NEXT STEPS

If the group has gone well, then tell other people about what you have learnt. Members of the group could write articles for your local union or workplace newsletter, or send them to Climate Solidarity for us to publish. There may be opportunities to make a presentation to colleagues, either in a union setting, or in meetings organised by your employer. Climate Solidarity offers training for action group members interested in presenting about the campaign.

If the group is keen to keep on meeting, why not go back to the Climate Solidarity menu and pick another topic. If you want to keep focusing on food, then the Healthy and Local theme may be the one for your group. However, you may want to do something completely different, choose one of the topics on energy use or travel.

Alternatively, there are suggestions on each of the activity sheets for cutting food waste across the workplace. Some of these suggestions are about applying the ideas to larger gatherings over which the members have direct control (eg catering for parties, buffets etc.). Ordering the right amount, and encouraging people to take spare food home can send out a strong message about waste. The other area is work canteens. This will require a more complex negotiation, and respect for health and safety laws, but potentially major food and cost savings. Your group could champion these initiatives to make a much bigger difference. Make sure that you work closely with your union reps, and let Climate Solidarity know how you get on.

# Waste not want not: Our action

Name of Action Group .....

Contact name .....

Contact e-mail, or mobile phone number .....

As you work through the activity sheets as a group, use this sheet to keep a record of how many action group members try each suggested activity. You'll need to refer to the individual action sheets to see what each of the actions involves. Don't worry if you don't do them all - though of course the more actions you take the bigger impact you will have. You can also keep a record of how many members plan to continue that new activity or behaviour. You might want to display the sheet somewhere that all action group members can see it.

	Number of members who were already doing this action	Number who have tried this for the first time	Number of members who intend to continue this action
<b>Shop smarter</b>			
Using a board or notepad in your kitchen for a basic shopping list			
Completing a shopping list before you do your shopping			
Planning meals for the week			
Being careful not to buy more food than you can use			
Noticing if you are being encouraged to buy more than you can use			
<b>Portion size and meal planning</b>			
Measuring ingredients like pasta or rice that are tricky to estimate			
Practicing zero plate waste			
A 'just enough' take away			
<b>Left-overs</b>			
A good system for storing and using left-overs			
A pot-luck lunch with colleagues or friends			
<b>Good storage</b>			
Clearing out and using up any 'UFO's or other 'old' food			
A special shelf in the fridge and / or freezer for food to use first			
Marker pen and labels handy for labeling things going into the freezer			
<b>Composting food waste</b>			
Composting food waste, using any system			

When you have completed your work on this theme, please send this sheet (or a copy) to:  
 FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, OXFORD, OX4 1JE



# Before & after: Waste not want not

Colour in the chart on this page at the beginning of your action group and you'll get a picture of where you tend to waste food. Then you can pick which changes to concentrate on. At the end of the action group, colour in the second chart (overleaf), to see whether you have made a difference.

Name:  
 .....  
 Name of action group:  
 .....

**Never**  
**Rarely**  
**Sometimes**  
**Often**  
**A lot!**  
**Always**

**For example:** Do you buy reduced for clearance items and forget to eat them in time?

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## GENERAL- How often do you throw away the following?

- Meat - before you cook it
- Vegetables - before you cook them
- Fruit
- Milk and cheese
- Eggs
- Prepared food and ready meals - before you have cooked them?


## Shop smarter

- Do you buy something and when you get home find that you already had it?
- Do you dash out to buy something that you could have bought when you did a big shop?
- How often do you go shopping without a list or idea of what you will buy?
- Do you buy reduced for clearance items and forget to eat them in time?
- Do you buy two-for-one deals and not manage to use it all?


## Portion size and meal planning

- How often is there unserved food left over after a meal ?
- Do your children leave uneaten food on their plates?
- How often are you unable to finish everything you ordered at a takeaway café or restaurant?
- How often do you feel that you have eaten more than you really want to?


## Left overs

- How often do you have food left over from a meal?
- Do you throw leftovers in the bin?
- Do you feed leftovers to your pets?
- Do you eat food left by other members of your family after you have already eaten?


**None**  
**Not much**  
**Some**  
**Fair amount**  
**A lot!**  
**All of it**

## Food Storage

- Looking in your freezer – are there things that you have no idea at all what they are?
- How many things have been in your freezer for over six months?
- How many things have been in your freezer for over a year?
- Looking in your fridge, how many things are inedible or close to going off?
- Looking on your shelves, how many perishable goods\* have not been used for 6 months?
- Looking on your shelves, how many tins have been hanging around for longer than you can remember?


\* by perishable goods we mean pasta, grains, flour, spices

# Before & after: Waste not want not

At the end of the action group, colour in this chart to see if you have cut your food waste. Compare back with your original sheet, and with others in your action group. At the end of the group, please gather all the sheets together, and send them back to Climate Solidarity at:

FREEPOST  
RSEY-UCEL-SZLL  
Climate Solidarity (COIN)  
106-108 Cowley Road  
Oxford OX4 1JE

**Never**  
**Rarely**  
**Sometimes**  
**Often**  
**A lot!**  
**Always**

**For example:** Do you buy reduced for clearance items and forget to eat them in time?

--	--	--	--	--	--

## GENERAL- How often do you throw away the following?

- Meat - before you cook it
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- Fruit
- Milk and cheese
- Eggs
- Prepared food and ready meals - before you have cooked them?


## Shop smarter

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- Do you dash out to buy something that you could have bought when you did a big shop?
- How often do you go shopping without a list or idea of what you will buy?
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**Not much**  
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**Fair amount**  
**A lot!**  
**All of it**

## Food Storage

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- Looking on your shelves, how many perishable goods\* have not been used for 6 months?
- Looking on your shelves, how many tins have been hanging around for longer than you can remember?


\* by perishable goods we mean pasta, grains, flour, spices



## **Activity pack:**

# **Healthy and local**

A low-carbon diet can also be a healthy diet. Learn more about how food choices can make a major difference to your carbon footprint, and explore ways that you can support local food producers. What we eat is mainly a personal choice, so this topic is mainly about supporting each other to make lower carbon food choices. It is a particularly good topic for the autumn, when the best of British food can be enjoyed.

## **Activity sheets:**

**The food pyramid**

**Eat the seasons**

**Meat-free Mondays**

**Go local**

**Group plan**



# Activity:

## The Food Pyramid

### What you need to know

#### What you eat matters

The food system as a whole contributes around 19% of the UK's greenhouse gas emissions. A huge amount of land, energy and water is used in producing, processing, packaging and transporting our food, and a large volume of waste is created in the process.

#### Local is good...

One of the important things to think about is how far your food has travelled, because of the energy used in transport. However, food miles are only one part of the equation – the way that food is grown, reared, stored and packaged also has a big impact on how much energy is used. Also, even if food comes from within the UK, it may have travelled many miles for processing. There is more about supporting local food in a later activity.

#### ...but local and seasonal is better

British fruit and vegetables sold out of season may have been grown in heated greenhouses, or stored for long periods in refrigerated environments. This means that they can sometimes actually use more energy than imported produce, although this does depend on many factors. What you can be sure of is that when British fruit and vegetables are in season, they will almost always be the lowest carbon choice. There is more about seasonal food in a later activity.

#### Discussion questions:

What are the biggest influences on the food you buy?  
Do you think healthy or unhealthy food costs more?  
What about local or imported? What about seasonal or out-of-season? Processed meals or basic ingredients?  
Which food labels do you find helpful?  
Which are confusing?



Photo: Avlxyz

### What you will do:

Use a 'food pyramid' to learn about which foods are good for you and the planet.

### What you will gain:

A quick overview of the main climate issues in relation to food.

A simple tool for helping reduce the carbon impact of the food that you buy.

### Perishable and processed food

Food that requires special conditions or which has a very short shelf life is likely to require more energy to transport and store. This includes many chilled products, for example. More robust items, such as root vegetables, tend to have much lower environmental impacts. Highly processed food, such as ready meals, also tends to use more energy over the whole life-cycle of the product than simple ingredients.

### Air miles

Although only 1.5% of fruit and veg is carried by air, it accounts for a whopping 40% of the energy used during food transport – it is the most energy-intensive way of transporting food there is. Many supermarkets (including Tesco) now label any food that has been transported using an aeroplane, so you can avoid it if you want to.

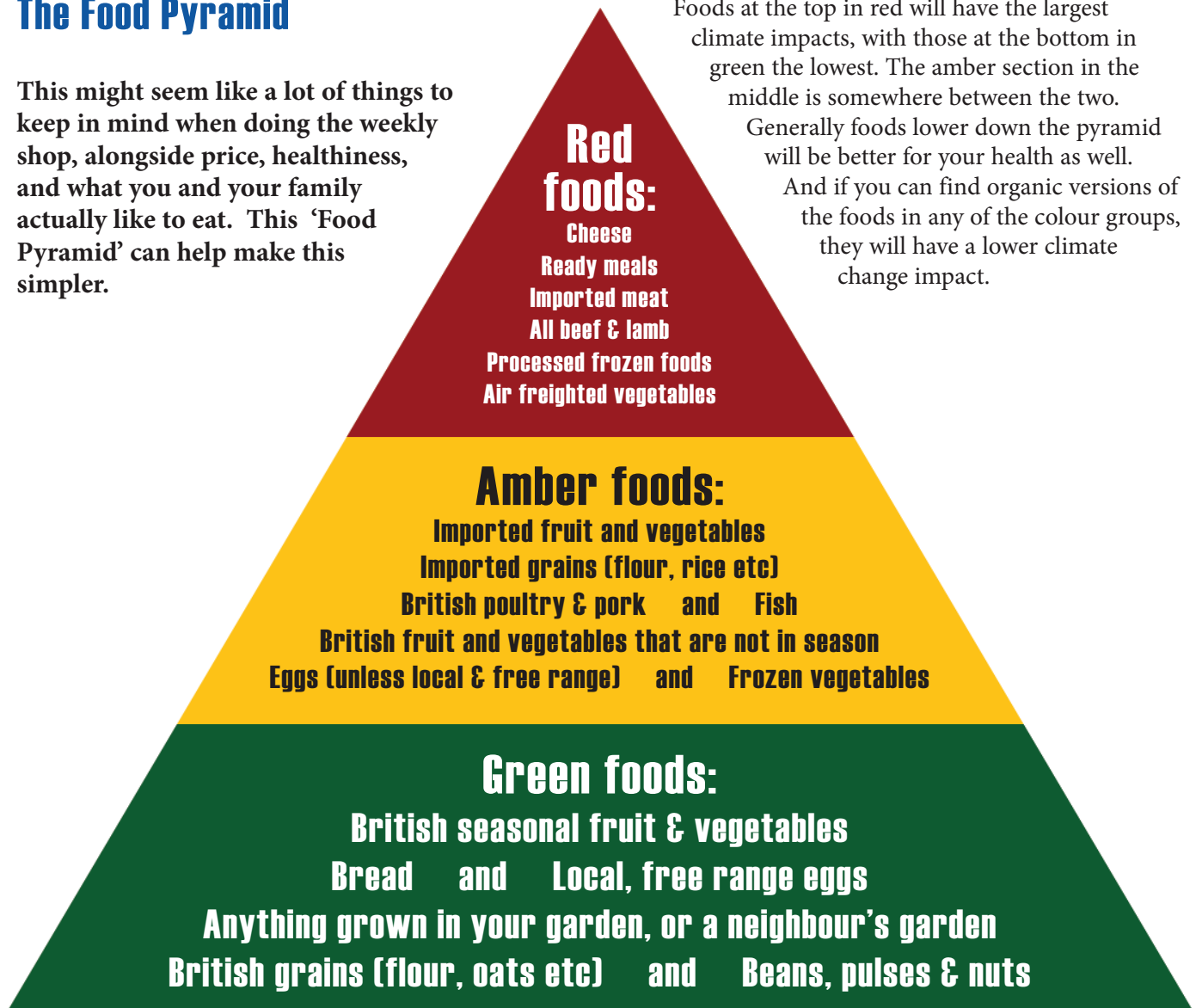
### Organic food

Many people think that eating organic food is better for them, or tastier – but this has not yet been proven in scientific studies. What is beyond doubt is that organic standards require farmers to protect the environment, and to avoid artificial chemical fertilisers, which produce nitrous oxide – another powerful greenhouse gas. Studies of organic farming systems show less environmental damage and a greater amount and variety of wildlife than conventional systems. In general, organic products have a lower climate change impact than similar non-organic versions.

## The Food Pyramid

This might seem like a lot of things to keep in mind when doing the weekly shop, alongside price, healthiness, and what you and your family actually like to eat. This 'Food Pyramid' can help make this simpler.

Foods at the top in red will have the largest climate impacts, with those at the bottom in green the lowest. The amber section in the middle is somewhere between the two. Generally foods lower down the pyramid will be better for your health as well. And if you can find organic versions of the foods in any of the colour groups, they will have a lower climate change impact.



## Action points for this month

### With a shopping receipt

Each member of the group finds a recent food shopping receipt. Using highlighter pens or other coloured pens, each member should mark all the RED, AMBER and GREEN food items. Unless you are a very trusting group you probably won't want other people looking at your receipts, but you can discuss what you have found. Are you already buying green low-carbon foods? Or are you mostly buying red foods at the top of the pyramid? What might you be willing to change?

### In the shops

Print out the food pyramid and take it with you next time you are shopping. Just buy what you normally buy, but just keep in mind what are red items, and what are green items. Then next time you shop, think about whether you could buy more things from further down the pyramid, and less from the red zone.

There will always be choices to make around what food you buy – and it is very difficult to get everything right. The more of your food is from the green zone, the less carbon pollution it will cause.

A carbon-light diet also fits well with a healthy diet. However, the red foods are not 'banned', and most people will continue to eat some high-carbon foods, just as most of us eat some unhealthy foods.

### Reporting back

Do you find the food pyramid helpful? Or is it easier just to think about buying 'local and seasonal'? What high-carbon foods is it easy for you to avoid or give up? Which high-carbon foods really matter to you? What are your favourite low-carbon foods?

# Activity:

## Eat the seasons

### What you need to know

#### Five reasons to eat seasonably:

**It tastes better:** Seasonal fruit and vegetables will be picked at the peak of readiness, and reach shops quickly, retaining more sweetness and flavour. Out-of-season and imported fruit and vegetables are often harvested before they are ripe, and stored for long periods, sometimes with post-harvest chemical treatments such as fungicides to increase shelf-life. Long-distance fruit and vegetable varieties also tend to be chosen for their high-yield and keeping qualities, not for flavour or nutritional value

**It's cheaper:** Research by the Eat Seasonably campaign has shown that a basket of fruit and veg bought in season can be as much as a third cheaper than the same basket bought out of season.

**It celebrates the seasons:** Eating seasonably means enjoying eating the right things at the right time: a crisp salad when it's hot and sunny, a wholesome stew when it's cold; strawberries in June, brussels sprouts in December.

**Everyone's doing it:** According to the Institute of Grocery Distribution, two thirds of consumers say they are trying to buy more seasonally.

**It's lower carbon:** Storing food for long periods, or transporting food over long distances takes energy, and results in carbon pollution. Growing in season requires less transport and also lower levels of artificial fertilisers.

#### Discussion questions:

Do you know which fruits and vegetables are in season right now?

What are the advantages and disadvantages of fresh food vs frozen or processed food?

Do you look forward to certain foods being in season – strawberries in the summer, for example?

Do you ever pick your own fruit and veg – or grow anything yourself?

#### What you will do:

Find out more about which foods are in season when.  
Try making some seasonal meals.

#### What you will gain:

Recipes full of ingredients that are fresh.  
A varied diet that changes with the seasons.



Photo: George Barker

#### How to find out what's in season

There are lots of resources online to help you find out what's in season. At Eat Seasonably [www.eatseasonably.co.uk](http://www.eatseasonably.co.uk) you can download a calendar of what is in season when, and print it out to stick on your kitchen wall, or staff noticeboard.

Another website, Eat the Seasons [www.eattheseasons.co.uk](http://www.eattheseasons.co.uk) allows you to sign up for a weekly e-mail recommending a seasonal food of the week, together with recipes and other tips. This site includes recommendations for some meats and fish, as well as fruit and vegetables. Some recipe books will also offer advice on when is the best time of year to buy various products. Shop staff may be able to give advice on what is in season, particularly in local greengrocers.

## Filling hungry gaps

Realistically, most people won't want to live on local, seasonable food alone. Firstly, it's important to note that many foods – including most meats, dairy and dried goods – don't have a particular season.

Secondly, there are some products like tea, coffee, bananas and chocolate which simply can't be produced in this country. The main issue with these products is supporting the pay and conditions of the people who produce them. Buying products with the Fairtrade mark will ensure that workers are paid a fair price for their labour, and also requires producers to meet certain environmental standards. Although products like tea do have to be transported long distances, it's important to get this in perspective: the biggest factor in determining the carbon pollution of a cup of tea is how much water you put in the kettle.

Finally, although there are always some UK fruit and vegetables in season, the choice is limited in spring, and there is most variety in the late summer and early autumn months. Imported, frozen and tinned foods are likely to play a bigger part in everyone's diet when fewer fresh, British products are available. The important thing is to enjoy and use local produce when it is in season.

## Action points for this month

### Get a seasonal food chart

You can download a food calendar from [www.eatseasonably.co.uk](http://www.eatseasonably.co.uk) in a variety of sizes, or group members may have other versions to share. Make sure that everyone gets a copy for their own home, and you may also wish to display one in the workplace if there is a suitable noticeboard.

### Check your fridge

Using the seasonal chart, check your fridge for seasonal ingredients. If you're already stocked up with seasonal food, then start planning a meal around the things you've already got. If not, start your next shopping list by putting down some seasonal fruit or vegetable that you like. Make sure you don't buy too much – wasting seasonal food is still a waste.

### Make some seasonal meals

This could include a shared meal for the action group members, as well as ordinary family meals at home. If you are making a salad in the summer, or a stew in the winter, you might be able to make all your ingredients seasonal.

But often it's not possible to make every single ingredient match the seasons – so don't get too hung up on this, and instead focus on the main ingredients.

### Reporting back

Is it easy or difficult to identify seasonal ingredients? Do you find thinking about the seasons of food an interesting new angle, or a bit of a chore? Is there anything that you haven't bought because it is right out of season? How might you keep up buying and eating seasonally? What seasonal food do you most look forward to?

## Making wider change

Workplace canteens and other catering services may not use a lot of fresh ingredients, although with the pressure for healthier alternatives, this is changing. If you have a canteen, a realistic goal might be for it to feature one seasonal food each month, perhaps with information for customers about what they are doing and why. The best way to raise this may be informally with canteen staff. However, in environments like schools or hospitals, where more attention is paid to diet, or at very large workplaces, it may be appropriate to raise it through formal union channels, or other consultative structures.

## Seasonal cookbooks

*There are entire cookbooks that are dedicated to seasonal food, such as Hugh Fearnley-Whittingstall's River Cottage Yearbook. A clever alternative is the companion guides produced by Eat the Seasons. These cost just £1.50 each, and act as a seasonal index to well known cookbooks (Delia Smith, Nigel Slater etc) organised by month. They can be downloaded from: <http://tiny.cc/Climate370>*

# Activity:

## Meat-free Mondays

### What you need to know

#### Meat and dairy farming is the biggest food-related cause of climate change

It might seem like the idea of a few cows roaming around a field is as 'natural' as it gets. But most modern farms are highly energy-intensive businesses, and there are now estimated to be around 1.5bn cattle worldwide. Livestock consume more than half of the 20 million tonnes of cereals used in the UK, and around 20% of animal foodstuffs used in this country are imported from outside the EU. Internationally, increasing consumption of meat has increased pressure on land, and contributed to de-forestation. Most significantly, cows and sheep also produce large amounts of methane as they digest, and methane is a powerful greenhouse gas. The chart below shows the climate impact of different food types.

#### You don't need to be a vegetarian

At least 3% of the adult population of the UK is vegetarian - more than 1.5m people. However, most of us like to eat some meat. In terms of climate change, what matters is the amount of meat and dairy that we eat. One of the easiest ways to cut down is to have more meat-free meals, but you can also make a smaller amount of meat go further if you use it with other ingredients. For example, rather than a traditional spaghetti bolognese with mince, why not try a spaghetti milanese which uses onions, mushrooms, tomatoes and just a small amount of ham or bacon?

#### Discussion questions:

How often do you eat meat – more than once a day? Most evenings? Only occasionally?

What are your main reasons for eating meat? (taste, convenience, nutrition, image?)

Do you have any recipes that you enjoy which don't contain meat?

Is anyone in the group vegetarian? What different reasons might there be for being vegetarian?

Why do you think that meat and dairy farming has such a big impact on climate change?

#### What you will do:

Find out why meat and dairy farming has such a big climate change impact.

Try different ways to reduce the amount of meat you buy and eat.

#### What you will gain:

New meal ideas. A healthier, lower-carbon diet.



Photo: Ramsey Beyer

#### Health benefits

Some meat and dairy products (such as pork pies, and hard cheeses) can be very high in saturated fat, and also high in salt. For most people, eating a bit less meat and dairy will fit in well with a healthier diet, including plenty of fresh fruit and vegetables.

#### Cost benefits

Vegetarian meals are usually cheaper than meat of similar quality. This is particularly true in restaurants.

#### What about fish?

The climate impact of fish varies greatly, depending on whether it is wild or farmed, and how it is caught, stored and transported. It's a complicated area. Generally, fresh, wild fish from UK waters will have the lowest climate impact, and generally fish will have a lower climate impact than red meat. However, there are also environmental concerns that many species are being overfished. The Marine Stewardship Council logo identifies fish from sustainable sources.

## Action points for this month

### Gather ideas

As a group, brainstorm ideas for meat-free meals. Include breakfasts, lunches and snacks well as evening meals. You may want to bring in recipe books, or look online for ideas. However, it's not necessary to come up with a long and detailed list (unless you want to); the main thing is to share a few ideas on everyday meat-free meals.

### Choose a meat free day

As a group, decide on a day when you are going to try being meat-free. You might want to try this as a one-off, or better still as a regular day of the week for a month. It doesn't have to be a Monday, despite the name of this activity sheet. It's probably best to choose a work day. Some group members may want to involve their family as well. Any vegetarians in your group could try a dairy-free day (i.e. no milk or cheese).

### Try it

You might want to set up a system to help each other remember - perhaps by sending a text or e-mail round the day before. Try to stay meat-free that day if you are buying a sandwich or a take-away, as well as any food you make at home.

### Reporting back

At the next meeting of the action group, report back on how you found the experience. Was it easy or hard? Did you run into any obstacles? Did it mean eating things you don't usually buy or cook, or just choosing options you might have had anyway? What would help you to maintain a meat-free day?



Cartoon: RGJ in *Private Eye*

## Making wider change

### Work lunches

If your workplace has a canteen, or even a favoured local sandwich shop, does it offer a good choice of options that don't involve meat? If not, try speaking to staff to see whether more vegetarian options can be offered. They are more likely to be interested if they know that the demand will be there.

### Events

On training courses, conferences and other workplace events, people are often given the choice of ticking 'vegetarian' as a 'special diet'. However, another option is to automatically make half or more of the food vegetarian, which will give more choice to most participants, bring down environmental impact, and possibly reduce the catering cost.

### Wider policy

If you really want to promote lower-carbon diets across your workplace, you could take up these ideas formally with the employer, through existing union channels. A meat-free day fits well with healthy eating messages, and with ensuring that employees who do not eat certain meats for religious reasons are catered for, as well of course as your employer's responsibility to cut carbon.



# Activity: Go local

## What you will do:

Explore alternatives to supermarket shopping.

## What you will gain:

Local knowledge about alternatives to supermarkets.  
Options that may be lower carbon, good value, and sometimes more convenient.

## What you need to know

### Where you shop has a big impact on how much energy goes into the food

Although most supermarkets are working to cut their carbon emissions, they are still big consumers of heating, lighting, air-conditioning and packaging. It's interesting to compare your local greengrocer with a supermarket: for example, greengrocers use almost no refrigeration at all, but supermarkets display most fruit and vegetables in cold cabinets. Many supermarkets are also now open 24 hours, running lighting and heating even when very few people are using the store.

Most of us have a strange relationship with supermarkets. On the one hand, being able to buy most of our food in one place is very convenient. They also have facilities that may be useful. But on the other hand, they can be stressful, exhausting experiences. This activity explores some alternatives to supermarkets.

### Discussion questions:

- Do you do one big weekly shop? Or do you just pick up food as and when?
- If you shop in a supermarket, what do you like and dislike about supermarkets?
- Do you buy any of your food from small, local shops? What do you like or dislike about local shops?
- Has anyone in the group used a veg box scheme? If so, what was it like?

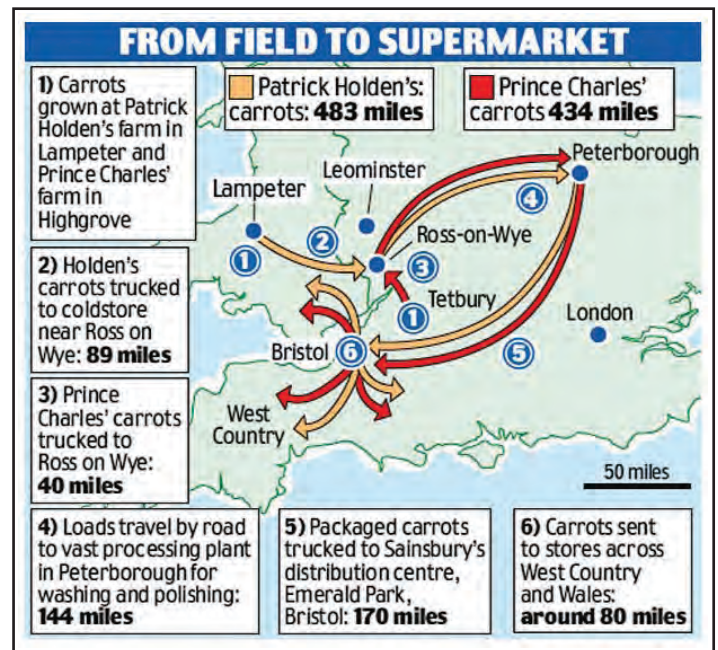


Photo: Nicolas Boulosa

### Local doesn't always mean local

The way that supermarkets are run means that even 'local' food will have been packed off to a central warehouse before returning to the shop near to where it was grown. The map below shows two examples. Local farm shops, butchers, greengrocers, farmers markets and box schemes, are much more likely to sell genuinely local produce.

The staff are also much more likely to be able to answer your questions about where things come from, and to stock more local produce if you request it.



## Alternatives to supermarkets

Just because something is being sold on a market stall, or in a farm shop, doesn't mean that it is environmentally friendly, or good value. The quality of produce is also likely to be more variable than in supermarkets. However, these alternatives do often use less energy, support local farms, help build community links, and can deliver some of the freshest and best value products available.

**Local specialist shops:** Although many local shops have closed, most towns will have an independent greengrocers or butchers. The best ones have friendly and knowledgeable staff, and offer good value. General corner shops tend to be more expensive, but still may offer bargains, and are easy to get to on foot.

**Farm shops and pick your own:** Produce sold direct from the farm supports a local business, and promotes fresh, seasonal produce. Pick your own is the freshest of all.



**Markets:** Markets can give an opportunity for local independent producers, who would otherwise be squeezed by supermarket contracts. Outdoor markets can be fun to explore, and offer some great bargains to the canny shopper.

**Box schemes:** Box schemes source their food from local farms and deliver it to you. Some of the larger firms now do meat, fish and dairy, as well as the usual fruit and veg. Box schemes favour seasonal produce, so they are one of the easiest ways of finding local, seasonable food.

## Action points for this month

### Gather information

The best place to find out about local farm shops, markets and box schemes is word of mouth. As a group, share ideas. You might also want to ask colleagues, family members and friends. The following websites may help, but nothing beats personal recommendation.

[www.country-markets.co.uk](http://www.country-markets.co.uk) [www.farmersmarkets.net](http://www.farmersmarkets.net)  
<http://tiny.cc/climate128>

### Try and compare

Each member of the action group should choose one (or more) alternative(s) that they are going to test out, such as a community market, or a box scheme. You might want to pair up – to visit a market, for example. Try and cover a range of options between you as a group. The idea is not to give up on supermarkets altogether (unless you want to) but to test out different options. If possible, take a note of some of the prices that you pay, and check these against similar items next time you visit the supermarket.

### Reporting back

What alternative did you try, and how was it? How did it compare on price to the supermarket? How easy or difficult was it? Would you be more confident using it in future? Where there any other pros and cons?

## Making wider change

### Food Co-ops

These are mutual structures that pool ordinary people's buying power to get good food at a lower price. You might want to see if there is a food co-op in your area, and advertise it in your workplace, or even consider setting up your own. See [www.foodcoops.org](http://www.foodcoops.org) for more.

### Bulk buying

If you don't have a food co-op near you, buying in bulk is still one of the best ways of reducing the cost of food, the amount of packaging and transport, and therefore its environmental impact. For example, local meat can be bought in bulk and then frozen. You might be surprised at how well bulk-buying from a farm shop compares on price with a supermarket. Your action group could do this together, or involve other colleagues.

### Workplace food fair

Many larger workplaces have regular sales of books, jewelry, cosmetics or other items by outside companies. If your employer allows this kind of activity, why not see if your action group can organise a food fair which showcases local products?

# Healthy and local: Our action

Name of Action Group .....

Contact name .....

Contact e-mail, or mobile phone number .....

As you work through the activity sheets as a group, use this sheet to keep a record of how many action group members try each suggested activity. You'll need to refer to the individual action sheets to see what each of the actions involves. Don't worry if you don't do them all - though of course the more actions you take the bigger impact you will have. You can also keep a record of how many members plan to continue that new activity or behaviour. You might want to display the sheet somewhere that all action group members can see it.

Number of members who were already doing this action

Number who have tried this for the first time

Number of members who intend to continue this action

## Food pyramid

Mark a till receipt with the colours of the food pyramid  
Use the food pyramid idea when shopping



## Eating seasonably

Display a seasonal food chart in your home or workplace  
Make some meals based on seasonal ingredients




## Meat-free Mondays

Have a meat-free day one day each week

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## Go local

Gather information about local food suppliers in your area  
Regularly use a local supplier (farm shop, market, box scheme etc)




When you have completed your work on this theme, please send this sheet (or a copy) to:  
FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, OXFORD, OX4 1JE



**Activity pack:**

# Get more from your car

Did you know that there are ways that you can save petrol, even without changing your car? A bit of basic maintenance, and adjusting your driving style, can reduce fuel consumption significantly. This topic includes a 'low-carbon MOT' and a 'low fuel driving test' that you can try out with your colleagues. This topic is likely to appeal to all drivers, and is relevant to both private cars and company vehicles.

## **Activity sheets:**

**Low fuel MOT**

**Idling and speed**

**Changing how you drive**

**Low fuel driving test**

**Convenor notes**

**Group plan**

**Hotspots**

**Before and After sheet**

**Driving test examiner's sheet**



# Activity:

## Low Fuel MOT

### What you need to know

#### You don't need to be mechanic to make your car more fuel efficient

You can increase your miles-per-gallon by a few simple maintenance tasks. These are all things that you probably do anyway from time to time. You won't need any tools, experience, or specialist knowledge.

#### Tyres

For safety, it is important to keep your tyres at the right pressure. Over or under-inflated tyres will reduce the control you have on the road, as well as increasing braking distances. Under-inflated tyres can also reduce your mpg by 3%. The AA and RAC recommend that you check your tyre pressure at least once a month. The correct pressure will be specified in your car's handbook – but you can also ask in a garage or check online if you don't have the handbook.

#### Oil level

Again for safety reasons, it is very important to check your oil regularly (at least once a month). Running out of motor oil can cause serious engine damage, and could also potentially leave you stranded in a dangerous situation by the side of the road. Keeping your engine oil topped up also makes a difference to your fuel use. If you let your oil get too low, it will reduce your mpg by around 3%. Don't wait until a warning light comes on - that means that you have left it too late.

### What you will do:

Check each other's cars for maximum fuel efficiency  
Undertake simple improvements.

### What you will gain:

Increase in your miles-per-gallon.  
Less wear on your engine and tyres, and a longer life for your car.  
Increased car safety.



Photo: Jake Wolfhead

#### Does the kind of oil I use make any difference?

In an old car, the type of oil you use will not make much difference. But in a new car there are advantages to using better quality lubricants. Some manufacturers now sell engine oil formulations which claim to save up to a tank of fuel per year of normal driving. These are likely to be a bit more expensive, but may be a good investment.

#### Stay aerodynamic

Most modern cars are designed so that every part of them reduces air resistance. Even the door handles are designed to be efficient. Extras like roof racks, roof boxes and bike racks will push up your fuel consumption, particularly at higher speeds, so take them off the car when they are not in use.

*continued overleaf ...*

#### Gadget spot

*Some tyres are designed to improve fuel efficiency. For a list of the current makes, visit: <http://tiny.cc/Climate169>*

#### Discussion questions:

How much do you think you spend on petrol each week / month / year?

When did you last check your tyre pressure and oil level?

What made you do it? Just remembering; a warning light; the car felt strange?

What's in your boot?

## Which is better: opening the window or turning on the air-con?

If you do have air conditioning and use it all summer long, or leave it on automatically, it can add 10% or more to your fuel bills. At low speeds (under 50mph) opening the window is always the better option. But at high speeds air resistance is the most important factor, and air conditioning with closed windows is a better way to cool the car. So if you have air conditioning, save it for hot days on the motorway.

## Lighten up

It's good to have a car full of passengers; this is much more efficient than taking two or three vehicles. However, it's worth having a clear out of your boot. Any unnecessary items you carry around all the time will nudge up your fuel consumption.

## Air and oil filters

Clogged air and oil filters also reduce your engine's efficiency. If you are confident doing work on your own car, you can change these yourself. Consult your car manual or a reputable online site. However, most people will prefer to have these professionally changed as part of a regular service, or when the car is at the garage for other work. Check that this work is done.

## Making wider change

If your fuel saving MOT goes well, think about involving more people from your workplace. Talk to your union reps about whether this is something that could be offered to all employees, perhaps by agreement with your employer. You might even be able to partner with a local garage.

If your workplace has its own fleet of vehicles, investment in good maintenance is important for health and safety purposes and productivity, as well as fuel efficiency. Talk to your union to see what arrangements and standards currently apply and whether higher maintenance standards can be negotiated to deliver benefits in all these areas.

For workplace fleets, really substantial environmental improvements can be made by purchasing less polluting vehicles, and by making adjustments to the systems and policies for their use. The Energy Saving Trust provides free advice to employers interested in improving the efficiency of their fleet. Their helpline number is 0845 602 1425 or visit: <http://tiny.cc/Climate492>

## Action points for this month

**Do this activity as a joint session at work, perhaps in a lunchtime. Anyone who does not bring their car to work can make the same test themselves at home.**

### Before the session:

Ask everyone to find out the correct tyre pressures for their car. You can easily check this online (just put 'tyre pressures' into a search engine) or in the car manual. Some cars have the pressures printed on the inside of the glove compartment or passenger door.

### Equipment you will need:

A tyre pump

A tyre pressure gauge

Some rags (not toilet paper) for wiping the dip stick and any spills

Stickers and pen

You may also want to have a whip around to buy a large bottle of good quality engine oil and funnel, if people want to fill up there and then.

In the unlikely event that no-one in your group is confident with tyre pressures and oil levels, co-opt someone else from your work place to help you.

**Go to the car park and do each of your cars in turn. If any car has just been used, leave it till last or miss it out.**

Check the tyres. Pump up if needed. If the pressures aren't already printed on the car, write the correct pressures on a sticker and put it in the glove compartment.

Check the oil level. Top up if required.

Check the car for any unnecessary extra weight or air resistance, such as stuff in the boot, or a roof rack.

Make sure that anyone in the group who is not confident in making a tyre or oil check learns how to do this for themselves.

### Future habits

You will need to keep making these checks regularly to maximise fuel efficiency. Good times to remember are when stopping for petrol, when you wash the car, or before any long journey. Most cars suggest slightly higher tyre pressures of the car is going to be heavily laden.



# Activity:

# Idling and Speed

## What you need to know

### Idling

If you have your engine idling (running when the car is stationary) it will typically use nearly a third of the fuel of driving at typical revs. A recent study found that the average driver commuting in a British city was spending 20 to 30 minutes standing still. If they turned off their engines when they were stopped they would save enough fuel every day to drive up to ten miles. Also, because idling engines burn fuel badly, idling cars are twice as bad for air quality as moving cars. Idling engines produce much of the air pollution in towns, which scientists believe is a leading cause of childhood asthma.

### How long do I need to be standing still before is it worth turning off the engine?

It takes very little fuel to start an engine, so in theory it is worth turning off an engine for any wait of over 10 seconds. But this is not very practical, so we suggest you turn off your engine whenever you anticipate that you will be waiting for half a minute or more. This might include slow queues at junctions, railway crossings, temporary traffic lights at roadworks and traffic jams.

### Discussion questions:

What is your preferred speed on winding A roads, on dual carriageways, and on motorways?

Do you ever break the speed limit?

Do you keep your engine running while you are stopped by the side of the road – for example when waiting for people? Why?

How long do you have to be standing in a queue or traffic jam before you turn your engine off? When was the last time you did this?

### What you will do:

Practice two easy low fuel actions.

### What you will gain:

Increase your mpg.

Reduce your emissions.

Reduce air pollution in towns.

Achieve a smoother and safer ride.



Photo: Timo Newton-Syms

### Safety tips

If you are at the very front of the queue, it may be better to leave your engine running, unless you are sure there will be a long wait. If you are further back in the queue, you will have plenty of time to restart the engine when you see the cars in front moving or the light change. When you turn the engine off, turn the ignition on one notch, so that your lights (and radio) stay on.

### Cold mornings

You do not need to 'warm up' your car's engine before driving off. It will save fuel, and wear and tear on the engine, if you start up and drive off immediately. Clearing your windows from ice using the car heater is especially inefficient.

### Why is speed important to mpg?

On a motorway or other straight and open road, the most efficient speed for a typical car is between 55 and 60mph in top gear. Above this speed the air resistance (also called the drag) increases and your mpg falls sharply. Once you break the 70mph speed limit you are not just breaking the law. Every minute you save by driving at 75mph is wasting enough fuel to drive your car an extra mile at 60mph. Or to put it another way: if you reduce from 75 to 60, every four minutes you get an extra mile for free. Over 75mph it becomes even more wasteful.

*continued overleaf...*

## Is speed also important for fuel consumption off motorways?

When not on motorways or dual carriageways, driving style is as important as the actual speed that you are doing. If you are constantly accelerating and braking hard, for example to overtake other vehicles, or to hurry along short stretches of road between bends, you will burn a lot more fuel than if you maintain a steady speed. Aggressive driving also increases the risk of accidents. There is a lot more about driving style in the next activity.



Photo: SLR Jester

## Action points for this month

### Time your journey to work, or another regular journey

You probably know roughly how long it takes you to drive to work, or other regular journeys. Time your actual journey for a few days to make sure.

### Try these low fuel driving habits for one week

- Only overtake very slow moving vehicles, otherwise travel at the speed of the traffic.
- Never travel faster than 60mph, even if allowed to, unless you need to overtake a vehicle moving much slower than the rest of the traffic.
- Turn off the engine (and then turn it back one click to keep the lights on) whenever you are likely to wait for more than half a minute and it is safe to do so. Find all the places on your daily drive where this is likely to happen and, unless you are the first or second in line, always turn off your engine.

### When you are trying this, time your journey to work again

Does it take longer and if so, how much longer?

### Then, for the rest of the month try following the same rules on all driving journeys.

## Making wider change

Studies of 'eco-driving' in large fleets show that huge amounts of fuel is wasted by lorries, vans and delivery vehicles idling unnecessarily. In well-maintained vehicles, there should be no need to keep engines running whilst deliveries are made, or passengers collected.

If your workplace has a large vehicle fleet with a culture of leaving engines running, you might wish to start a discussion within the union as to whether this practice can be changed, then engaging the employer as appropriate. Talk to a rep to identify the best way to start this conversation.

Your workplace could also discourage idling by vehicles visiting the workplace – for example in schools this could include both school buses, and parents who collect their children by car. Switching engines off will reduce pollution and noise levels around the workplace, as well as saving fuel.

Many commercial vehicles are fitted with speed limiters, which can be helpful for reducing fuel consumption, as well as keeping within the law. However, these technical fixes are no substitute for a culture of good, safe, efficient driving. Employees should also not be under pressure to drive fast or aggressively to meet unrealistic targets. Your union can play an important role in encouraging the right driving culture, and in ensuring that targets and systems support that culture.

# Activity: Changing how you drive

## What you need to know

### Driving style makes a big difference

In a recent test, the Energy Savings Trust found that drivers were able to increase their mpg by an average of 33% after just half an hour of tuition in low fuel driving skills. Apart from swapping a large car for a small one, or driving less, changing your driving style is the most significant action you can take to save fuel and cut your emissions from driving.

### The five rules of low fuel driving:

#### 1. Anticipate

Look ahead up the road to anticipate what is coming. Take your foot off the accelerator as soon as you know there will be slower traffic, a red light or a junction ahead. A fuel efficient driver slows first then brakes gently. Braking is important for safety, but if you find yourself braking constantly you are probably not fully anticipating the road ahead.

#### 2. Be gentle with your accelerator

Jabbing at your accelerator will gulp fuel. Imagine that you have an egg between the sole of your shoe and the accelerator peddle. Build up speed smoothly.

### Discussion questions:

What kind of driver are you? Do you drive smoothly?

What do you think makes a good driver?

How close do you drive to the vehicle in front of you?

Are you always braking and accelerating?

### What you will do:

Learn and apply the rules of low fuel driving.

### What you will gain:

Enhanced driving skills which will save you fuel and will be safer for you and your family.



Photo: Nikki Aminor

#### 3. Keep well back

The main reason why people brake needlessly is because they are too close to the vehicle in front. For safe and smooth driving, you should keep at least two seconds stopping distance from the vehicle in front. At 30 mph that is 6 car lengths. At 60 mph you need 18 car lengths. In wet and icy weather you should allow two or three times as much. If you have any doubt about the need for distance try the simulator at [www.stoppingdistances.org.uk](http://www.stoppingdistances.org.uk)

*continued overleaf ...*

#### 4. Keep it rolling

It takes a lot of fuel to start a car from a standstill. In traffic congestion, at roundabouts or give way signs, aim to take your foot off the accelerator early, brake gently as required, and keep rolling at a low speed so that if the traffic allows you can smoothly move off. This requires a combination of anticipation, control and a good distance from the car in front. You should of course still stop fully at pedestrian crossings and stop signs.

#### 5. Change up as soon and smoothly as possible

Change to a higher gear as soon as possible without laboring the engine. If you have a rev counter, try to keep the revs fairly low at all speeds. As a rule of thumb you should be changing up a gear at around 2000 rpm in a diesel car or around 2500 rpm in a petrol car.

### Coasting

Coasting - rolling downhill or approaching a junction with your foot down on the clutch - is sometimes seen as a way to save fuel. In fact, in modern cars the engine management system will shut off the fuel when you take your foot off the accelerator, so throwing out the clutch does not save fuel. Even in older cars, the saving would be small at best. Coasting also reduces driver control, so is not recommended.

## Action points for this month

**This action takes the same format as 'idling and speed'. You can do them in either order, or both together.**

### Time your journey to work, or another regular journey.

You probably know roughly how long it takes you to drive to work, or other regular journeys. Time your actual journey for a few days to make sure.

### Try these low fuel driving habits for one week

- a) Always shift up to a higher gear as soon as possible.
- b) Identify the places where you regularly have to slow down; practice taking your foot off the accelerator early, so that you only need to brake gently, if at all.
- c) Keep a good distance from the car in front; this will give you more time to react
- d) Imagine an egg between your shoe and the accelerator peddle; don't break the imaginary egg - always build up speed gradually.

### When you are trying this, time your journey to work again

Does it take longer and if so, how much longer?

**Then, for the rest of the month try following these rules on all driving journeys.** If your car shows mph, you should be able to see the difference right away. Alternatively, keep a record of your fuel consumption over a week, and see if you can notice the difference.

## Making wider change

Work-related road accidents are by far the largest cause of work-related death – resulting in between 800 and 1000 deaths per year, against 250 for all other reportable causes. On average, people driving as part of their job also have higher accident rates than private drivers. Many workers (for example postal staff) are also exposed to traffic risks as pedestrians. For more information on these issues and the union response see <http://tiny.cc/Climate580>

Low fuel driving is safer driving. There are many factors in encouraging safer driving at work, ranging from skills training to shift patterns. Your union may already have raised safer driving as a health and safety issue. Recognising the environmental benefits of good driving practices gives the union another factor to bring into negotiations.

# GET MORE FROM YOUR CAR

## NOTES FOR ACTION GROUP CONVENOR

### General comments

This topic is intended for people with regular or heavy car use. It has a broad-based appeal and could be an entry point for people who are not ready for more radical change. This is not to say that it is less important than other topics for reducing emissions: people can achieve a 10% increase in mpg by tuning their car to be more efficient, and a whopping 25% increase in mpg if they make some changes to the way that they drive.

This topic also fits well with 'smarter commuting' which looks at ways to reduce total mileage. If the group has time you might like to try one activity from smarter commuting.

The topic includes two practical activities - the low fuel MOT and driving test – which take place during the meeting time. You will need easy access to people's cars. This might mean agreeing in advance to park in a particular area of the workplace car park for example.

It is important to emphasise throughout that you don't need to be a mechanic or 'good with cars' to take part in this topic. The only 'maintenance' involved is very simple stuff like checking tyre pressures. Most people in the group will probably know how to do these things - its more getting into the habit of doing them regularly - though also make sure that anyone who doesn't know how to check tyres or oil gets a chance to learn.

This theme lends itself to a bit of friendly competition. As well as the low-fuel MOT and the driving test, the Before and After sheet allows people to see how they are doing in cutting fuel use, and also how they are doing against others in the group.

A note on safety: Many of the changes we encourage are linked to increased safety. People must be aware that their first concern on the road is safety (themselves and others), and keep this in mind when trying out new techniques.

One of the recommendations for action in the workplace is to persuade your employer to sign up for the Energy Savings Trust Smarter Driving programme, which will provide one-on-one tuition from qualified driving instructors and special cars. If you think your employer might agree, why not approach them at the very beginning, through your union rep, so that you could replace the 'driving test' activities with Smarter Driving training.

### MEETING ONE: 'HOT SPOTS' AND 'BEFORE AND AFTER' SHEET

The **Hot Spots** sheet is simple and can be done at one sitting. You don't need access to your cars for this. The point of the hot spots sheet is for everyone to find out where is the area they personally can cut waste most.

The **Before and After** sheet is relatively easy. Its simplest if people start with a full tank, and use a tripometer to keep a note of mileage. It is important to measure mpg over at least a week, and probably best to do it for the whole period between the first and second meetings. The sheet will only work if members note all the times which they buy petrol.

**Checklist for the next meeting:** bring a pocket calculator for working out the figures, and everything (pump, oil, funnel etc) that you need for the low fuel MOT. Remind everyone to bring their car manuals (or at least their tyre pressure figures)

## MEETING TWO: WORK OUT THE MPG AND LOW FUEL MOT

Start by working together to work out the figures for mpg on the **Before and After** sheet. Its probably best if one person then collects all the sheets and looks after them until session five. Then go into the car park and to do a low fuel MOT. Remember to get the group to bring everything that you will need (car manuals or note of pressures, a tyre pump, a tyre pressure gauge, a funnel, some rags). If you have a small group you can all go from car to car. If tight on time you might want to split into pairs or threes. Make sure that anyone who is not confident about doing the checks actually gets to do them hands on - that is how they will learn and get confidence.

## MEETING THREE: IDLING AND SPEED

At the meeting discuss attitudes to idling and speed. Work through and discuss the sheet. Everyone agrees to work on it during the next month.

People may be resistant to driving at lower speeds, but emphasise that it is a major use of fuel. One way of doing this might be to talk about fuel cost. If you increase from 60 to 75 the car needs a quarter more fuel per mile, so each litre of fuel is now costing you £1.32 (25% more than the current price of £1.06).

Running the engine continuously can also be a deeply ingrained habit. Emphasise that modern vehicles do not need to 'warm up' or be kept 'ticking over'. Concentrate on the easy stuff - not running the engine before setting off, or when waiting at the side of the road. Check that everyone knows how to switch off the engine but keep lights etc on, so that they can safely stop idling when in stationary traffic queues. Try *if...then* sentences to change habits on idling, and speed.

## MEETING FOUR: CHANGING HOW YOU DRIVE

Feedback and report on the idling and speed activities. Work through and discuss the *Changing how you drive* activity sheet. Everyone agrees to work on it during the next month.

Driving patterns are deeply embedded habits, so people need lots of time to talk about their habits and develop *if...then* sentences.

Decide at this meeting who will be drivers and who will be examiners in the test next meeting so that people can prepare. Either put people into pairs and they take it in turns, or split the group down the middle and decide who goes with who at the next meeting.

**Checklist for the next meeting:**

Copies of the test sheet for the examiners

Examiners can bring a high viz jacket and clip board if they want to get into their part.

The Before and After sheets

## MEETING FIVE: DRIVING TEST

If there is enough time you could do two tests in one meeting, though it is likely that will need to do the second test at your final meeting. The meeting as a whole can decide on a route that combines several different styles, and whether to follow a set route, or whether to leave it to the drivers to find their own ways. Then split into driver and examiner groups. Each group discusses what they will find challenging and gets ideas from the others about how to do it. Then go out into the car park and start. If you are all heading for the same route you should leave a minute between cars.

Make sure that you have a bit of time, either before or after the tests, to give everyone back their Before and After sheets, so that they can measure their mpg again before the final meeting.

## FINAL MEETING

The group may need to do the second set of low-fuel driving tests.

If people haven't already done so, help each other to complete the second section of the **Before and After** sheet, and compare the new mpg figures. Hopefully everyone will have managed to cut their mpg, although of course the figures can get skewed by unusual journeys. See who has the lowest mpg in the group. Collate all the sheets and return them to FREEPOST RSEY-UCEL-SZLL Climate Solidarity (COIN), 106-108 Cowley Road, Oxford OX4 1JE. This will help up to learn from your experience, and to evaluate the impact of the whole campaign.

## NEXT STEPS

If the group has gone well, then tell other people about what you have learnt. Members of the group could write articles for your local union or workplace newsletter, or send them to Climate Solidarity for us to publish. There may be opportunities to make a presentation to colleagues, either in a union setting, or in meetings organised by your employer. Climate Solidarity offers training for action group members interested in presenting about the campaign.

If the group is keen to keep on meeting, why not go back to the Climate Solidarity menu and pick another topic. If you want to keep focusing on travel, then the Smarter Commuting theme looks at reducing car use. However, you may want to do something completely different, and choose one of the topics on energy or food.

Alternatively, there are suggestions on each of the activity sheets for promoting low-fuel driving across the workplace. Your group could champion these initiatives to make a much bigger difference. Make sure that you work closely with your union reps, and let Climate Solidarity know how you get on.

# Get more from your car: Our action

Name of Action Group .....

Contact name .....

Contact e-mail, or mobile phone number .....

As you work through the activity sheets as a group, use this sheet to keep a record of how many action group members try each suggested activity. You'll need to refer to the individual action sheets to see what each of the actions involves. Don't worry if you don't do them all - though of course the more actions you take the bigger impact you will have. You can also keep a record of how many members plan to continue that new activity or behaviour. You might want to display the sheet somewhere that all action group members can see it.

Number of members who were already doing this action

Number who have tried this for the first time

Number of members who intend to continue this action

## Low Fuel MOT

Checking tyre pressures and pumping up tyres if needed

Checking oil levels, and topping up if needed

Removing any racks or extra weight when not required


## Idling and speed / changing how you drive

Turn off engine when stopped or queuing for more than half a minute

Move up into higher gears as soon as possible

Drive at or below the speed limit on motorways and dual carriageways

Time your journey to work, and again when using low-fuel driving tips


## Low-fuel driving test

Take the test

--

When you have completed your work on this theme, please send this sheet (or a copy) to:  
 FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, OXFORD, OX4 1JE



# Hot-spots: More from your car

This form helps you to find the 'Hotspots'- the places where you are wasting the most fuel- so you can make the changes that have the biggest effect. This is only looking at the waste you can avoid, not your total fuel use. There will be other ways that you can reduce your fuel use (for example buying a more efficient car), but these are the simple and free measures that will get you started.

## How to use this hot-spots form

Print out this page. Then fill in the number of squares in the answer to make a solid block for each question.

## For example:

You look in your car manual and measure your type pressures. For each 10psi that they under-inflated fill in 3 boxes. Your tyres are 30 psi below the recommended pressure, so you fill in 9 boxes:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

When you have finished the form you will soon see the areas where you can make the biggest changes. You can add up the boxes to estimate your possible £ or CO<sub>2</sub> saving. Then go to the Activity sheet for that Topic - for example *Idling and Speed*- to find the actions you can take.

**Each square represents a wastage of around £8 in fuel bills, or around 20kg of CO<sub>2</sub>/yr.**

### Action Topic: Low fuel MOT

Do you always have a roof box or bike rack on your car? (20 boxes).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Is the boot of your car usually full with heavy items? (7 boxes).

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

If you have air conditioning, how often do you use it?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Sometimes during the summer (5 boxes). Most of the time during the summer (10 boxes). Whenever it is warm (fill in 20 boxes).

When you buy fuel, how much do you fill up the tank?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

If you regularly keep your tank more than half full, then fill in 1 box.

In winter do you run your engine to warm it up / defrost windows?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

For every minute that you do this per day in winter, fill in one box.

Are your tyres underinflated? You have no idea (3 boxes)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

OR for each 10psi under-inflated fill in 3 boxes.

Engine Oil - If you use the cheapest oil you can find, fill in 2 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

If you don't change your oil between services fill in 2 boxes.

### Action Topic: Idling and speed

How long would you sit in your car without moving before you turned off your engine? 1-2 minutes (1 box) 3-4 minutes (2 boxes)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

I never turn it off (fill in 5 boxes petrol, or 3 boxes for diesel cars)

OR Count how many minutes in your daily commute are spent standing still and fill in one box per minute.

How fast do you try to drive on motorways?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

70mph or less (fill in nothing). Often 70-80 mph (fill in 13 boxes).

Often over 80 mph (fill in 25 boxes).

### Action Topic: Driving style

When do you usually change gear when driving on slow roads

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

(in a town or city)? At 2000-2500 revs add nothing.

Between 2500-3500 revs (fill in 11 boxes for petrol, or 6 boxes for diesel cars)

When travelling around town or on slower country roads, which of the following best describes your driving style?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

A - I overtake anyone going slower than me, even if they are driving at the speed limit. I accelerate and brake a lot. I drive quite close to the person in front if they are going slowly (fill in 20 boxes).

B - I stick to the speed limit as closely as possible. I tend to drive quite close behind cars and trucks that are going slowly and overtake them when I can. (fill in 10 boxes).

C - I usually drive slower than the speed limit and rarely overtake anyone else. I don't accelerate very quickly, so I don't brake much round corners (fill in no boxes).

## How did you do?

I filled in a total of \_\_\_\_\_ boxes

This represented a wastage of around £ \_\_\_\_\_ (at £8 a box) producing \_\_\_\_\_ kg of carbon dioxide (at 20kg a box)

My biggest hotspot was \_\_\_\_\_

My next biggest hotspot was \_\_\_\_\_

## How do you want to save money and CO<sub>2</sub>?

My target in the next 6 months is to drop \_\_\_\_\_ boxes, saving me £ \_\_\_\_\_ (at £8 a box) and reducing my contribution to climate change by \_\_\_\_\_ kg of CO<sub>2</sub>.

To measure your progress in cutting your mpg, use the **Before and After** sheet for this topic. You can also use the **Group Plan** to keep track of the actions that you take.

# Before & after: Get more from your car

This sheet helps you to work out your average miles per gallon (mpg), and whether your new low carbon driving makes a difference. Fill this in at the beginning and end of the Action Group.

Name: .....

Name of action group: .....

## Before

Fill up your car with fuel. (If you don't want to fill it to the top, fill it to a clear mark, like ½ or ¾ full)

Note the date and mileage

Date .....

Start mileage

--	--	--	--	--	--	--

Note: if you have a 'trip' function on your milometer, just zero this to record your miles driven.

From now on, record fuel bought	How much
Date where	fuel (litres)
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Total litres: .....

Keep a record for at least a week. On your last fill up, fill it to the top (or to the mark you used before). Include this fill up in the above table.

Note the new date and mileage

Date .....

End mileage

--	--	--	--	--	--	--

Work out how many miles you have driven (take 'start mileage' away from 'end mileage').

Miles driven:

--	--	--	--	--	--	--

Divide your miles driven by total litres of fuel bought.

Write the answer here:

miles / litre

Finally, multiply that figure by 3.8 to get your mpg (if your clock is in km, multiply by 2.3 instead)

My mpg is:

miles/gallon

## After

Fill up your car with fuel. (If you don't want to fill it to the top, fill it to a clear mark, like ½ or ¾ full)

Note the date and mileage

Date .....

Start mileage

--	--	--	--	--	--	--

Note: if you have a 'trip' function on your milometer, just zero this to record your miles driven.

From now on, record fuel bought	How much
Date where	fuel (litres)
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Total litres: .....

Keep a record for at least a week. On your last fill up, fill it to the top (or to the mark you used before). Include this fill up in the above table.

Note the new date and mileage

Date .....

End mileage

--	--	--	--	--	--	--

Work out how many miles you have driven (take 'start mileage' away from 'end mileage').

Miles driven:

--	--	--	--	--	--	--

Divide your miles driven by total litres of fuel bought.

Write the answer here:

miles / litre

Finally, multiply that figure by 3.8 to get your mpg (if your clock is in km, multiply by 2.3 instead)

My new mpg is:

miles/gallon

Copy this sheet as many times as you need. Compare your results with others in your action group. At the end of the group, please gather everyone's sheet together, and send them back to Climate Solidarity at:

FREEPOST RSEY-UCEL-SZLL  
Climate Solidarity (COIN)  
106-108 Cowley Road, Oxford OX4 1JE

# 'Better Driving' Test Score Sheet for examiners

For more information see:  
[www.climatesolidarity.org](http://www.climatesolidarity.org)

Driver's name:

Examiner's name:

Date of test:

**Climate  
Solidarity**  
for a just future

## Condition of the car

**Fault** **Fail**

Oil level close to minimum

Oil level below minimum

Driver does not know tyre pressures  
or have information in car

Tyres up to 5dpi below  
recommended pressure

Tyres more than 5dpi below the  
recommended pressure

Notes:

## Anticipating the road ahead

**Fault** **Fail**

Continuing to accelerate when there  
is a need ahead to slow

Braking suddenly (unless forced  
by another driver)

Driving closer than the safe  
stopping distance

20mph 40ft 12 metres 3 car lengths

30mph 75 ft 23 metres 6 car lengths

40mph 120ft 36 metres 9 car lengths

60mph 240ft 73 metres 18 car lengths

Driving closer than half the safe  
stopping distance

20mph 20ft 6 metres 1.5 car lengths

30mph 35 ft 12 metres 3 car lengths

40mph 60 ft 18 metres 5 car lengths

60mph 120 ft 36 metres 9 car lengths

**Good driving:** Keeping  
a safe distance from the  
vehicle in front. Slowly  
decelerating as soon as  
you can see slower or  
stopped traffic or a red  
traffic light ahead.

Notes:

## Right speed for traffic

**Fault** **Fail**

Unnecessary overtaking

Accelerating and then braking

Going over the speed limit

**Good driving:** Keeping  
to a steady speed with  
other vehicles that is  
appropriate for the road.

Notes:

## Not idling

**Fault** **Fail**

Keeping the engine running for  
over 30 seconds when stopped

Keeping the engine running for  
over one minute when stopped

**Good driving:** Switching off  
the engine when you are  
stopped by the road or in a  
queue (especially when you  
will have plenty of notice to  
turn the engine back on).

Notes:

## Changing gears

**Fault** **Fail**

Changing gears up at over  
2,500 revolutions

Changing gears up at over  
3,000 revolutions

**Good driving:** Changing gears  
up smoothly at  
2,000-2,500 revs.

Notes:

**Total  
Faults:**

**Total  
Fails:**

## Pass or fail?

Make a mark in the relevant  
column for each time the driver  
does something that is a 'fault'  
or a 'fail'.

A driver passes the test  
if they have 10 or fewer faults  
and no fails.

A driver fails the test  
if they have 11 or more faults,  
and / or 1 or more fails.



## **Activity pack:**

# **Smarter commuting**

Wouldn't it be nice to spend less time, energy and money getting to work? This topic helps you to take a fresh look at all the options, including public transport, cycling, and car sharing with colleagues. You may be surprised to find you have alternatives to the same old grind. Employer involvement can really help with this topic, and it can work well across a whole workforce, as well as in a small group.

## **Activity sheets:**

**Map your options**  
**Personal Travel Plan**  
**Car Sharing**  
**Cycle Benefits**

**Convenor notes**  
**Group plan**  
**Before and After sheet**



# Activity 1:

## Map your options

### What you need to know

#### Traffic jams are bad for you

Recently consumer watchdog Which? reported that 60% of drivers feel 'angry' on their way to work – and that traffic jams are the main cause. Getting on public transport means that you can be more relaxed on the journey and have your time back to read, plan your day or listen to music. Trains and buses on bus lanes will be faster too. In cities, cycling is often faster than driving during rush hour.

#### And exercise is good for you

The government recommends a minimum of half an hour of light exercise (such as walking) per day for health. So a 15 minutes walk to a bus stop or railway station is not an obstacle - it may be your chance to get this half hour or exercise in your day. And cycling or walking to work is even better. There are many motivating reasons for getting on your bike – cyclists are happier and healthier.

<http://tiny.cc/Climate862>

#### Are cars the cheapest way to travel?

Cycling is relatively cheap (the average annual cost of maintaining a bike is £75) and walking is free. The comparison between car and public transport costs is different in every situation - but research shows that public transport is usually cheaper if you have a season ticket. As well as petrol or diesel costs, driving to work increasingly means paying for parking, and perhaps a congestion charge. The biggest cost of owning a car is keeping it on the road (an average of £5,500 per year in the UK) so there are very large savings if you have a car free life, or go from two cars to one.

### What you will do:

Find all the cycle, bus, and train routes near your workplace.

### What you will gain:

A detailed understanding of your local bus, train and cycle networks.

A good basis from which to plan low carbon commuting.



Photo: Adrian Short

### Planning helps

When it comes to changing your travel patterns, you need to know all your options. Where are the nearest bus stops and when do they run? How long does it take to walk from your house to the station, and is there a safe route that you can cycle to work? Most of us can't answer those questions – but arming yourself with a few basic bits of information is the first step to leaving the car at home.

### Discussion questions:

Do you know your local bus and train routes?

Do you know where all the stops are within ten minutes of your home and work?

Do you know how much a season ticket costs?

## Action points for this month

This is an activity to work on together as a whole group. You may be able to do it in a special activity session, or alternatively you can build it up over the course of the month.

Buy a large scale flat map with your workplace somewhere near the centre. Draw a circle 1 km away from work - this is a 10-15 minutes walk. Draw another circle 2km away - this is a 20-30 minutes walk. Now draw another circle at 5km away. This is roughly a 20 min cycle. Label the circles (e.g. "10-15 mins walking" etc). If you think these times are too short (perhaps because your area is very hilly) or too long (your work force is all very fit), then adjust them accordingly.

Using different coloured marker pens, mark all bus, train and cycle routes that pass through the 1km or 2 km circle around work. Mark on the bus stops and stations that fall within the circle.

**You can find out this information about bus, train and cycle routes from various places:**

- enter your workplace postcode into the mapping search on: [www.sustrans.org.uk](http://www.sustrans.org.uk)
- use the local knowledge in your group
- search train or bus company website, or printed information
- ask your local council if they have a free cycle route map (check: <http://tiny.cc/Climate745>)

At this stage you are not trying to change anything, just finding out all the information that you need.

### Reporting back

Were there any surprises for you on the map? Who in the group knows the most about local transport? Which information was easy to find, which more difficult?



Photo: Marco Molinari

## Making wider change

The transport routes map is a valuable resource for everyone in your workplace. Studies find this information is a huge step to helping people change their travel patterns. **Your union rep could get permission to put this map up on a wall somewhere visible like a staff room. There is usually a union notice board that can be used if there is space.**

Many employers want to encourage people to leave their cars at home, not least because it saves expensive parking spaces; however, taking away benefits such as parking spaces is obviously contentious. One approach is to negotiate for alternative benefits, such as subsidised public transport. Raise this issue with your union, so that they can consult with members as to their real preferences, and negotiate to the benefit of members and the environment.

Share your tips, successes and learning through the Climate Solidarity website.  
[www.climatesolidarity.org.uk](http://www.climatesolidarity.org.uk)



# Activity 2: Your personal travel plan

## What you need to know

### Personal travel plans work

A few years ago in Australia, the government developed a programme called 'Travelsmart'. Thousands of people took part in the Travelsmart programme, and cut their carbon emissions by nearly 15%. The programme worked so well because everyone who took part designed their own individualized travel plan.

### What sort of impact will my travel plan have?

About 2kg of carbon are saved for every short journey that is made using a bike or on foot instead of a car. Switching to an energy efficient light bulb only saves 10kg over a whole year – so getting to grips with your commuting can have a significant impact.

### Won't my commuting time be longer?

Not necessarily. There has been a lot of investment in public transport in the past ten years, particularly to improve bus services. In cities, cycling is often quicker than driving, and buses get dedicated lanes to cut through the traffic jams. In London, for example, the average driving speed for car commuters is only 9mph (Transport for London). Plus, you can read the paper or a book on the bus, rather than just staring at the number plate in front.

## What you will do:

Draw up a personal travel plan.  
Put your plan into practice.

## What you will gain:

A personal low-carbon travel plan.  
A range of options for personal travel.  
Exercise and other health benefits.  
Potential time savings.



Photo: Nomad Tales

## Burning less petrol means burning more calories

You probably won't be able to get door-to-door on public transport. But this is a hidden advantage of leaving the car at home – walking or cycling to the train station or bus stop is a great way of getting the weekly exercise that doctors recommend.

## Discussion questions:

- How much time do you spend each day commuting (and how much in a traffic jam?)
- How do you feel about that?
- Have you always driven to work, or do you sometimes use the bus, the train or other local transport? What are the good and bad things about public transport?
- What are your reasons for not using it more?
- Would you like to get more exercise and get healthier? How much exercise (and what kind) do you need or would you like to get?

## Action points for this month

### Find your house on the map

Using the map from Activity One (or a copy of it) mark the house of each person in the group. Draw a circle around each house for a 10-15minute walk (1km), a 20-30 minute walk (2 km) or a 20 minute cycle ride (5km). Then mark the bus stops, and trains stations (if any), near each house, using the same sources of information recommended in Activity One. If you are fortunate, you might live within walking or cycling distance of your workplace. If you are further away, you will need to use a combination of walking and public transport.

### Find out bus and train times

To find out how to get between any two points by public transport, just enter the relevant postcodes into [www.traveline.org.uk](http://www.traveline.org.uk), or ring the traveline number 0871 200 22 33. You can also use [www.transportdirect.info](http://www.transportdirect.info), which suggests cycle routes as well as public transport. No travel website is perfect, so use these resources together with your local map, and knowledge in the group. One of your group could go to the local bus or rail station or tourist information and pick up a set of printed local timetables. See if you can identify two or three travel options for everyone in the group, even if some of them seem a bit impractical.

### Draw up your personal travel plan

You should now have all the information you need to plan your low-carbon commute. Don't be afraid of planning every little detail – how long it takes you from your house to the bus stop, what sort of discount tickets are available, that sort of thing. Pay attention to the small details, and the rest will fall into place. Work together as a group, and share the information you've found. We have provided a personal travel plan form to help you.

### Set yourself some simple reminders

Changing routines can be hard – the whole point about habits is that we don't think much before we do them. But one great way of getting to grips with a new routine is breaking it down into simple rules. Say to yourself: 'IF I want to cycle to work on Thursday, THEN I need to check my bike is ready the evening before', or "IF I want to get the bus to work, THEN I need to set my alarm ten minutes earlier".

Breaking a big change down into a series of smaller steps makes breaking old habits easier.

### Make it fun

Think of something that will make it feel different from the normal commuting. For example, if you are going by bus or train take a magazine to read (something you could never do in a car), or choose some favourite music to listen to.

### Set a date to start

Agree on a day when everyone in the group will try your new personal routes. If you can, let each other know how it goes before the following meeting. Some people's plans might have been more successful than others – it's not too late to change yours.

### Decide how long to try it

The first time you try something different it always going to be challenging and stressful. We suggest that you either try it for a week, or try it on the same day for a few weeks so that you can get into the rhythm of it.

## Making wider change

Many employers want to promote greener transport but some need more persuasion than others. Your Action Group might want to raise these issues with your union branch or environmental rep. Unions are well placed to facilitate employers and employees working together to promote lower carbon travel, for example by making this kind of travel information more widely available. This is useful for good relations with employers and helps employers to think about how they can cut carbon emissions on a wider scale. It could even spill over into transport policies at work.

# Activity 3:

## Car sharing

### What you need to know

#### Who lives near you?

The mapping that you did for Activity Two should come in handy here – you might be surprised by who lives in your area:

*'I actually found someone living seven minutes drive from my house, working in the same building, on the same floor – in another department and doing the same hours'.*

- Halifax Bank of Scotland employee,  
Transport for London Car-share Guide

#### Who's got space in their car?

Some people will already have a full load, perhaps because they drop off the kids on the way. However, a significant proportion of people currently drive to work on their own - so find out who's got space and see if you can come to an agreement.

#### Share the costs of commuting

One less car on one road means less carbon in the atmosphere. But car-sharing also means that petrol costs and running costs are reduced too. If you take it in turns to drive (swapping every day or every week), then you will save on wear and tear as well. Transport for London estimate that as a result of sharing the costs of petrol, car parking and other vehicle running costs, commuters that car share save themselves £1,000 a year compared to driving alone.

#### Discussion questions:

Do you drive on your own or do you have other people (e.g. family) in the car?

How do your friends or neighbours get to work?

Do you know anyone at work who lives close to you? Have you ever suggested sharing the journey?

Do you go directly to work, or do you drop people off on the way?

Have you ever thought about car sharing before?

What are the reasons that you don't car share already?

#### What you will do:

Share the trip to work with someone who lives near you. Take one extra car off the road.

#### What you will gain:

Two (or more) people getting to work for the price of one. Company and a chat. A low-carbon alternative even if leaving the car at home is not an option.



Photo: Adam Fagen

#### Mix and match

It's not necessary to share every journey for a car share to succeed. A part-timer might share the journey in with a full-timer, but then get the bus home. You might walk as far as a colleague's house, and then get a lift in. You may be able to share on some days of the week, but not others, depending on work patterns, child care, and other responsibilities.

#### Employers will often support car share schemes

Car share clubs at work can often save employers money – which means they might well offer incentives to staff to take part. For example, E.ON UK offered all employees who took part in their car share scheme a 50p canteen voucher a day.

## Action points for this month

### Plan your car sharing

Help each member of the group who currently drives to work on their own to find a car share - either providing a lift to someone else, or receiving one, or sharing the driving turn about. If you are lucky, there may be someone else within the action group you can car share with. If not, there are two main ways to find a car share:

### Seek out existing car-share schemes

There may already be people in your area doing a similar journey to you. Find out the details of existing car share schemes, or register with one of the popular websites:

[www.liftshare.com](http://www.liftshare.com)

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

### Invite other people at work to get involved

Put up an advert for people to car-share with, or send round an email explaining that you want to share lifts with people in your area. Start an informal database - which could be as simple as a chart on the wall in the staff room or canteen that has a list of local areas, a list of people's names, the time that they travel and the number of spaces they have in the car.

### Decide on a trial period

It can take a little while to get into a new routine. Agree a trial period, during which members will car share a few times.

### Reporting back

At the next meeting, share your experiences. How was it to be a car sharer? How does it compare to driving alone, or public transport options?

## Making wider change

Many employers run formal car-share schemes. Check with your branch or regional officials - maybe other members have already negotiated support for car sharing.

If your employer doesn't yet run a scheme, your group could be the catalyst for one, making a real difference to the carbon footprint of you and your colleagues. Even if your employer won't go that far, they may be able to provide incentives such as priority parking spaces for car-sharers, or other benefits to members who share cars.

You might find the following employers guide helpful: <http://tiny.cc/Climate71>

Although it is written with employers in mind, it contains lots of useful tools for getting employers interested. It includes surveys that your employer can give to members of staff to gauge interest, as well as useful examples of what incentives other employers have offered to staff signing up to car share schemes at work.

### Mileage rates

It is also worth looking at your employers mileage rates for in work travel. The Inland Revenue permits higher rates for drivers who are giving lifts to work colleagues whilst on business. If your employer's travel policy does not have an allowance for passengers, this is something that you might want to raise through union channels.

# Activity 4:

## Cycle benefits

### What you need to know

#### Cycling is the cutting edge of low carbon technology

Bicycles are highly efficient machines. Cycling and walking are always more environmentally friendly than even a fully occupied small car, or any form of public transport.

#### Mass action works

In surveys, the main reason given for not cycling is a fear about safety. In fact, cyclists are safer per mile travelled than pedestrians, about as safe as car occupants per hour of travel, and much safer than motorcyclists on any measure. There is also clear link between the number of cyclists and safety - towns and cities with a lot of cyclists are safer for cyclists, partly because drivers are more aware. Using designated cycle routes and lanes increases safety further.

#### You can get a new bike tax-free

The Cycle to Work scheme is a national initiative run by the UK government, aimed at providing employees with tax-free bikes. Typical savings are between 30-50% of the price of a new bike. Employers can run the scheme themselves, or sign up with a third-party provider such as [www.cyclescheme.co.uk](http://www.cyclescheme.co.uk) Employees then visit an approved bike shop, choose their bike and accessories, and arrange for the cost to be invoiced to the employer. The employee then 'hires' the bike from the employer through regular monthly installments, until the bike is paid for, at which point they make a final payment and take permanent ownership of the bike.

#### Discussion questions:

Do you currently own a bike? Do you ever use it – if not why not?

What would encourage you to cycle - for work, or for leisure?

Would you be more likely to use a bike if you had a new one in good working order?

Do you know about the government's Cycle to Work scheme?

Does your employer support cycling now? Could they do more?

#### What you will do:

Engage with your employer to promote cycling to work

#### What you will gain:

Easier access to the lowest carbon travel option

Additional employee benefits



Photo: Danny McL

Most employees will be eligible for salary sacrifice schemes such as Cycle to Work, but certain conditions apply (for example, paying PAYE). Salary sacrifice schemes can also have an impact on other benefits in some cases, such as for employees nearing retirement, so it is wise to check with your union advisors on the detail of any scheme.

#### How to stay cool and dry

For an average daily commute, statistics show that UK cyclists will only get badly rained on around a dozen times a year. Nevertheless, there is a lot that cyclists can do to stay comfortable in both hot and wet weather. Carrying any gear on the bike (e.g. in a saddlebag) rather than on your back really helps to keep cool, as does slightly slower cycling. Mudguards and chain guards will keep you clean, though you'll need full waterproofs if you are going to cycle in really wet weather. Alternatively, just be a fair weather cyclist - you will still get all the benefits on the days you do cycle. Shower facilities at work are also a great help to cyclists, and may be appreciated by other staff as well.

## Action points for this month

Most of these action points involve negotiating with employers, so make sure that you involve your local union officials (e.g. environment rep) and use official channels where appropriate. Many employers will be supportive. Sustrans has produced a factsheet for employers, which spells out some of the benefits such as workforce health and well being.

<http://tiny.cc/Climate344>

### Cycle mileage

The Inland Revenue permits employers to pay up to 20p a mile tax-free for cycles used on business. If your employer does not already include this in their travel policy and terms and conditions, why not push for it to be added? Some employers also offer other incentives - such as a cash payment for cyclists who are willing to give up a workplace parking space.

### Showers at work

Providing showers at work requires a one-off investment by employers, but it is an opportunity for an employer to demonstrate tangible support for employee cycling and lower carbon commuting. Showers and changing spaces are a facility for the whole workforce, not just cyclists.

### Secure storage

A prominent and well-sited bike rack is a must for any modern building, and hoops start from as little as £100 each to supply and install. Ideally, bike parking for employees should be covered, perhaps in a secure shed or cage. Again, Sustrans have provided a useful information sheet:

<http://tiny.cc/Climate151>

### Tax-free bike scheme

Many major employers already support the Cycle to Work scheme. Find out if yours is one. If not, discuss with your union whether you would like to push for them to join. If your employer already offers the scheme, why not try it out for yourself and get a brand new bike at a discount. Your group could also consider ways of promoting the scheme more widely in the workplace, or encouraging your employer to do so.

### Gadget spot

*The folding bicycle is a cool technology that helps you combine cycling with car-shares, trains and buses. You can even cycle to work and catch the bus back. One of the best known, the Brompton, is an award-winning British made product.*

### Relaxed bike trip

If cycling to work still sounds a bit daunting, why not organise a cycle ride for your group at a weekend, or on a summer's evening. You could cycle a few miles to a local pub or cafe, for example. Involve friends and family.

See how many people you can get to give it a go.

## Making wider change

This Activity has mainly been about wider change. If it goes really well, you might like to establish a permanent bike users group in your workplace, or use your union channels to support efforts to promote cycling in other workplaces.

# SMARTER COMMUTING

## NOTES FOR ACTION GROUP CONVENOR

### General comments

The main goal of this topic is to help people to develop a travel plan that is personalised and suited to their needs. Emphasise that no-one is being asked to give up their car, unless they want to. This is all about giving people more options and choices.

The core concept is that people prepare a map from which they write their own travel plan that meets their personal needs and circumstances. It is unlikely that group members will live close to each other or all have the same options, so the group is about helping each other to each try different options and then sharing the experiences.

The activities that make up this topic all lend themselves to including members of staff beyond the action group. So don't be afraid to encourage group members to look beyond the group for support and assistance in putting their travel plans into action.

Changing travel patterns can be difficult. People may feel that they have already looked into all the options. It can be also be a shock switching from a very familiar routine to something new and untried. Encourage people to 'give it a go' - there may be more options than they think. Its also worth emphasising that this is a high impact topic. Private car use (especially single occupancy) is a huge contribution to climate change. Switching to low-carbon options for commuting, even if it is not every day of the week, can make a major contribution.

**Note:** Some people have to come to work by car - either because they are required to use their cars at work, or because there really is no way to get from their home to work except by car. If most of the members of the group are in this position, then you either need to just focus on the car sharing activity, or you may be better choosing a different topic.

### MEETING ONE

You may want to start the mapping process at the first meeting. If so, you need to buy a large-scale flat map of the area, and bring a compass to draw 1km, 2km and 5km circles. Once you have this drawn, people can gather information about public transport and start entering it on the map between the first and second meetings. Alternatively, you may just want to focus on introductions in the first meeting, and start the mapping from meeting two.

At the first meeting, make sure everyone gets a copy of the **Before and After** sheet. This is basically a diary on which to record progress. The first thing to do is to fill in the distance between home and work (measure it on a map, use the internet, or your car tripometer to get the distance). Then start recording how you make the journeys to and from work each day. There is enough space to keep a record throughout a period of six months, but you can just use it for one or two weeks at the beginning and one at the end if you'd prefer.

Start using the **Group plan** to help keep track as you work through the activities.

### PERSONAL TRAVEL PLANS

You will need to decide how many meetings you need to complete the area map and get the personal travel plans worked up. You may want to do most of the work together in meetings, or to do most of the work outside the meetings and then meet to talk about what you have found. Encourage people to brainstorm all the possibilities, and to combine different forms of transport - cycling to the train station, or driving to a park and ride, for example.

Make sure that everyone does a plan, and choose a common starting date (or week). If everyone is in it together, you are much more likely to see it through. Agree how long you are going to try it for -

remember it takes a while to get used to a new routine. After everyone has had chance to try their route a few times, meet together to talk about it.

## SHARING EXPERIENCES

At the next meeting, make sure that you all have a chance to share your experiences: was it fun, was it difficult, was it what you expected? Its also important to discuss how and when you will continue. It is unlikely that many people will be able to switch entirely to a new form of commuting, so encourage members to define of the exact conditions under which when they will *not* use the car:

e.g. If it is nice weather then I will cycle to work (or, I will only drive if it is raining)  
If I do not need the car at work that day then I will take the bus

Encourage people to keep filling in the **Before and After** sheet, to see how they are getting on.

The remaining activities on car sharing cycling to work can be done in any order. Some groups may want to do just one of these activities; others will explore both.

## CAR SHARING

Car sharing is something that can be done informally with friends or colleagues, through an on-line scheme, or with formal employer support. The key thing about car sharing is to set up arrangements that will last. It is better to share once a week for a year than to try and share everyday but give up after a few weeks.

## CYCLE BENEFITS

Not all cycling is the same. Cycling up a hill, on a busy road, in the rain, is going to be hard going for most people. Cycling along a quiet, level cycle path in the sunshine is one of the most pleasurable and healthy forms of travel. There is not much you can do about whether your area is hilly or flat, but you can search out good cycle routes, and promote cycling as an option for fair, dry days. Good cycle facilities also make a difference, and that is a significant focus of this activity. Above all, the more people cycle - the more attractive it will be to others. In London, despite the appalling traffic, there has been a big increase in the number of people cycling, partly because of the congestion charge, and it is now seen as a normal way to get to work. Other places like York (which is very flat) and Bristol (which isn't) are also developing strong cycling cultures. Could your area do the same?

## FINAL MEETING

Collect together all the **Before and After** sheets. You might want to add up as a group how many of each kind of commute you did in the first and last weeks. Please return all the sheets, together with the **Group Plan** to FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, Oxford OX4 1JE. This will help up to learn from your experience, and to evaluate the impact of the whole campaign.

## NEXT STEPS

If the group has gone well, then tell other people about what you have learnt. Members of the group could write articles for your local union or workplace newsletter, or send them to Climate Solidarity for us to publish. There may be opportunities to make a presentation to colleagues, either in a union setting, or in meetings organised by your employer. Climate Solidarity offers training for action group members interested in presenting about the campaign.

If the group is keen to keep on meeting, why not go back to the Climate Solidarity menu and pick another topic. Alternatively, there are suggestions on each of the activity sheets for promoting low-carbon commuting across the workplace. Your group could champion these initiatives to make a much bigger difference. Make sure that you work closely with your union reps, and let Climate Solidarity know how you get on.



# Smarter Commuting: Our action

Name of Action Group .....

Contact name .....

Contact e-mail, or mobile phone number .....

As you work through the activity sheets as a group, use this sheet to keep a record of group and individual actions. You'll need to refer to the individual action sheets to see what each of the actions involves. Don't worry if you don't do them all - though of course the more actions you take the bigger impact you will have. You can also keep a record of how many members plan to continue that new activity or behaviour. You might want to display the sheet somewhere that all action group members can see it.

Done together as a group (tick)

Number of members who were already doing this action

Number who have tried this for the first time

Number of members who plan to continue

## Map Your Options

- Get a map of your workplace area
- Add on circles for walking and cycling times
- Mark all the public transport routes in the circles


## Personal travel plan

- Map your home and possible non-car routes to work on the group map
- Draw up a personal travel plan for low-carbon commuting
- Put the travel plan into practice


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## Car sharing

- Find out if there are any existing car share schemes in your area
- Find a colleague to car share with
- Regularly travel to work using a car share


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## Cycle Benefits

- Use union channels to encourage your employer to support cycling to work
- Cycle to work
- Cycle as a leisure activity

--




When you have completed your work on this theme, please send this sheet (or a copy) to:  
 FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, OXFORD, OX4 1JE

# Before & after: Smarter commuting

Use this table to keep track of whether you are making the shift to lower carbon alternatives. Start it at the beginning of your action group.

During each week, mark a cross in the relevant box for each journey to work, and another for the journey home. If your journey mixes different forms of transport, put a cross against the main mode of transport, or put half a cross in the two main ones you used. The more crosses to the left of the table, and the fewer on the right, the lower your carbon pollution will be.

Copy this sheet as many times as you need. Compare your results with others in your action group.

<b>Name:</b> .....
<b>Name of action group:</b> .....
<b>Distance between your home and workplace in miles</b> .....

Week	Dates	Cycling or walking	Bus or train	Shared car	Car not shared
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

At the end of the group, please gather everyone's sheet together, and send them back to Climate Solidarity at:

FREEPOST RSEY-UCEL-SZLL  
 Climate Solidarity (COIN)  
 106-108 Cowley Road  
 Oxford OX4 1JE

**Activity pack:**

# Lower electric bills

Simple actions can really reduce waste. Switching things off, changing when you use appliances, and changing any remaining old-style light bulbs can really help make better use of energy in the home. You will work together to practice new habits so that soon you won't even notice doing them. Once you've cut your bills, there is an activity sheet to help you think about switching to a greener supplier. You can explore this topic at a simple home level, or get involved with larger changes in the workplace.

## **Activity sheets:**

**Switching Off**

**Power Shift**

**Water and clothes**

**Lighten Up**

**Make the switch**

**Convenor notes**

**Group plan**

**Hotspots**

**Before and After sheet**



# Activity:

## Switching off

### What you need to know

#### Are you on standby?

Standby is a common feature with televisions, music systems, videos, dvd players, radios, computers, printers and computer monitors.

Although it uses less power than leaving the machine on, it represents a steady and constant drain of power - usually around 10-15 watts. At this level two appliances on standby will use more power than a fridge. Some electronic equipment continues to use electricity even when it has been switched off. The only sure way is to switch things off at the socket.

#### Which are the energy guzzlers?

Some appliances use far more electricity than others. Some of the biggest savings can be made by switching off appliances which otherwise might run all the time. In order of energy use (hungeriest first) these are:

- |                             |                    |
|-----------------------------|--------------------|
| 1 Desktop computer          | 2 Computer monitor |
| 3 Wireless router or server | 4 Television       |
| 5 Printer                   | 6 Digital Box      |
| 7 Video / dvd               |                    |

#### Can you turn off a video and freeview / digital box?

Unfortunately most digital boxes are designed to be left on all the time. However there is no reason why a box cannot be turned off at the socket. It is not true that it needs to be turned on at night to receive programme updates: if it needs updates it will load them when it is turned on again.

#### Discussion questions:

Is there anything that you leave fully switched on when you are not using it? Are there reasons for this?

Do you find standby useful or annoying?

How much electricity do you think your house uses when you are not at home? How could you reduce this?

#### What you will do:

Get into the habit of turning things off when they are not in use.

#### What you will gain:

Turning things off when you do not use them can save up to 10% of your electricity bills.

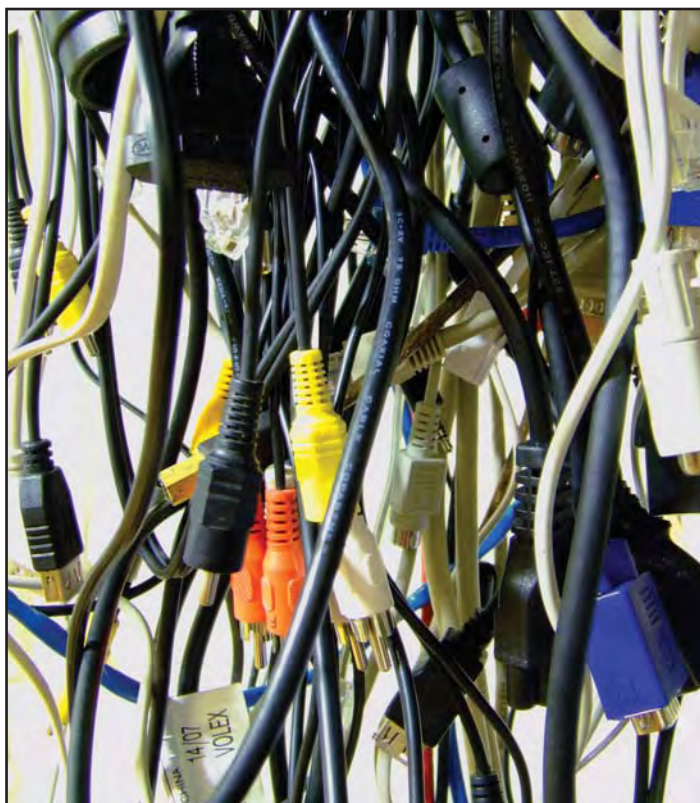


Photo: Andres Rueda

You only need to leave a DVD player on standby if you want to keep the timer working and automatically record programmes.

#### Does switching a computer on and off damage it?

Switching off a computer makes no difference at all to its lifespan, and may make it function faster. Nor do you need to leave it on to receive updates: these load when you start up.

#### Do low energy bulbs use more energy to start than leaving them on?

This is a myth. Low energy bulbs do take half a minute to fully warm up, but they use no more energy. It is worth turning them off - even for a short time. And it won't shorten their life either.

## Action points for this month

### Check for obstacles

You could do this action as individuals, with family members, or pair up with another action group member. Have a look around your house and the sockets in each room, and note all the things that you leave switched on at the socket. There are only a few things (e.g. your fridge) that really need to be on all the time. Is there anything that you leave on just because it is tricky to get to the socket (under a table, behind the sofa)? Its unlikely you can move the furniture - unless you were thinking of having a change anyway - but you might well be able to solve the problem by buying a strip plug. Strip plugs (short extension leads with multiple sockets) are widely available (e.g. Argos) and make switching off easy and accessible - make sure you get one with a switch on it though.

### Switch off day

As a group, agree a date that will be your 'switch off day'. On the agreed date, you all agree to be as ruthless as possible in switching off appliances that are not in use, and lights when you leave a room. Don't allow anything on for a minute that it is not needed. Switch off the TV at the wall as soon as you have finished watching. Switch off your printer as soon as you have finished printing.

It'll work much better if you can also get family members or housemates involved. If you pick a work day, then you can practice at work as well as home. You will probably find some things easy, and some a bit annoying. Discuss with other action group members, and continue to do the easy things - they will soon become automatic habits.

### Night-time and leaving the house routines

Do you turn off the lights when you go to bed or leaving this house? Just go a step further: go around the house and switch off all lights, electronics and items on standby. Don't forget to turn off digital boxes or a wireless internet server - they each use more power than a low energy light bulb.

### Report back

Share your experience with other action group members. Have you changed your habits? What has been easy, what has been more difficult? Are there still practical or psychological obstacles to always switching things off? How might these be tackled?

## Making wider change

### CRC Energy efficiency scheme

From April 2010, most large employers will be required to register under this scheme, and to report annually on their energy use. There will be league tables and a system of permits which will put significant financial pressure on employers to cut emissions from energy use (electricity and gas). Under the scheme, employers are specifically encouraged to consult with recognised unions, and of course they are going to need the involvement and co-operation of employees in order to meet their targets. This means its an excellent time to talk to your reps about joint working between your union and your employer to save energy.

### Energy Audits

Talk to your union reps to see if the employer has done an energy audit - which looks at electricity use in the workplace. Employers should have done this already. Your support for your rep will make it easier for her/him to raise this with the employer.

### Its not just the lights

In an office setting, computers are often amongst the heaviest energy users. All individual desktops, screens, printers and photocopiers can and should be switched off overnight or when not in use.

Air conditioning is a very heavy electricity user. Blinds, portable fans, and opening windows are all much cheaper and lower carbon ways of cooling. If air conditioning is used, it should only be on when and where it is actually needed.

Talk to your union reps to see how a culture of switching off might be encouraged in your workplace. There are also resources available from the TUC's Greening the Workplace project. [www.tuc.org.uk](http://www.tuc.org.uk)

### Gadget spot

*You can now buy plug-in meters which can tell you exactly how much electricity a particular appliance is using. You can find many different models on Amazon and e-bay (search for "plug in electricity meter"). Prices start at around £10. Why not buy one as an Action Group and then each have a go?*

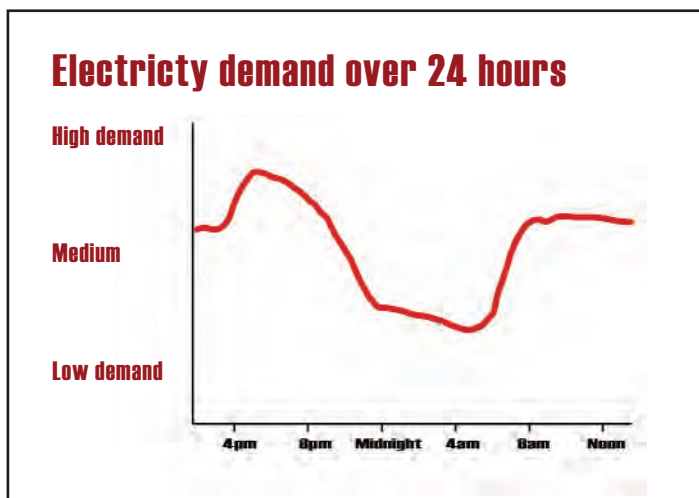
# Activity: Power shift

## What you need to know

### Why peak load is important

Electricity demand changes through the day and power companies have to be constantly changing the output of power stations to meet the demand. During the peak period of 5pm to 9pm demand is at its highest and can vary widely from minute to minute.

Because the power companies need to supply enough power to the maximum demand there is very high wastage during this period - whenever the demand falls the generators continue to spin and the electricity just goes to waste. At other times of day demand is much more constant and there is less wastage. Demand falls during the night and there is a surplus of electricity during this time. See the graph below to see the changes in electricity demand over an average day in the UK.



## What you will do:

Time your use of electric appliances outside the peak demand period of 5pm to 9pm.

## What you will gain:

A significant cut to your carbon emissions.  
Lower bills, if you have an Economy 7 electricity tariff.



Photo: Joakim Wahlander

For all these reasons if you can shift a kilowatt hour of your electricity from the peak period to the rest of the day it will have 25% less carbon dioxide emissions. If you can shift it to the period of lowest demand - between 12 midnight and 5am - when there is surplus power your climate change impact will be even lower.

So simply shifting the time you do something will be greater increase in efficiency than all the technological improvement of the past 15 years. Its a great a difference as between an A rated and a C rated appliance.

## I am on a green tariff for electricity. Does this still apply to me?

Absolutely. Wind power is generated whenever there is wind and throughout the night, not when there is most demand. Solar power is very limited in the evening. As we move to renewable power it is vital that we find ways to level our demand.

*continued overleaf ...*

## Discussion questions:

What time of day or night do you think you use most electricity? When the least?

Are there any appliances that you set going last thing at night?

Do you have appliances with automatic timers built in? Do you know how to use them?

## So is it worth changing to Economy 7 electricity?

Electricity suppliers encourage you to use electricity during the 7 off peak hours (1am-8am) with a special low tariff. However the current Economy 7 tariffs also charge more than the normal tariff for day electricity, so this is normally only recommended if you have electrical heating, such as underfloor heating or storage heating. If you are already on Economy 7 there is certainly an extra incentive to reschedule as many appliances as you can to the off peak hours.

## Can you reschedule freezers and fridges?

For food safety reasons this is not recommended at present. In future, fridges and freezers may be designed to respond to changes in the power supply.

### Action points for this month

#### Notice what you do now

As an action group, agree to note which appliances you and your family use during peak demand 5pm - 9pm. You could all do this on the same evening, or just on a day to suit you between meetings. Make a simple list of each appliance that you use during this period.

#### Identify possible appliances for overnight or daytime use

Concentrate on heavy electricity users such as washing machines, dishwashers, tumble driers, ovens, breadmakers and water heaters. Consider whether you could shift the time you use them without a loss in convenience. The easiest way to shift the time is to set the appliance running last thing before you go to bed (or as you leave the house in the morning). You may already do this with some appliances. Ideally - for the greatest efficiency - you need to run them in the middle of the night - for example between 2 and 4am. Many modern appliances have timers that allow you to set the time they work, or to delay their start by a number of hours.

#### Report back

How did you find this activity? Could some (more) appliances be easily retimed? What are the obstacles? Does this activity feel worthwhile even if it doesn't save you money personally?

### Making wider change

In office-based environments there may not be much scope for retiming energy use, although it is still worth looking for any specific opportunities in your workplace. In industrial settings, where energy contracts are often negotiated on the pattern of demand, there may be scope for considerable financial savings (as well as carbon reduction) by shifting processes to off-peak hours. This is a complex matter, with potential implication for shift patterns, health and safety and so on. It is likely that the difference between off-peak and peak prices will grow wider in coming years, so it is well for your union to be informed about these issues.

Changing the pattern of demand is not often discussed by the general public, even though it could deliver significant efficiencies and carbon savings. Your action group might like to discuss how this idea could become more widely known, or how government could incentivise changes to the pattern of demand.



# Activity:

## Water and clothes

### What you need to know

#### Heating water is likely to be the largest use of electricity in the home

Unless you are using electricity to heat your home, heating water is likely to be your single largest use of electricity: for (in order of highest to lowest use) baths, showers, washing machines, dishwashers, in the kettle, and for cooking.

#### With modern detergents most clothes can be washed at 30 degrees

There is rarely any need for clothes to go in a hot wash - and all clothes recommended for washing at 40°C can be washed at 30°C. Marks and Spencers, ASDA and many other retailers now recommend a standard 30°C wash which can reduce the energy consumption of your wash by 40%. They recommended that towels, underwear, sportswear, baby clothes, bedding, and heavily stained items are still washed at higher temperatures to ensure they get completely clean.

#### More efficient tumble drying

If using a tumble drier you can improve the efficiency by keeping the filter clean and doing the maximum loads (usually 6kg). There is a video by Which magazine at <http://tiny.cc/Climate109>

#### Discussion questions:

How much water do you put in the kettle?

How do you heat hot water for baths and showers in your house (e.g. combi boiler, boiler and hot water tank, immersion heater, electric shower)?

How is this heating controlled (on a timer, on demand, on all the time?)

How long do you spend in the shower?

What temperature do you wash your clothes?

Do you ever dry clothes on a line or drying rack?

### What you will do:

Try various changes in the way you heat water, and wash and dry clothes.

### What you will gain:

Make significant carbon savings.

Clothes that smell fresher and last much longer.



Photo: altrain43

### Good reasons for air drying

Tumble driers are heavy users of energy: an average drier running a load every two days will cost you £113 a year in electricity. Apart from the cost and carbon emissions, there are two other good reasons to air dry clothes whenever possible.

1. Tumble driers can overdry your clothes and damage the fibres. The lint you empty from the drier is all material that has been worn off your clothes by the drier.
2. Direct sunlight kills dust mites. According to official NHS advice, 20% of people suffer allergies to these mites, which can cause asthma and eczema.

Clothes dried in the fresh air also smell fresher. You can even get outdoor racks with covers for bad weather: e.g. [www.ecowashinglines.co.uk](http://www.ecowashinglines.co.uk) An indoor drying rack works well in a warm room; however, don't heat a room up just to dry clothes: its more efficient in that case to use a tumble dryer.

### At the laundrette

If you use a self-service laundrette, most of these tips also apply. Use lower temperature washes, and makes sure you do a full load - to get your money's worth and to save energy. On a sunny day, bring your washing home to dry on the line for free.

## Action points for this month

### Kettle knowledge

This change is very simple, but can save significant amounts of energy and money over time. Empty your kettle. Now measure and pour in one mug of water. That is all the water you need to boil for one mug of tea! Measure how much you need for 2 or 4 mugs (or however many you are usually making tea or coffee for) and note where the water comes to on the scale. Now you can always just freshly and quickly boil the water that you need. (Note, in old fashioned kettles with a coil element, you do need to cover the element as a minimum. Most modern kettles have a flat element). Try this out at work in your action group, then at home.

### Hot water handling

If you don't know, find out how you heat your water at home, and what controls you have. If you have an electric shower or combi boiler, it will only heat the water you use - which is ideal, provided you don't get stuck in the shower for ages. If you have a hot water tank, it may be heated by a gas boiler, or an electric immersion heater, or both. Running an immersion can be very expensive (in money and carbon), so either only switch it on when you need it, or make sure the timer is adjusted to heat the water before you need it, and not at other times.

### How low can you go?

If you have a washing machine with a 30° cycle, try using this (or whatever the lowest temperature setting is) for your regular wash. If you are not usually the person who does the laundry in the house, you may have to negotiate for change.

### Free drying

If you don't already have one, fix up a washing line of some sort. Sales of washing lines and rotary dryers are up 20% this year, so you'll be in good company. There is a version to fit even the smallest outdoor space. On warm or breezy days, things will dry completely outside. If the weather isn't that good, part dry items outdoors, and then finish them off in the tumble dryer. You'll find that you will only need a much shorter drying time.

### Report back

There are lots of activities here, and you may not all wish to try them all. Compare notes on your experiences. What was easy, what more difficult? What habits are you going to keep?

## Making wider change

At work, is there wastage or unnecessary use of hot water?

However, keep a sense of proportion and keep focused on the big energy users. If you work in an office, focus on computers, lighting and air conditioning, not the kettle people use for tea breaks.

### Gadget spot

#### *The Ekokettle*

*(www.ekokettle.com) has settings so that it will switch off at 80° or 90°, as well as the normal 100 degrees. Tea and coffee connoisseurs actually recommend these slightly lower temperatures, and they are certainly hot enough to make your cup of soup.*

### Gadget spot

*Get a timer to stick on the wall in your shower. You can get an electronic one that is shaped like a simple water drop, or a rubber duck. Decide how long (or short) you want your showers to be, and it will bleep when time is up. You can even get one like an old fashioned egg timer.*

# Activity: Lighten up

## What you need to know

### Old style light bulbs are on the way out

In September 2009 the UK withdrew 100 watt incandescent bulbs from sale. There are plans to phase out sales of all old-style bulbs by 2011.

### Its worth changing now

It goes against the grain for most people to throw something out when it is still working. However, it is worth throwing out your remaining old bulbs and changing to low energy bulbs now. The energy saving from lower consumption far outweighs the energy needed to make the new bulb. Just do it.

### Low energy lights are available in different colours and strengths

There is a wide variation in the colour of light from low energy bulbs ranging from a blue-white (that some people don't like) through to the cosier yellow of old style lighting. The light colour is often indicated on the box: warm white is often a safe bet.

Like old style lightbulbs, low energy bulbs come in different strengths. The standard is 11watts, which is supposed to replace an old 60watt. But if this is not strong enough for you, buy a 15watt which is a replacement for 100watt.

### Discussion questions:

Do you still have old style incandescent bulbs?

How do you feel about the low energy bulbs?

Do you like them or not like them?

What is the longest lasting one you have?

Do you have halogen spotlights in your house?

How many do you have?

Do you have any lights that run all night? Why?

### What you will do:

You will aim to change all your lighting over to low energy bulbs.

### What you will gain:

Reduce your climate change impact by switching to bulbs that last for years and years. Discover smart and fashionable new ways to light your home.



Photo: Jen Waller

### Halogens are often the biggest lighting energy users

Halogens are often sold as 'low energy' or 'efficient'. Each individual bulb may be somewhat more efficient than a standard old fashioned bulb, but they are much less efficient than a real low energy bulb (just put your hand near them and you can feel the energy that is being wasted as heat). In addition, halogens are usually used in groups - perhaps four or more to the room - which can really ratchet up the energy consumption.

### There are low energy options for almost all types of light and light fitting

Low energy bulbs now come in a range of shapes and sizes to fit most ordinary lights. You can even get low energy bulbs that will work with dimmer switches, although these are still a more specialist product, and you will probably need to order them online. You can replace halogen bulbs (GU10 bulbs) with compact fluorescent lights, or LEDs. Both are more expensive than normal halogens but will pay for themselves many times over.

*continued overleaf ...*

## Where you can buy low energy bulbs

You can buy standard low energy bulbs in the same places you could always buy old style bulbs. The major supermarkets and pound stores have very low prices. There is a wider range, including the halogen replacements in the large DIY chains and IKEA has a particularly wide range. Like with any product, there can be some variation in quality, and very cheap bulbs may not last as long - although they will still save electricity. If you want to get the best price on the specialist bulbs, especially for LEDs, you should buy on the internet. Climate Solidarity has shopped around for you and can recommend:

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

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

[www.lightbulbs-direct.com](http://www.lightbulbs-direct.com)



Photo: Mark Paciga

## Where you can find out more

There has been a lot of encouragement from government and businesses for people to switch to low energy bulbs. This is mainly for good environmental reasons, but unsurprisingly this has also generated a lot of debate and some suspicion,

and various myths spread in the media. Some of the common myths, and answers, are dealt with at:

<http://tiny.cc/Climate58>

## Action points for this month

### Find a bulb colour you like

Discuss the low energy bulbs you have in the group, and find a make that has a nice colour light. Maybe members could bring bulbs they like into work to swap and compare at home.

### Replace all your old style bulbs

They are being phased out anyway, so save the energy now and replace all of them. Work out how many the whole group needs. Don't forget less obvious lights, such as doorstep or garage lights. If you work out the total order someone in the group could look around for the best deal and buy all of them together - but remember that the cheapest bulb may not have the nicest light. Your local authority energy officer or energy advice centre may even have free ones, so give them a call.

### Security lights

External security lights often use very large energy-intensive bulbs. Although they have been quite a fad in recent years, research suggests that security lights make very little difference to crime rates. If you do choose to have a security light, make sure that both the light and any motion sensors are properly adjusted, so that does not simply blind any passers by. Solar powered options are also available, but these can vary in quality - so ask around for a recommendation.

### Report back

Did you manage to change all your bulbs? If not, is there a reason? What would help? The nice thing about this action is that it is a one off. Once all your bulbs have been changed, you only need to replace them one at a time, when they go. And because they last so much longer than the old fashioned bulbs, you'll spend less time changing lightbulbs anyway.

## Making wider change

**The main reason people don't change the old style bulbs is because they never get round to it.**

So you can do a big favour to a local community centre, an elderly neighbour or a family member by offering to do it for them. You will be helping them save money, but also making a significant action on climate change - each replacement bulb will save half a tonne of carbon dioxide over their lifetime. Publicise your efforts in the local union or workplace newsletter.

**Are there inefficient bulbs at work that could be changed?**

Check with your union rep whether this issue has already been raised. If not, your group might like to do a quick count of the number of old fashioned bulbs in your workplace that could be changed. Each low energy bulb that is changed will save up to £40 over the course of its lifetime, even allowing for the cost of the bulb, so the figures soon add up. It's also worth noting how many old fashioned bulbs are burned out, as low energy bulbs last much longer. Your rep might find this information very useful when they go in to talk about saving on bills.

# Activity:

## Make the switch

### What you need to know

#### Why switch energy suppliers?

The privatised energy industry in the UK means that there are numerous energy suppliers to choose from, most of which offer a number of different deals or tariffs. It's debatable whether all this adds up to a good deal to the consumer. However, what is certain is that if you haven't ever switched energy suppliers, you will almost certainly be paying more for your energy than you need. Most companies offer special deals to new customers, and there are better rates if you sign up for electricity and gas from the same company. Switching is generally easy, and can be done in a few minutes online or over the phone. All you'll need is a recent bill and a meter reading.

If you are switching suppliers, you might want to consider an option that supports low-carbon, renewable energy. There are two main ways of doing this: choosing a green tariff, or a green company.

#### Green electricity tariffs

Most energy companies offer a green tariff for electricity. You still get the same electricity supply, but the company buys one pound of electricity from renewable sources (such as hydro electric or wind) for every one pound of electricity that you use.

However, there is a complication. UK law requires 10% of the electricity that each energy company sells to come from renewable sources like wind turbines or hydro-electric dams. This figure will rise to 15% in 2015. Most energy companies miss these targets and have to pay fines. To date, these legal targets have been ahead of take-up of green tariffs, so for the big energy companies it is the law which is driving moves they are making towards greener energy, not consumer demand. In the past, some companies have been charging a premium for buying renewable energy which they would be purchasing anyway.

#### Discussion questions:

What do you think about wind turbines, solar panels, and other types of renewable energy?

Who do you buy your electricity and gas from now? What do you think about their prices and customer service? Do you think they support renewable energy or fossil fuels?

What do you think about green tariffs?

Have you ever switched supplier? What might encourage you to choose a particular tariff or supplier?

#### What you will do:

Find out how the different energy companies compare on their climate credentials

Consider switching energy suppliers and taking green or ethical factors into account

#### What you will gain:

A clearer picture of where your energy comes from

Confidence that you are buying your energy from a company that is right for you



Photo: Windfarm in Cornwall by Barry Ennor

However, a new accreditation scheme from OFGEM is now in place which requires green tariffs to include some additional environmental benefit. You can see a list of approved green tariffs at: [www.greenenergyscheme.org/](http://www.greenenergyscheme.org/)

#### Green electricity companies

If you want to support renewable energy more actively, there are a number of smaller specialist green energy suppliers, including **Green Energy**, **Good Energy** and **Ecotricity**. All of these companies go well beyond the legal minimum requirements for renewables. For example, Good Energy only buys electricity from renewable sources, while Ecotricity invests all of its profits in building new wind energy supplies. The companies have fallen out publicly about which is the 'greenest' approach, but independent reviews agree that all of these companies provide a greener option than the standard green tariffs from the big energy companies.

Ebico is a company with a slightly different approach. It is not a green company as such, but it does give customers a stronger incentive to cut energy use than other suppliers. This is because Ebico has no standing charge and only charges on the basis of energy used. Ebico also charges customers the same price per unit however they pay, as part of their commitment to fairness. This is unlike most energy companies which reward people on direct debit and penalise those on card meters.

You can see a guide and comparison at: <http://tiny.cc/Climate738>

*continued overleaf ...*

## Green gas?

Unlike electricity, which can be generated from a number of different sources, all domestic gas supplies are essentially the same, although Ecotricity does have plans to start putting gas from domestic waste into the grid. Whoever you buy your gas from, the best thing you can do to reduce carbon emissions and save money is to reduce the amount you use. The Lower Heating Bills and Cosy Home activity sheets are all about reducing gas use.

## Costs

All energy companies have different pricing systems, but in general a green tariff should not be more expensive than the 'average' tariff. However, just as a small corner shop is often (but not always) more expensive than a supermarket, the specialist green companies are usually (but not always) a bit more expensive than the cheapest deals from the big power corporations. You will need to weigh up the cost and environmental factors and choose the right deal for you. Whoever you buy your energy from, the best way to keep your bill down is to keep your energy use down.

## Generate your own

As countries such as Germany have already shown, there is real potential for domestic and community power generation, with the right government support. Solar hot water panels are now used on thousands of homes in the UK, and can provide all a family's hot water needs in the warmer months. Other technologies, such as photovoltaic (electric solar) panels, and ground source heat pumps, can also work well in the right situation, but are very expensive to fit. From 1 April 2010, a new Clean Energy Cashback will pay a good rate for all electricity generated from domestic renewable technologies. This is an exciting area, but will need careful research, and will not be right for everyone. A lot more information is available at: <http://www.energysavingtrust.org.uk>

## Action points for this month

### Find out what you are buying now

Use the website [www.fuelmix.co.uk](http://www.fuelmix.co.uk) to find out what mix of sources (coal, nuclear, renewable etc) your current electricity supplier gets their energy from. This site is free, and provides up to date information for every supplier.

Check a recent bill to see how much you are being charged per day for being connected (the standing charge) and how much you are charged for each unit of electricity or gas. You may wish to compare bills with others in your action group, to see whether the rate you are paying is over the odds. Of course the best way to keep your total bill down is to use less power.

### Make the switch

If you are not happy with your current supplier – whether because of their price, customer service, or because they support fossil fuels or nuclear power – it's time to make the switch.

If environmental factors are your number one priority, then the best option is to pick one of the specialist green energy companies – Good Energy, Ecotricity or Green Energy. If you are less concerned about where your energy come from, but you want a tariff that rewards you for reducing energy use, then take a look at Ebico. If price is your top priority, look at a green tariff on [www.greenenergyscheme.org](http://www.greenenergyscheme.org) or just go for the cheapest tariff you can find.

### Introductory offer

As a Climate Solidarity member, you can claim a £50 discount on your electricity bill if you switch over to Good Energy. Simply follow the links from the Climate Solidarity home page to switch and claim.

## Making wider change

Employers in both the public and private sectors are major consumers of electricity and gas, so their choice of tariff and supplier can have a real influence on the future shape of the energy market. Many companies have already chosen to switch to a green energy supplier as part of their commitment to action on climate change.

Persuading your employer to shift to renewable tariff electricity is a major step towards a low carbon economy, and if your employer is a major consumer they may be able to negotiate a price that is highly competitive with the non-green supplies. Raise the matter through your union green or environmental rep, environment committee, or other recognised channels.



Photo: Sam Teigen

## Feedback

At the next meeting of the action group, share any experience of switching suppliers. Was it as easy as advertised? Were there any problems? How did prices compare? Are you now getting all your electricity from renewable sources?

# LOWER ELECTRICITY BILLS

## NOTES FOR ACTION GROUP LEADER

### General comments

This is a good group topic: there are lots of low cost activities, chances for the group to work together, and strong possibilities of creating wider change. It works well at any time of year.

It is important in this topic to keep a sense of perspective and keep the focus on activities that save the most electricity. Government and media campaigns often focus on actions like switching off mobile phone chargers which only save a tiny amount of electricity. The biggest savings will be made by adjusting the use of power hungry equipment like electric showers, and not continuously running home computers and other digital equipment. Low energy lightbulbs are now mainstream, and they are such good energy savers that it is worthwhile changing those last few bulbs.

If any group members regularly use electricity for room heating (e.g. storage heaters), this will use a large amount of electricity. They may want to look at some of the activities from “Lower heating bills” or “Cosy home” to reduce bills in this area.

### MEETING ONE AND TWO: HOT SPOTS, BEFORE AND AFTER, GROUP PLAN

The **Hot Spots sheet** should be fairly straightforward. The sheet is quite accurate and should give a good estimate of where people should focus their efforts, and what they can achieve. The amount of money people can save will depend on their tariff; £2 per box represents an average tariff. If someone is on a pay-as-you-go meter they will save more.

The **Before and After** sheet will help people to get a sense of how they are doing. Encourage people to fill in the first part between the first and second meetings. If possible, people should take the reading in an ‘average’ week - i.e. avoid holidays or other unusual times.

The **Group Plan** gives a brief overview of all the activities in this topic, and will help the group keep track of what you have tried, and what has worked,

### CHOOSING YOUR ACTIVITIES

The activity sheets can be done in any order the group wishes. ‘Switching off’ is an easy one for people to start with. The air-drying in ‘Water and Clothes’ will work best at warmer times of year. If you are meeting during the winter you might like to focus on lighting and include some activities from Lower Heating Bills and Cosy Home.

### SWITCHING OFF

Most of this activity is about getting new habits, and you will find ‘if...then’ sentences a really useful tool. For example, *If I turn off the tv, then I turn off the digital box....if I leave the house then I turn off everything.* This can feel a bit artificial, but it does really work if people make their own.

For some actions (such as computers) it is also important to change the habit of turning them on: people may automatically switch a home computer or TV on when they get in from work for example. If people can shift to switching equipment on when they want to use it, they can cut running times significantly.

### POWER SHIFT

Changing the time of electricity use may be a new idea for you, and some people may find it too abstract or technical. Except for people on Economy 7 tariffs, there is currently no financial advantage. However, shifting to a more efficient time of day does produce a major change in the

emissions of the electricity you use, and for some people this may be a relatively easy change to make. You need to decide as a group whether it is something you want to try.

It is only heavy energy appliances, such as washing machines, dishwashers and tumble driers that are really worth time shifting. Again it is important to be realistic and to concentrate on changes that work for people and can be maintained easily.

## **WATER AND CLOTHES**

This activity is most relevant for people who own a washing machine and drier, which not everyone does. It is also most relevant in summer when there is better weather for outdoor drying.

Let people talk openly about why they like (and don't like) tumble driers and air drying. People may be reluctant to shift to air drying: as tumble driers can be very convenient. There is plenty of ways to cut carbon without giving up on the drier completely - such using the drier more efficiently (with larger loads), using it at night (see „Power Shift’), air drying the wettest items (jeans, sheets, blankets), part air drying and finishing off in the tumble drier, or air drying on fine days and tumble drying on wet/cold days.

## **LIGHTEN UP**

There are very mixed feelings about low energy bulbs. They do save a significant amount of energy over time, but they have also been pushed by energy companies and the media as if they were the complete answer to climate change, which of course they are not. Some people love them and some people say they dislike the light. This is often because they bought one and didn't like it. People may not realise that there are differences between different makes of bulb, or that the technology has improved a lot since they first came in. Encourage people in the group to share their views and learn from each other, and to try out different sorts of bulbs before buying a lot.

Most people have some low energy bulbs already. This activity is to encourage people to change over completely, including swapping to low-energy replacements for halogens, which is where some of the biggest efficiency gains can be made.

## **FINAL MEETING**

Before the final meeting, encourage people to fill in the second part of the **Before and After** sheet, by taking another set of meter readings. The final part of the sheet (seasonal adjustment) will help people to see more accurately whether they really are cutting electricity use. If people are not confident with numbers, it may be best to do the final part together in the group meeting.

If you haven't already done so, fill in the final parts of the **group plan** as a record of the group's efforts. Please send us a copy of all the Before and After sheets and the group plan to FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, Oxford OX4 1JE. This will help up to learn from your experience, and to evaluate the impact of the whole campaign.

## **MAKING WIDER CHANGE**

There are suggestions on all the activity sheets for creating wider change. The **Hot Spots** sheet can also be used in the workplace, although it doesn't cover air conditioning, which can be the largest single user of electricity. Many workplaces are already trying to cut energy use, so make sure that you find out what is going on already from your union green rep. Whatever you do, focus on the biggest items. Nagging people about work about the amount of water they boil in the kettle can irritate them, particularly if there are much bigger changes that could be made.



## **NEXT STEPS**

If the group has gone well, tell other people about what you have learnt. Members of the group could write articles for your local union or workplace newsletter, or send them to Climate Solidarity for us to publish. There may be opportunities to make a presentation to colleagues, either in a union setting, or in meetings organised by your employer. Climate Solidarity offers training for action group members interested in presenting about the campaign.

If the group is keen to keep on meeting, why not go back to the Climate Solidarity menu and pick another topic. If you want to keep focusing on energy uses, then the Lower Heating Bills or Cosy Home themes may be good for your group. However, you may want to do something completely different, and choose one of the topics on travel or food.

Alternatively, you may want to focus on the suggestions for promoting lower energy use across the workplace. Your group could champion these initiatives to make a much bigger difference. Make sure that you work closely with your union reps, and let Climate Solidarity know how you get on.

# Lower Electricity Bills: Our action

Name of Action Group .....

Contact name .....

Contact e-mail, or mobile phone number .....

As you work through the activity sheets as a group, use this sheet to keep a record of how many action group members try each suggested activity. You'll need to refer to the individual action sheets to see what each of the actions involves. Don't worry if you don't do them all - though of course the more actions you take the bigger impact you will have. You can also keep a record of how many members plan to continue that new activity or behaviour. You might want to display the sheet somewhere that all action group members can see it.

Number of members who were already doing this action

Number who have tried this for the first time

Number of members who intend to continue this action

## Switching Off

- Checking round the home / work for physical obstacles to switching off
- Taking part in a 'switch off' day
- Switching off all sockets (apart from fridges etc) last thing at night
- Switching off computer when not actually in use
- Switching off printer when not actually in use
- Switching off other electronics when not in use


## Power Shift

- Noting which appliances are used in peak hours (5pm - 9pm)
- Only using a washing machine outside peak hours (5pm - 9pm)
- Only using a tumble drier outside peak hours (5pm - 9pm)
- Only using a dishwasher outside peak hours (5pm - 9pm)
- Only heating water (e.g. immersion) outside peak hours


## Water and Clothes

- Only boiling the water you need in the kettle
- Regularly washing clothes at 30°C
- Reducing long electric showers to just 5 minutes
- Drying clothes on a washing line during dry weather


## Lighten Up

- Replacing all old fashioned bulbs with low energy bulbs
- Replacing all halogen bulbs with low energy options


When you have completed your work on this theme, please send this sheet (or a copy) to:  
 FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, OXFORD, OX4 1JE

# Hot-spots: Lower electricity bills

This form helps you to find the 'Hotspots' the places where you are wasting the most energy - so you can focus on the actions that have the biggest effect. This exercise is only looking at the waste you can easily avoid, not your total energy use, so lots of things have been simplified.

## How to use this hot-spots form

Print out this page. Then fill in the number of squares in the answer to make a solid block for each question.

## For example:

On any average evening, how many rooms, that have no-one in them, are fully lit? Fill in 5 boxes for each room. You have 3 rooms, so fill in:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

When you have finished the form you will soon see the areas where you can make the biggest changes. You can add up the boxes to estimate your possible £ or CO<sub>2</sub> saving. Then go to the Activity sheet for that Topic - for example *Switching off* - to find the actions you can take.

**On average each box represents a wastage of £4 in electricity bills, or 10kg of CO<sub>2</sub>/yr.**

### Action Topic: Switching off

On any average evening, how many rooms that have no-one in them are fully lit? Fill in 5 boxes for each room.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Do you have lights that are left on all night (such as security lights)?

Fill in 9 boxes for each standard bulb, 4 boxes for each halogen bulb, and 2 boxes for each low-energy bulb that is left on all night.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Do you leave a desktop computer on, all or most of the time?

If yes, fill 17 boxes for each desktop computer, 5 boxes for a laptop.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Do you leave electronic items on, all, or most of the time?

Fill in 6 boxes for each printer that you leave on most of the time.

Fill in 4 boxes for each set-top box or server left on most of the time.

Fill in 4 boxes for each digital box left on most of the time.

Fill in 2 boxes for each Television that is used to listen to the radio.

Fill in 1 box for each of any other electronic items left on standby.

And for every ten phone-chargers routinely plugged in, fill in 1 box.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

### Action Topic: Power shift

How often in an average week do you wash or dry between 5pm and 9pm? For each time you wash clothes add 1 box, for each time you run a dishwasher or clothes drier per week, add 2 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

### Action Topic: Water and clothes

Do you often have more than one cup of hot water left over when you boil the kettle? If yes, fill in 3 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

How often in an average week do you wash clothes at over 30°C?

Fill in 1 box for each wash per week at 40°C or 50°C, and 2 boxes for each wash per week at 60°C or over.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

If you heat water or showers with electric: do you hang around in the shower for longer than it takes to have a good wash?

For each long shower add 1 box.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

How often do you use a tumble drier in the spring and summer?

Fill in 10 boxes for regular use - four times a week.

Fill in 5 boxes for occasional use - twice a week.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

### Action Topic: Lighten up

How many old-style light bulbs are in regular use? Add 1 box for each filament light bulb, and 1 box for every two halogen bulbs.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

## How did you do?

I filled in a total of \_\_\_\_\_ boxes

This represented a wastage of around £ \_\_\_\_\_ (at £4 a box) producing \_\_\_\_\_ kg of carbon dioxide (at 10kg a box)

My biggest hotspot was \_\_\_\_\_

My next biggest hotspot was \_\_\_\_\_

## How do you want to save money and CO<sub>2</sub>?

My target in the next 6 months is to drop \_\_\_\_\_ boxes, saving me £ \_\_\_\_\_ (at £4 a box) and reducing my contribution to climate change by \_\_\_\_\_ kg of CO<sub>2</sub>.

To measure your progress use the **Before and After** sheet for this topic. You can also use the **Group Plan** to keep track of your actions.

# Before & after: Lower electricity bills

This sheet helps you to work out your weekly electricity use, and whether your new low carbon habits make a difference. Fill this in at the beginning (before) and end (after) of the Action Group.

Name: .....

Name of action group: .....

## Before

Read your electricity meter  
(If you need help, see: <http://tiny.cc/Climate62>)

Date ..... Time .....

Day of the week .....

Start reading

--	--	--	--	--	--

Read your meter again one week later, ideally at the same time of day.

Date ..... Time .....

End reading

--	--	--	--	--	--

Work out how many units of electricity you have used:  
(end reading take away start reading)

Units used

--	--	--	--	--	--

## After

Read your electricity meter

Date ..... Time .....

Day of the week .....

Start reading

--	--	--	--	--	--

Read your meter again one week later, ideally at the same time of day.

Date ..... Time .....

End reading

--	--	--	--	--	--

Work out how many units of electricity you have used:  
(end reading take away start reading)

Units used

--	--	--	--	--	--

You can now compare the amount of electricity you used in a week at the beginning of the action group, and in a week at the end of the action group. Hopefully the second figure will be lower.

### Seasonal adjustment

However, electricity use will tend to be higher in the winter and lower in the summer. To get a better comparison, you need to adjust each figure depending on the month of the year.

Use a calculator to multiply the Units used figure above, by the figure for the month (in which the reading was taken) from the table on the right.

### Before

Units for comparison:

--	--	--	--	--	--

### Seasonal multiplier

Jan	0.89
Feb	0.97
Mar	0.96
Apr	1.08
May	1.13
Jun	1.16
July	1.07
Aug	1.09
Sept	1.04
Oct	0.93
Nov	0.92
Dec	0.87

Use a calculator to multiply the Units used figure above, by the figure for the month (in which the reading was taken) from the table on the left.

### After

Units for comparison:

--	--	--	--	--	--

Copy this sheet as many times as you need. Compare your results with others in your action group. At the end of the group, please gather everyone's sheet together, and send them back to Climate Solidarity:

FREEPOST  
RSEY-UCEL-SZLL  
Climate Solidarity (COIN)  
106-108 Cowley Road  
Oxford OX4 1JE

Thanks for your time.

**Activity pack:**

# Lower heating bills

Does your heating system just do its own thing and burn up cash? Together we can learn how to take control of our home heating system – to master the boiler, room temperatures and the thermostat – to make sure you get heat exactly when and where you want it. You will cut carbon and save money too. This topic will work best during the colder months when you have a chance to try out the learning as you go along. The activity sheets also include suggestions for workplace action.

## **Activity sheets:**

**Control the controllers**  
**Heat when you want it**  
**Heat where you want it**

**Convenor notes**  
**Group plan**  
**Hotspots**



# Activity:

# Control the controllers

## What you need to know

**Reducing heating is one of the easiest way to significantly reduce carbon emissions**

Heating is responsible for around two-thirds of the power we use at home, and reducing heating temperatures can cut energy use for heating by up to 15%. For an average semi-detached house that would save half a tonne of carbon dioxide (CO<sub>2</sub>), the main greenhouse gas, every year.

### Your house is full of heating controls

An ordinary house with gas central heating will usually have at least three main heating controls. If you have thermostatic radiator valves you may have ten or more controls in total. If you can get all these controls working in harmony, you will be able to get the heat you want, when and where you want it.

### Meet the three main heating controls

You have three main heating controls: the boiler flow thermostat, the water thermostat, and the main thermostat. (We will look at radiator thermostats in a separate Activity sheet).

### Discussion questions:

**Are some rooms too hot and some too cold in your house?**

**Is your bath water scalding hot, so that you need to mix it with lots of cold water?**

**During colder weather, do you ever find your house too hot? Do you sometimes open a window, or take off a layer to cool down?**

**Did you know you may have ten or more thermostats in your house? Do you know where they are and how they work?**

**Do you find your workplace, shops or other people's houses too hot?**

### What you will do:

Learn more about how your heating controls work  
Try making some adjustments.

### What you will gain:

Control over your heating systems  
An important first step to cutting energy waste.

#### a. Boiler flow thermostat

All boilers have an internal thermostat that controls the temperature of the water in the central heating pipes to prevent them overheating. This will be a knob or dial on the boiler - often labeled with a symbol of radiator. Boilers (especially modern condensing boilers) work most efficiently at lower flow temperatures, so you can get an immediate gain of up to 10% simply by turning this thermostat down.

#### b. Hot water thermostat

Hot water systems usually have a separate thermostat - again to prevent it from overheating. If you have a hot water tank, there will be a box with a dial, often attached to the side of the tank or the wall of the airing cupboard. If you have a 'combi' boiler there will probably be a dial or knob on the boiler itself, probably marked with the symbol of a tap.

It is wasteful having tap water that is hotter than you need, especially if it is just sitting in a tank waiting to be used, and you will need to mix it down with cold water to use it anyway. More than 600 people a year suffer from severe scalds from tap water, three-quarters of them children under five (RoSPA figures). The water is definitely too hot if you cannot bear to hold your hand under the hot tap for more than couple of seconds.

#### c. Central thermostat

Most modern central heating systems have a main house thermostat that controls the entire system. It is important that this is sited away from radiators and outside doors. Ideally, it will be sited in a warm room that you use regularly, like your living room, as this will make it more likely to respond to your actual heating needs. Wherever your central thermostat is, remember that it is just measuring the temperature immediately around it.

It is difficult to recommend a temperature to set your thermostat, because it depends on the location of the thermostat and your preferences. Older or less active people often prefer higher temperatures (21°C for example) whereas younger or more active people, especially children, do fine with lower temperatures (18°C for example). The recommended temperature for babies is in the range 16°C to 20°C as higher temperatures in bedrooms have been associated with cot death. Whatever temperature your thermostat is set at, you can make significant energy savings by turning it down to whatever is the minimum comfortable temperature for you.

## Action points for this month

### Reduce your boiler flow temperature

Find the boiler flow control on your boiler. Try setting it to the mid range of the dial. If it is already lower than this, leave it where it is. The best time to test this is when there has been a heavy frost. If your central heating still heats up the house satisfactorily then, you may be able to turn the boiler flow lower still. If not, you may need to turn it up a bit.

### Reduce your hot water temperature

Hot water thermostats rarely have temperature readings and are often inaccurate. Simply try turning down the control on your boiler or hot water tank by small steps until you find the right temperature for you.

Note: official guidance suggests that hot water tanks should ideally be above 60° in order to eliminate any risk from harmful bacteria; however, official guidance also suggests that tap water should not be more than 49° to avoid scalding. You will have to make your own decisions. With combi boilers, as the hot water is not sitting in a tank, there is no problem with lower temperatures.

### Reduce your main thermostat setting

- People get used to temperatures and need a while to adjust, so make all changes gradually.
- In the first week reduce the main thermostat by just half a degree centigrade - no more - so that you and your family can get used to it.
- If it feels fine a week later, then reduce it by another half a degree.
- Continue each week until you find a comfortable temperature. This might be a temperature where you would need to wear a light pullover if you were sitting still watching tv, for example.
- If you feel that the temperature is too low, then turn up the thermostat again by just half a degree - no more - and see how that feels for a week before turning it up again.

Note: if you have a radiator in the same space as your thermostat, its important not to change the setting on the radiator whilst you are finding the right temperature for your wall thermostat.

If you find that the new temperature is right for most of the house but that one room is too warm or too cool you should just adjust the temperature in that one room. See the activity sheet "Heat Where you Want It" for more information.



Photo: BLP

## Workplace & making wider change:

As we all know, it can be very unpleasant working in an environment that is too hot or too cold. Employers have a general duty under health and safety legislation for the workplace to be a 'reasonable' temperature. The legal minimum temperature is 16°C for office work, or 13°C for manual work, but there is no legal maximum at present. The TUC is calling for a 24°C maximum, which is also recommended by the World Health Organisation. Many workplaces and social meeting areas are overheated – if people working in an office in winter are wearing a single layer of clothing (a blouse or shirt) or are opening windows in winter, then temperatures are too high.

Workers should have some control over their environment. With modern heating technology, there is no excuse for systems which impose the same heating on everyone across a large workplace, regardless of personal preferences or the needs of different workers. In summer, workers should have access to fresh air, opening windows, fans and blinds. In winter, all staff should be able to adjust radiators in their area up or down.

The right working temperature is not just a question of actual air temperatures. As HSE guidance notes, if employers deny workers choice or flexibility in clothing, this can have a negative impact on thermal comfort. <http://www.hse.gov.uk/temperature/thermal/factors.htm>

In an office setting, heating is a major user of energy. Cooling buildings with air-conditioning is even more energy intensive. Poor workplace temperatures are a common source of complaint, but often no-one takes the time and trouble to give staff more control and comfort. Your union is ideally placed to gather information on the experience of staff and to take these views to the employer and / or building manager. Although extreme temperature problems are clearly a health and safety issue, addressing workplace temperature as an energy issue may also be a good tactic to use with reluctant employers. Speak to your local environment or green rep or other local union representative.



# Activity: Heat

## WHEN you want it

### What you need to know

#### Every minute a boiler is running it is burning fuel

Some people believe that it is most efficient to run the boiler continuously. This is wrong: gas boilers are very fast to heat up and it is far more efficient to run them only when needed.

#### Heat storage

To get the timing for your heating right, you need to take account of the fact that houses take time to warm up and, once warm, they take time to cool down. The actual amount of time this takes will depend on various factors, such as the amount of insulation you have. In winter, you'll get the most benefit from your heating if you set it to come on before you get up in the morning, but to switch off well before you leave the house to work. The heating should come on before you get home, but just as important, should switch off before you go to bed.

#### Where are your timers?

Your heating system probably has a central timer. This might be built into your main thermostat, stuck on the wall alongside the boiler, or built into the boiler itself. Ideally your hot water tank has a separate timer, though older systems may run hot water on the same schedule as heating. 'Combi' boilers provide hot water on demand, so won't have a timer for hot water.

#### Discussion questions:

Do you understand your heating controls? Do you turn on the heating when you want it, or do you just run it on the timer?

Do you ever turn off the heating when you don't want it?

Is your heating ever on when there is no one at home?

Do you ever heat up a tank of water and not use any of it?

#### What you will do:

Manage your central heating to give you heat only when you need it.

#### What you will gain:

Understanding how your heating systems work and control over the heating

Savings in energy, money and CO<sub>2</sub>.



Photo: R. Cao

Older style timers look like clocks and are easy to understand and adjust. New models are electronic and offer more functions (such as different times for different days) but are sometimes not very 'user-friendly', and take a bit of time to find your way around.

#### You can override the timer

Unless you follow a very predictable routine, you will need to actively control your heating if you want to cut out energy waste. All timers can be overridden. On older style controls, the best way to override the timer may be to move the little pins in the clock. More modern controls allow you to 'advance' to the next on or off, and don't disrupt the timer. Some even allow you to delay the next action for a set time. Override your timer whenever you need to.

#### It is more efficient to heat one room with an electric fire than a whole house with gas

Heating with electricity is three times more polluting and expensive than gas. However, it is more flexible: you can warm just the space you need. So if you only need to heat one room (for example if you are working at home, or you are sick) it is far more efficient to leave the boiler off and just heat that one room with an electric heater.

## Action points for this month

### Understand your timer(s)

There is probably no other gadget in your house that can have such an impact on your energy use and monthly bills. Its worth investing a bit of time to make sure you understand exactly how it works. If you haven't got the manual, try searching for it online. You might like to work together with someone else in your action group, or with someone in your house who is into gadgets. Make sure you can check the on / off times, adjust them, override the timer if you need to, and use any programmable functions - e.g. for different days.

### Work out the heat storage in your house

This is a little experiment to do on a cold day. Adjust the heating so it won't come on before you get home. Put it on as soon as you get through the door, and then time how long it takes before the room reaches a comfortable temperature (say 19°C). Its best if you actually measure this with a room thermometer if you can. Then, at the end of the evening turn the heating off and find out how long it takes to cool down again to a cooler temperature (say 16°C). You will probably find it will take longer to cool down than it did to warm up. Now you know how long before you get up or get home the heating needs to come on, and how long before you go out or go to bed it can go off.

If you have a hot water tank, you can also measure how long it takes to get the water hot. Start from a cold tank, switch it on, and then check the temperature of the water from the tap every 10 minutes. You will need to allow it to run a little each time to get the water from the tank to your tap.

### Set the timers

Decide exactly when you need your heating (and hot water if applicable) to come on and go off. Remember to allow for the delay in warming and cooling. Set the timer for your most common routine, but don't worry if this won't apply on some days of the week. If you have a programmable timer, you can allow for this - e.g. if you are all usually out on a Friday night, you may only need the heating on for an hour or so to warm the house before you come home. If you don't have a programmable timer, you can just override the timer on that day.

### Override the timers

You can obviously override your timer if you feel too hot or too cold. To save energy, start the habit of always switching off your heating when you leave the house, and when you go to bed (if it is not already off). Find a good way to remind yourself. This might be a mental reminder - 'when I pick up my keys to go out ... I'll check the boiler is off' - or it might be a note in a prominent place.

### Get a small fan heater

This is only worth doing if there are times when you only need to heat one room. A small heater will cost around £20. Most models have an in-built thermostat, which gives you more control.

## Making wider change

As mentioned in the wider change box on the first activity, heating at work is important in terms of energy, health and safety, and workplace wellbeing.

Many workplaces, offices and public buildings have heating on far longer than is necessary. For example schools often keep the entire building heated if only one part will be used at night. Alternatively, teachers may end up working in freezing classrooms if the heating is turned off centrally and they have no other facilities. Sometimes this is because the right investment has not been made in a modern and flexible heating system; sometimes it may just be that the employer finds it 'easier' not to bother with adjusting the heat to actual needs.

As well as physical infrastructure, matters like shift patterns, lone worker policies and home working arrangements can all have an impact on what needs to be heated when. Getting the heating timing right may therefore need to be tackled as part of wider union / employer dialogue. Speak to your green or environment rep about how energy use can be factored in to these discussions.

# Activity: Heat

## WHERE you want it

### What you need to know

#### Overheating the wrong rooms is the single largest source of waste heat in a house

You don't need every room to be the same temperature. Some rooms need to be warm and cosy, others can be cooler, and some may not even need to be heated at all. This activity is about matching the heating in your house to the places where you really need it. Get it right and you could save more energy than changing your boiler or double glazing your windows - at no extra cost to you at all.

#### Adjusting radiators

If you have old style radiators the valves are only really designed to be on or off. However, you may be able to get a half way temperature by turning them partially on.

Many modern systems have Thermostatic Radiator Valves (TRVs) which offer more control. TRVs switch off the radiator when the room has reached the temperature set on the dial. Typically they have 5 settings in which 3 is around 21°C (which is a good setting for a warm zone) and 2 is 16-18°C (a good setting for a medium zone). Note - TRVs control the temperature of the room, not the temperature of the radiator. Think of them like a wall thermostat, regulating if the heating is on or off.

#### Discussion questions:

Are your rooms the temperature you want them to be, or are they sometimes too hot or too cold?

Do you have thermostatic radiator valves? Do you find them useful?

Do you heat the hall or landing in your house? Why?

In your house which rooms do you want to be warm, which a bit cooler, and which don't need heating?

Do you ever use a patio heater or heat a conservatory? When and why?

#### What you will do:

Adjust your radiators room by room.

#### What you will gain:

You will get the temperatures you want in the places you want them.

You will reduce wasteful heating of cool and underused spaces.

You will reduce your climate impact and bills significantly.



Photo: Rakka

TRVs should be adjusted carefully and then ideally left alone. If you find the room too cold then turn the TRVs up just half a level, if it feels too warm then turn them down just half a level. If the room is in regular use, you shouldn't need to touch them again once you have found the right level. You can of course still turn off the radiator completely if the room is not in use.

#### Ventilation in bedrooms

Some people like to sleep with their window open, which adds considerably to the heat loss of their home. A much more energy-efficient way of keeping your bedroom from becoming stuffy is to turn the heating down or off. If you do sleep with the window open, only open it when you actually go to bed, and make sure that you keep your bedroom door shut, to prevent the open window sucking heat from the rest of the home.

*continued overleaf ...*

## Heating outdoors is the most wasteful of all

Running a patio heater regularly, or heating a conservatory, can use as much energy as heating the entire house. Conservatories can be a great way to enjoy the natural warmth of the sun, but they are very expensive to artificially heat, even if fully double glazed. If you do have a conservatory, treat it as an outdoor space for heating purposes.

## Making wider change

As mentioned in the wider change box on the first activity, heating at work is important in terms of energy, health and safety, and workplace wellbeing. The principle of warmer and cooler heat zones is equally applicable to a workplace setting.

Many workplaces do have TRVs, but often no-one takes responsibility for the settings. In actual work spaces (offices, class rooms etc) the ideal is if workers can control the heat as they need it. Provided people understand the controls - using them as a thermostat - and feel that they have the permission to use them, this should ensure the right working temperature.

A lot of heat can be wasted in areas such as corridors, stairs, unused rooms, or bathrooms. This is a particular problem in buildings from the 1950s and 1960s, which often have large areas of single glazing in corridors and stairs. Like domestic conservatories these are effectively outdoor spaces with very high heat loss and should be heated lightly if at all. Of course, it is then important that working spaces have doors which keep the heat in.

Unions can take a lead by engaging with employers on physical changes (e.g. investment in additional heating controls) and encouraging greater awareness and knowledge amongst employees. Ultimately it is in the interests of both employer and workers for heating to be efficient and effective. Your green or environment rep may already be taking action in this area. See if there are ways that you can support them.

## Action points for this month

### Step one: Decide which rooms and spaces you would like to be warm, which medium, and which cool

Typically, the living room, kitchen and bathroom might be warm rooms. Bedrooms might be medium rooms. Halls and corridors, or rooms you are not using could be cool rooms. But it is up to you, everyone has different preferences. The important thing is to think about different parts of the house needing different temperatures. The pattern also doesn't have to be set in stone - if you have a guest room, this might be a cool room when unused, but a medium room when you have guests staying.

### Step two: Cool rooms or spaces

In the areas you have decided can be cool, try turning the radiators completely off. If you decide that some spaces are then too cold, turn the radiators on the minimum amount. Keep adjusting once a day until the temperature seems right, and then leave it. Shut doors between cold and warm spaces.

If you need to use a cool room for a short period - for example, doing some DIY in a utility room - it is probably more economical to heat it with a small electric fan heater, just whilst you are in there.

### Step three: Medium rooms

If there is a TRV on the radiator, try it a little below the mid setting (for example 2 on a 5 scale). If this is too warm or too cold, adjust it by a little each day. Once you have it right, leave it there.

If you have an old fashioned on / off valve, turn the radiator off, then turn it slightly on until there is a partial flow through the radiator. You can also turn it fully on, or off, depending on whether the room is in use.

### Step four: Warm rooms

If there is a TRV on the radiator set it at the mid setting (for example 3 on a 5 scale) and adjust it a little at a time up or down until the room is consistently at the temperature you wish.

If you have an old fashioned valve, turn the radiator fully on. If the room is then too warm for you, you can turn the radiator off, but it may work better in the long run to reduce the main thermostat, or reduce the amount of time that the boiler is on.

# LOWER HEATING BILLS

## NOTES FOR ACTION GROUP CONVENOR

### General comments

This is a good group topic: there are lots of low cost activities, chances for the people to work together, and opportunities to save money and carbon . This is a great topic for the cold months.

This topic assumes that people have central heating (ideally gas, but oil or LPG is also possible) with radiators and a central thermostat. People who are heating with solid burners, open fires or electric storage heaters will gain more from the Cosy Home topic.

Getting properly to grips with heating controls can take a bit of time and thought. The activities should help you all to do this in a structured way. If people are willing, it is well worth buddying up and looking at your home controls together - two heads are better than one.

As everyone knows, heating is expensive - and it is likely to keep getting more expensive as North Sea gas runs out. Many people already try hard to keep their heating bills down. The activities in this topic will help you to get the best out of your heating system. However, this is only one part of the picture: good insulation is crucial for keeping the heat in (see the Cosy Home topic); switching energy supplier may help reduce bills; and of course there is no substitute for decent wages and fair prices, so that people can afford to heat their houses.

**Timing.** Most of the activities in this topic aren't suitable for the summer months, as most people will have their heating turned off completely. If you are starting your action group in late spring, it may be better to choose another topic. You could always come back to this topic in the autumn.

### MEETING ONE: HOT SPOTS AND GETTING 'BUY-IN'

The hot spot sheet should be fairly straightforward. The sheet is based on sound figures, and should give a good estimate of where people can make the most effective changes.

Changing heating settings will require the cooperation of the people you live with. The more that you can get family or house-mates involved, the better the chances of success. At the first meeting have a good discussion in the group about how to do this and exchange experience at meeting two.

### MEETING TWO: CHOOSING YOUR ACTIVITIES

Start by asking everyone if they talked with the people they live with and what happened. Share tips and ideas.

There is no special order to the activities. You could start with Control the Controllers because it usually makes more sense to change the heat output of the boiler and main thermostat before changing room settings. However changes in one part of the system will change other parts, so whatever order you do the exercises people may find that they want to go back and rethink their earlier settings.

Whatever people do, the important rule is that *all changes should be made just a little at a time to see how it feels before changing it again*. Small changes in temperature can make a large difference to heating bills, so it is worth getting it just right.

Start using the Group Plan sheet as a joint record of what has been tried.

### MEETINGS THREE TO FIVE: ACTIVITIES

#### CONTROL THE CONTROLLERS

In this exercise and ‘Heat When You Want It’ some people may be struggling with badly-written thermostat and boiler manuals, or confusing controls. The best way to tackle this is for people to work together and help each other.

**Water temperatures.** As noted on the action sheet, official guidance is that hot water should not be stored at less than 60°C, because of the potential risk of infection such as ‘Legionnaires Disease’. We feel it is responsible to mention this - and households including elderly people or children may want to be especially careful. However it should be stressed that the odds of contracting LD from water stored below 60°C are very low. For example, solar hot water is usually stored below this temperature and there is still no known case of LD being contracted from a solar system in the UK.

## **HEAT WHEN YOU WANT IT**

Using the override functions on a modern timer can save a lot of energy, but first you need to understand them. So here again you may need to get the controller manuals and find the most technically minded person in the group to explain them.

## **HEAT WHERE YOU WANT IT**

The point of these activities is that you can save a lot of energy without any loss of warmth by heating just the spaces you need to heat. The main group exercise in the meeting is talking about heat zones: which rooms members like to be warm, medium and cool. Once they have this in mind they can go home and adjust the heating to fit. Although there is a lot of talk about Thermostatic Radiator Valves (TRVs) it is not vital that people have them. The most important aspect is turning radiators down (or off) in rooms that are not being used.

## **ADDITIONAL ACTIVITIES**

There are only three main activities, so if the group needs a further activity it should look at one of the activities in Lower Electricity Bills (such as ‘Turn it Off’) or some of the simple DIY exercises in Cosy Home (such as Draughtproofing)

## **FINAL MEETING**

Celebrate what you have done together so far, and think about next steps.

If you haven't already done so, fill in the final parts of the group plan as a record of the group's efforts. Please send us a copy at FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, Oxford OX4 1JE. This will help us to learn from your experience, and to evaluate the impact of the whole campaign.

## **NEXT STEPS**

If the group has gone well, then tell other people about what you have learnt. Members of the group could write articles for your local union or workplace newsletter, or send them to Climate Solidarity for us to publish. There may be opportunities to make a presentation to colleagues, either in a union setting, or in meetings organised by your employer. Climate Solidarity offers training for action group members interested in presenting about the campaign.

If the group is keen to keep on meeting, why not go back to the Climate Solidarity menu and pick another topic. If you want to keep focusing on heating bills, then the Cosy Home theme may be the one for your group. However, you may want to do something completely different, and choose one of the topics on travel or food.

Alternatively, there are suggestions on each of the activity sheets for promoting lower energy use across the workplace. Your group could champion these initiatives to make a much bigger difference. Make sure that you work closely with your union reps, and let Climate Solidarity know how you get on.

# Lower heating bills: Our action

Name of Action Group .....

Contact name .....

Contact e-mail, or mobile phone number .....

As you work through the activity sheets as a group, use this sheet to keep a record of how many action group members try each suggested activity. You'll need to refer to the individual action sheets to see what each of the actions involves. Don't worry if you don't do them all - though of course the more actions you take the bigger impact you will have. You can also keep a record of how many members plan to continue that new activity or behaviour. You might want to display the sheet somewhere that all action group members can see it.

Number of members who were already doing this action

Number who have tried this for the first time

Number of members who intend to continue this action

## Control the controllers

Check the boiler flow thermostat to the radiators, and reduce if possible

Check and reduce the hot water thermostat on the boiler or tank, and reduce if possible

Check the main room / house thermostat, and reduce if possible


## Heat when you want it

Work out the heat storage time of your house and / or hot water tank

Check any hot water timers, and adjust if required

Check any central heating timers, and adjust as and when required


## Heat where you want it

Work out which rooms you want to be cool, medium and warm

Adjust the radiators in each room

Leave patios and conservatories unheated


When you have completed your work on this theme, please send this sheet (or a copy) to:  
 FREEPOST RSEY-UCEL-SZLL, Climate Solidarity (COIN), 106-108 Cowley Road, OXFORD, OX4 1JE

# Hot-spots: Lower heating bills

This form helps you to find the 'Hotspots'- the places where you are wasting the most energy - so you can focus on the actions that have the biggest effect. This is only looking at the waste you can avoid, not your total energy use. There may be many other ways that you can reduce your total energy use (for example the insulation ideas in *Cosy Home*), but these are the low cost actions that will get you started.

## How to use this hot-spots form

Print out this page. Then fill in the number of squares in the answer to make a solid block for each question.

## For example:

How many hours, in an average day, is the heating on when you are asleep or not in the house? For each hour, fill in three boxes. You run it an hour before you get up, and hour before you get home and an hour after you go to bed, so you fill in 9 boxes:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

When you have finished the form you will soon see the areas where you can make the biggest changes. You can add up the boxes to estimate your possible £ or CO<sub>2</sub> saving. Then go to the Activity sheet for that Topic - e.g.: *Heat Where You Want it* - to find the actions you can take.

**Each square represents a wastage of around £5 in gas bills, or around 25kg of CO<sub>2</sub>/year.**

### Action Topic: Control the controllers

**The flow temperature on your boiler - what is it set to?** If it is set above "mid" fill in 12 boxes. If its at "maximum" fill in 20 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

**The thermostat on the hot water cylinder - what is it set to?**

Start from 55 degrees C, for each degree over 55 fill in 1 box.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**What is the thermostat setting for your home?**

Start from 17°C, for each degree over 17 add 15 boxes.


### Action Topic: Heat WHEN you want it

**How many hours, in an average day, is the heating on when you are asleep or not in the house?** For each hour, fill in 3 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**If you have a hot water cylinder, is it controlled on a timer** (add 5 boxes) **or is it kept hot all the time** (add 10 boxes) ?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

### Action Topic: Heat WHERE you want it

**If you have a separate hall by the front door, do you heat it?**

If yes (but you have a porch) add 20.

If yes (and you have no porch) add 40.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**Do you have heated radiators on landings or in corridors?**

If yes, fill in 7 boxes for each heated radiator.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**Do you sleep with your bedroom window open?** If yes add 15 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

**Do you heat rooms that are unoccupied or rarely used** (e.g. spare rooms and storage rooms)? For each underused room that is heated fill in 20 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

**Do you have a gas patio heater?** In an average week in cold weather, how much do you use it? Add 1 box for each half hour it is on.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

## How did you do?

I filled in a total of \_\_\_\_\_ boxes

This represented a wastage of around £ \_\_\_\_\_ (at £5 a box) producing \_\_\_\_\_ kg of carbon dioxide (at 25kg a box)

My biggest hotspot was \_\_\_\_\_

My next biggest hotspot was \_\_\_\_\_

## How do you want to save money and CO<sub>2</sub>?

My target in the next 6 months is to drop \_\_\_\_\_ boxes, saving me £ \_\_\_\_\_ (at £5 a box) and reducing my contribution to climate change by \_\_\_\_\_ kg of CO<sub>2</sub>.

We are planning an on-line tool to help you measure progress on cutting your gas use. Please use the **Group plan** to keep track of the action that you are taking.



# Activity pack:

# Cosy home

Work with friends and colleagues to do some basic DIY to make your house more efficient and comfortable. You will learn how to do your own draught-proofing and insulation, and how to keep the costs right down. This is your chance to get done all those things you've been meaning to do for years. This topic does require some investment of time and effort, and some costs up-front, but can deliver some of the biggest savings. It will work best in a supportive group who want to focus on activities outside the workplace.

## Activity sheets:

**Measure up**

**Plan and shop**

**DIY action**

## Factsheets:

**Insulate or re-insulate loft**

**Pipe insulation**

**Insulating behind radiators**

**Draught proofing**

**Temporary double glazing**

**Lag or re-lag hot water tank**

**Cavity wall insulation**

**Hotspots**

**Cosy home shopping list**



# Activity: Measure up

## What you need to know

### You can do it yourself

Stopping draughts, adding insulation, and lagging pipes are all jobs that you can do yourself. Together, these simple steps can make a major difference to the comfort and energy efficiency of your home, reducing both your energy bills and your carbon pollution. All of these tasks can be done with just basic DIY skills (no drilling, plumbing, electrics or carpentry involved). Even if you are a DIY novice, with the information available here, and the support of other Action Group members, you'll be creating your cosy home in no time.

There are some cosy home measures that do need paid professional help: such as cavity wall insulation or fitting a more efficient boiler. These measures are worth looking at as well.

### It doesn't have to be expensive

Creating your cosy home will require you to spend some money on materials, and some time on fitting them. However, you'll start saving money on your heating bills straight away - and these savings go on year after year.

The box on the right gives you some basic information about the cost of creating your cosy home, and some idea of what you can expect to save on your heating bill. Working together as part of an Action Group will help keep costs down, as you can shop around for the best prices, and buy in bulk.

### Discussion questions:

**Are there parts of your house that feel cold, or where you notice draughts?**

**Are there any jobs you've been meaning to do for ages that might save energy around the home?**

**What has stopped you making your house more energy efficient? Is it a lack of time, knowledge, money, or something else?**

**Are you keen on DIY? Can you help others, or do you need help?**

## What you will do:

Fill in your 'hotspots' sheet to find out where you're wasting the most energy.

Measure up and start thinking about the materials you'll need.

## What you will gain:

A better understanding of how to stop heat escaping.

The beginnings of a plan for your cosy home.

## Investments for a cosy home

### Reflective panels for radiators.

Initial Cost: £2-8 per radiator. Save £1-6 a year per radiator.

### Full draught proofing of doors and windows.

Initial Cost: Up to £100 if all doors and windows need draught proofing. Save £25 a year on heating bill, and improve comfort.

### Fit a jacket to your hot water cylinder.

Initial Cost: About £12. Save £35 a year on your heating bill.

### Insulate your hot water pipes.

Initial Cost: Around £10. Save £10 a year on your heating bill

## Action points for this month

### Hotspots

If you haven't already done it as a group, get everyone to complete the hotspot sheet for this topic. This will show you where you are losing most heat from your home, and help you work out what jobs need to be done.

### Measure up and make a shopping list

The first step is to measure up - pipes that need lagging, windows and doors that need draughtproofing, and so on.

If you haven't already got one, you'll need a tape measure. 3m tapes are available from DIY stores for less than a pound and will be fine for most jobs; a 5m or 8m tape may save you a bit of time if you are measuring a loft.

To make life easier, we've put all the things that you might want to measure on a shopping list (see separate sheet). You may want to check some of the task fact sheets to work out exactly what you need to measure, but also use your common sense: if there is a draught under a door, you need some insulation on the bottom, and so on. Make sure everyone has a copy of the blank shopping list to take away.

Not everyone has a loft, or a hot water tank, so just focus on what is relevant to you. We recommend measuring up for everything you need in one go, so that job is done, even if you don't feel you can do all the buying or fitting right now. Depending on where you live, the job might take as little as 15-20 mins, or as much as a couple of hours or more, if you have a big loft or pipes under your floors.

**Bring your shopping list to the next meeting.**



# Activity:

## Plan and shop

### What you need to know

#### Where to buy

The materials you need to make your house a cosy home are readily available from well-known DIY stores such as B&Q, Homebase and Wickes. There may be specialist shops in your area that have an even better or cheaper range and very knowledgeable staff. The advantage of the large stores is that if you find you don't want something you can usually take it back for a refund.

#### Get bulk prices

You will get the best prices by putting in a bulk order with a local builders' merchant or buying in bulk on the internet. If you open an account with a builders' merchant you may get a further trade discount of up to 20%. To get the best prices you will need to shop around and probably buy from several different places - this will need a bit of local research.

#### Discussion questions:

**Are the household inventories of group members similar? Is there anything you've missed out? Are there any group members who have similar activities planned – can you help each other?**

**What do you think are the priorities – how much will it cost, and how much will you save on your heating bill?**

**Where can you buy the materials?**

### What you will do:

Combine your household inventories and plan for some group home improvements.

Prioritise the changes that will really make a difference to your home energy use.

Order the materials you need.

### What you will gain:

Cheaper prices for buying in bulk.

Help and support in planning from the rest of the group.

Sharing the tedium of tracking down and buying the products.



Photo: Darrren Hester

### Get all the help you can

Many local councils have grants to help cover the costs of insulation, or will even fit it for free. Check your council's website, or look them up in the phone book. If you are a council or housing association tenant, talk to your landlord or tenant association about getting better insulation. There are also national grant schemes. If you own your own home or rent it from a private landlord, and you or someone in your house are on certain benefits, you may be eligible for a number of sizeable insulation grants and special offers under the Warm Front scheme in England ([www.warmfront.co.uk](http://www.warmfront.co.uk)), HEES in Wales ([www.heeswales.co.uk](http://www.heeswales.co.uk)), the Energy Assistance Package in Scotland ([www.energyassistancepackage.com](http://www.energyassistancepackage.com)), or the Warm Homes scheme in Northern Ireland ([www.warm-homes.com](http://www.warm-homes.com)).

# Action points for this month

## Plan how you are going to work

Before you buy materials, decide as a group how you are going to work.

## The full monty

If you are up to the challenge, it can pay off to buy all the materials everyone needs for all the cosy home jobs in one go. You will need to think about delivery, storage, and sharing costs, but think how good it would feel to have everything you need for your cosy home all bought and ready.

## One step at a time

If members of the group have a long list of tasks and materials, or you are not too sure how it will all work, it may be better to pick a task (e.g. draughtproofing doors) that everyone will try to start with, and just buy those materials first.

Once you have decided, work out the materials you need for the next stage from your shopping lists.

## Bulk buying

If you want to shop together, and you have a lot of different materials to get, give each person one product to track down. For example, if your shopping lists show that you need 28m of radiator reflectors, then give someone the job to find the best price and buy the materials. If you need 15m of pipe lagging, assign this to someone else.

## Some example prices

The following list gives some examples of how much materials may cost. However, if you know of cheaper local deals, and because you are buying in bulk, you may be able to get them even cheaper. And don't forget that the 'payback' time of investing in energy saving materials is often very short – so invest now, and continue saving energy for years to come.

### B&Q

Draughtproofing Seal: £10.48 for 20m

Hot Water Jacket: £11.98

### Focus

'Blow dry' double glazing film: £6.99 for 5m

Glass Fibre loft insulation: £29.99 for 170mm X 7m

### Wickes

Pipe Insulation: £3.99 for 3m

## Grant info

This is also the time to find out more about grant schemes available in your area, particularly for jobs you can't do yourself, like cavity wall insulation. The following websites will get you started:

### Energy Saving Trust grants database:

<http://tiny.cc/Climate29>

**National grant schemes:** [www.warmfront.co.uk](http://www.warmfront.co.uk) (England), [www.heeswales.co.uk](http://www.heeswales.co.uk) (Wales), [www.energyassistancepackage.com](http://www.energyassistancepackage.com) (Scotland), [www.warm-homes.com](http://www.warm-homes.com) (Northern Ireland)

Don't forget to try your **local council** as well.

# Activity: D.I.Y. Action

## What you will do:

One or more DIY jobs to help make a cosy home.  
Work together and help each other.

## What you will gain:

New skills and knowledge.  
A cosier home.

## What you need to know

### Climate Solidarity fact sheets

We have put all the basic information that you need on a fact sheet for each task. You can download these from the Climate Solidarity website, just like all the other Climate Solidarity materials.

### Where to find out more

Staff at DIY stores will usually be able to give you advice, or give you a free leaflet on how to use insulation products. B&Q has a DVD which covers all the main insulation jobs (see <http://tiny.cc/Climate75>) on sale for £2. There is also lots of free information available online, including videos, some of which are listed on the factsheets. You can also watch a quick demonstration of all the main jobs at: <http://tiny.cc/Climate12>

The very best advice is from each other. If someone in the group has already fitted loft insulation for example, get them to share any tips or advice with the rest of the group. Working together means that you can learn together, as well as having more pairs of hands on the job.

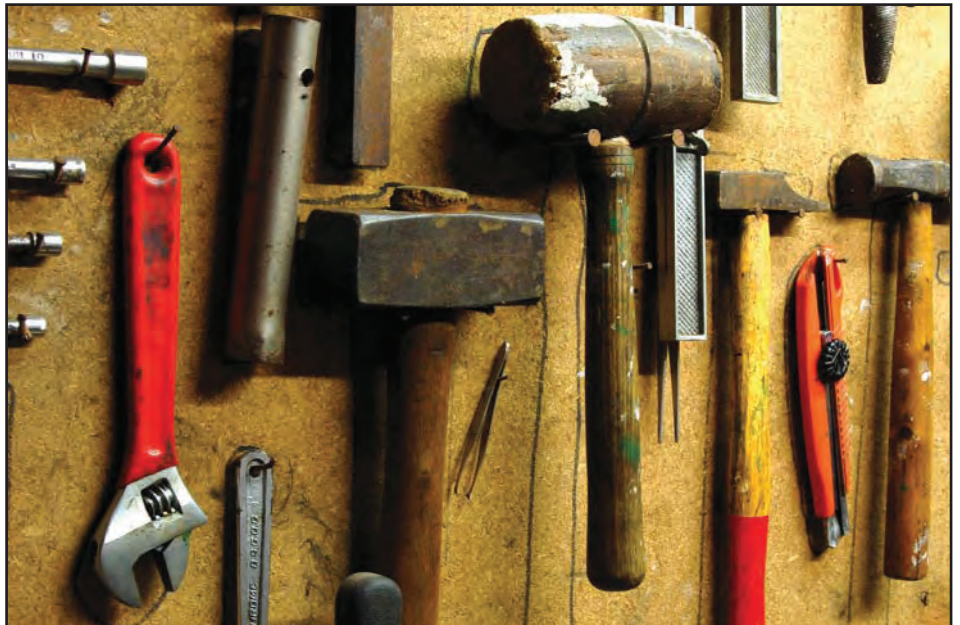


Photo: Suzanne Bouron

### It's not that hard

None of the basic insulation jobs need special tools or skills. The hardest part is getting round to measuring up and buying the bits you need – after that it's mainly a case of cutting and sticking. Some of the jobs will take time, but you will find that practice will help you to do a fast, neat job. By teaming up with someone else in the group, you'll find it easier and faster and you can learn from each other.

### Share your skills

There is a large demand for these simple improvements. Many people don't feel that they have the time or skills to do it themselves. Builders are expensive and often won't do these kinds of smaller jobs. So think of someone who needs your help - a family member, a friend, a neighbour - and share your new skills. Also tell them about the existing deals for cavity and loft insulation, and help them to apply. If you are enterprising, it could even be a way to earn some extra money.

### Discussion questions:

When is the best time to get DIY jobs done?

Who lives nearest to each other? How do you feel about working together?

What else do we need to get started?

## Action points for this month

### A cosy home party

A great way to get started is to have a 'cosy home party'. Someone in the group hosts it at their flat or house, and in return for providing the tea and biscuits, gets everyone else to help them make their place cosy. Fix a date and time and make sure you have all the materials. If everyone feels a bit of a DIY novice, you might want to start by watching the B&Q DVD together, or (if you've got good internet access) the relevant online videos for the tasks. You could focus on just one big job – like insulating a loft – or have a go at a few different things – like putting foil behind a radiator, insulating a door and a window, and lagging some pipes. Set yourself a challenge. Learning and working together like this is much more fun than trying to do it all on your own.

### Book your DIY times

You could all host a cosy home party in turn, but if that feels like too much organising, it's still worth working together to get the jobs done. Pair up with someone who lives close to you, and agree a couple of dates (e.g. this Saturday, and the one after). You could work with someone else in the action group, or just someone else that you know. Work together on one home, and then return the favour.

### Keep going...

It may take a couple of months or more for everyone in the group to complete their cosy home, depending on how many tasks there are, and how you have organised the work. Keep meeting as often as you need, or keep in touch with a Facebook group or similar. If you didn't buy all your materials at the beginning, take turns to source the materials that you need. Remember to share your tips and learning with each other. Celebrate with a drink or a meal when it's all done.

## Making wider change

This activity has focused on making your own homes cosier, to save you money and cut your carbon pollution. One simple way that you can help create wider change is to tell other people (friends, relatives, neighbours) about what has worked for you.

However, as well as individuals taking action for themselves, we also need government action to bring all homes up to a high standard of insulation. The UK has some of the least energy efficient housing in Europe. The End Fuel Poverty campaign ([www.endfuelpoverty.org.uk](http://www.endfuelpoverty.org.uk)) is a coalition of social and environmental charities, community organisations and trade unions campaigning for comprehensive government action to help make sure everyone can afford to heat their home, including decisive action to improve insulation. Could your union be (more) involved in this campaign?

Heat loss is an issue in workplaces as well. In some workplaces, there may be scope for retrofitting to improve the energy efficiency of existing buildings. New buildings offer special opportunities to maximise insulation at the design stage and to cut waste and pollution for years to come. The more active and organised your union is in the workplace, the more effectively they can represent staff views to estate managers and capital planners, including environmental concerns. Why not get involved in your local branch, or raise these issues with your rep?



# Factsheet: Insulate or Re-Insulate your Loft



Comfort:



Savings:



around £150/year

Initial cost:



around £250

Time to install:



half a day

(after the loft has been cleared)

DIY skills required:



Mucky job? **yes**

## Why do it?

This is the action that will make the biggest difference to your heating bills. It will also make a major difference to the comfort of the upstairs rooms. You can easily install the insulation yourself, and there are subsidised deals to have it fitted for you. It is also well worth doing if you already have some loft insulation but less than the recommended 27 cms.

## The cost?

It will cost around £250, but much less if you can buy insulation in bulk or on special offer (many DIY stores offer it for half price or less). Energy companies are required by the government to provide subsidised deals and will insulate an average loft for you for around £250. If you are over 60 or claiming benefits it can be free (see <http://tiny.cc/Climate29>). To find the latest deals call the Energy Saving Trust 0800 512 012.

## What you will need

**Rolls of insulation.** The main form of insulation is quilts of mineral wool or glass fibre sold in large rolls. Some of the latest products also have reflective foil, though these are more expensive.

**A face mask.** Be careful not to inhale the fibres. You may also want goggles.

**Gloves and old clothes.** The fibres can itch so you should wear gloves. You will want to change and wash clothes immediately after installing.

## What do you do if you want to store things in the attic?

You can easily build an insulated base for part of your attic. Fit one layer of the standard loft insulation between the joists. Then place sheets of 50mm of solid foam insulation (often known by the brand name of Kingspan or Celotex) across the joists with a layer of chipboard or MDF on top to provide a strong floor. The solid foam will be strong enough to hold the weight of storage.

Mark the location of the joists carefully and screw the chipboard to the joist with 100mm screws through the solid foam sheet. Do not use nails as banging them in could damage the plaster in the rooms below.

## What do you do with sloping ceilings?

You have two DIY options: You can cut solid foam insulation (often known by the brand name of Kingspan or Celotex) to the width of the joists and slide it down from the attic. Or you can pack the space with rockwool insulation pushed down from the attic. The most effective option is to ask a builder to dry line with insulation on the room side but this is best done as part of a major replastering or renovation job.

## What do you do if you have a flat roof?

Flat roofs require the professional installation of either insulated dry lining inside the house or a new insulated roof covering. Neither are covered by existing grants or subsidised schemes.

## Further info:

General advice - <http://tiny.cc/Climate01>

Dealing with small holes and sloping ceilings - <http://tiny.cc/Climate02>

More advice from the Energy Saving Trust - <http://tiny.cc/Climate03>

## How to do it

You should lay a minimum of 270 mm (approximately one foot). This will need two layers of quilt insulation: one between the joists and one across the joists at right angles. A further layer (laid once again at right angles) is also worthwhile and will pay for itself.

Remember to also insulate all pipes in the attic and wrap insulation over tanks or insulate them with a special tank jacket – see the relevant factsheets for help with this.

Remember to insulate the door or hatch to the loft (for example backing it with insulation). The attic door can also be a major source of draughts so put draught stripping all around it. See the relevant factsheet for more information.

# Factsheet: Pipe insulation



Photo: Velo Bus Driver

Comfort:



Savings:



around £1/metre per year, or up to £40/metre for central heating pipes

Initial cost:



around £1 per metre

Time to install:



10 - 20 minutes per metre

DIY skills required:



Mucky job? Only for underfloor pipes

## Why do it?

If the hot water pipes are lagged, the water in the pipe will stay warm for longer so you can draw off hot water straight away without waiting for the whole pipe to fill. This is a great convenience and a small but regular money saver. You may also be able to turn down your hot water temperature (on the boiler or tank) as the water will cool less on the way to the tap. Insulation also means pipes are far less likely to freeze and burst. It is worth doing both hot and cold water pipes in lofts.

Central heating pipes that run in a cold space (such as a cellar or under the ground floor) are particularly worth lagging. You may be losing up to £40 for every uninsulated metre. There is generally no need to insulate central heating pipes that are within your living space, unless they are throwing out a lot of heat where you don't want it.

## The cost?

Standard pipe lagging (insulation) costs around 50p - £1.25 per meter depending on the thickness. Higher quality insulation products are also available.

## Measuring up

You will find hot water pipes going to your hot taps in the kitchen and bathroom, coming from your boiler, going into your hot water tank (if you have one) and running between all these things.

You will find central heating pipes coming from your boiler, and going to and from each radiator.

Some pipes will be easy to access (e.g. under a kitchen sink) whilst others may be more difficult to get at (e.g. under floorboards). You'll have to decide which pipes you can get to, but obviously the more you can insulate the better. Your top priority should be any uninsulated central heating pipes in a cold space (such as a cellar or under the ground floor).

Pipes come in two common sizes - 15mm (usually for hot water) and 22mm (usually for central heating). You need to measure up how much you need of each size.

## What you will need

Basic foam pipe insulation can be bought from any DIY shop. As well as coming in 15mm and 22mm sizes, it is available in thinner and thicker versions. It is always worth getting the thicker insulation, unless there is no space to fit it. Higher quality rubber or phenolic foam are also available from builders' merchants. These are more expensive (around £10 / meter) but have much higher insulation properties, and are worth using on central heating pipes if you can afford to.

You will also need a **sharp knife** (such as a modeling knife, or a Stanley knife) to cut the insulation, and **gaffer, duct or foil backed tape** to wrap round joins or awkward corners.

15mm

22mm  
diameter

## How to do it

Fitting pipe insulation is very simple. Do all the straight lengths of pipe first, cutting to fit. Wind around once with gaffer tape (or foil backed tape) at each end and around any joints and gaps to make a tight seal. On bends you may be able to butt two lengths of insulation together, by making a 45 degree angle cut (see the video).

Otherwise wrap the pipe bend several times with strips of felt sleeving, followed by several strips of bubble wrap. Tie tightly with gaffer tap to hold and seal the join.

**Recommended video:**

<http://tiny.cc/Climate04> - American workman 'Pat' shows how to cut and fit pipe insulation.

# Factsheet:

# Insulating behind radiators



Photo: Rakka

Comfort:



Savings:



around £1 - £6 per radiator/year

Initial cost:



around £2 - £8 per radiator

Time to install:



half an hour per radiator

DIY skills required:



Mucky job? No

## Why do it?

Radiators produce heat in all directions, and heat up the wall behind them. This is fine when they are heating an interior wall, but when they are mounted on an outside wall a quarter of that heat is lost into the wall. The total waste is especially high in buildings without insulated cavity walls. By reflecting heat back into the room they should also make it more comfortable.

## The cost?

From £2-£8 per radiator

## What you will need

### Radiator insulation

There are different kinds of radiator insulation on the market.

The cheapest come as a roll of insulation (foam or bubble wrap) faced with a silver foil to reflect heat. An alternative version comes as reflective panels with a sawtooth design to reflect heat back. These cost around £8 per radiator but are claimed to be more effective. Brandnames include Heatkeeper Radiator Panels, Novitherm Heat Reflectors.

Photo: Mirjana Chamberlain-Vucic



## Glue or fixings

You will need to attach the insulation to the wall. You could use tape, stick-on Velcro, or a gun adhesive such as No More Nails (though this will damage wallpaper). You may also need a sharp knife to cut the insulation to size.

## How to do it

You do not need to remove the radiator. Simply cut the insulation to size, making slots to go around wall fittings or pipes if required.


A guide to foil backed insulation roll - <http://tiny.cc/Climate05>

A guide to installing reflective panels - <http://tiny.cc/Climate06>

# Factsheet: Draught Proofing



Photo: Junap

Comfort: 

Savings:   
around £25/year in a typical home, but  
can be much higher in a draughty home

Initial cost:   
around £1/metre

Time to install:   
half an hour per door or window

DIY skills required: 

Mucky job? No

## Why do it?

Draughts are a major source of energy loss. Even more importantly, a draught can mean that you feel cold, even when the air temperature in the room is quite warm. So stopping draughts has a double benefit.

## The cost?

Window: £3 for draught strip. Door: £4 per door for draught strip, £6 for a brush, £7 for a rubber seal. Floors around £10 per floor.

## What you will need

### For windows and doors

**Draughtstrip** - rubber draughtstrip is available in white and brown and E and P profiles. (P is best for larger or irregular gaps). Do not buy foam strip, it does not last.

**Brushseals** - for the sliding edges of sash windows.

### For doors

**Door brushes** - measure the door to check the width. The cheaper brushes have a plastic strip, but it is worth paying extra for a metal strip for external doors.

**Rubber seals** - for very draughty outside doors - they cost around £7 each.

### For floors and other gaps

**Sealant cartridges and cartridge gun** - around £4 for the gun and £4 per sealant cartridge. You can use any sealant (often called “caulk”), but an acrylic wooden frame sealant is best. A specialist product for sealing floors is called Bona Gap Master and comes in a wide range of colours for £4 a cartridge.

**Wooden strips and panel pins** - for larger gaps, especially between floor and skirting board.

## How to do it

### Finding the gaps

Go around the house on a cold windy day and feel around all doors, windows, floors and skirting boards to find the gaps (you can also find draughts with a feather). To really deal with draughts you also need to block the places where air is going out, which you will not be able to feel. So check for gaps around the tops of rooms, especially on a top floor. Typical problems are holes where pipes go into the attic (check especially in airing cupboards) and poorly fitting attic hatches.

Overview on doors and windows -  
<http://tiny.cc/Climate08>

How to insulate sash windows -  
<http://tiny.cc/Climate09>

More about doors - <http://tiny.cc/Climate10>

### Floors and other gaps

Caulking and sealant work well for narrow gaps of 2mm or less. Using the cartridge gun run a bead of sealant along the crack and gently press in with a wet finger. For larger gaps you may need to fill the hole before caulking - solid foam insulation can be cut to fit.

In floors you can insert thin strips of wood or slice strips of solid foam insulation before sealing. An alternative product is Gapseal, a filler putty designed for floors.

How to use a sealant gun for gaps -  
<http://tiny.cc/Climate11>

For larger gaps between floorboards and skirtings, run a thin strip of wood (for example 2mmx20mm) flush with the skirting and fitting tight to the floorboards. Nail it in place with panel pins.

# Factsheet:

## Temporary double glazing



### Why do it?

Double glazing windows does not make as large an energy saving as other measures, but contributes far more to the overall sense of comfort in a room. However replacement windows (or professional secondary glazing) are a major expense. Plastic sheeting is easy to install and, although suitable for only one winter, will save enough energy to pay for itself. It will also cut out draughts and is almost undetectable.

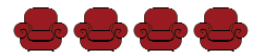
### What you will need

**Plastic sheeting** - for the best results you need special window plastic sold in kits. These can be bought at any DIY store or on the internet. There are large discounts for bulk purchases.

**Double sided tape** - this is usually provided in a kit, or can be bought at most stationers.

**Modelling knife** and a **hair dryer**

**Comfort:**



**Savings:**

around £8 year per window



**Initial cost:**

around £4 per window



**Time to install:**

20 minutes per window



**DIY skills required:**



**Mucky job? No**

*Photo: Leslie EB*

### How to do it

Fit double-sided tape all around the window (wipe surfaces first to get a good clean grip). Attach plastic sheet tightly to the tape, allowing some overlap. Gently heat with the hair dryer and the plastic will tighten and become fully transparent (this only works with the special plastic provided in kits). Trim excess off with the modelling knife.

Short video about installing temporary double glazing - <http://tiny.cc/Climate14>

Slightly longer and more detailed video - <http://tiny.cc/Climate15>

# Factsheet:

## Lag or Relag Hot Water Tank

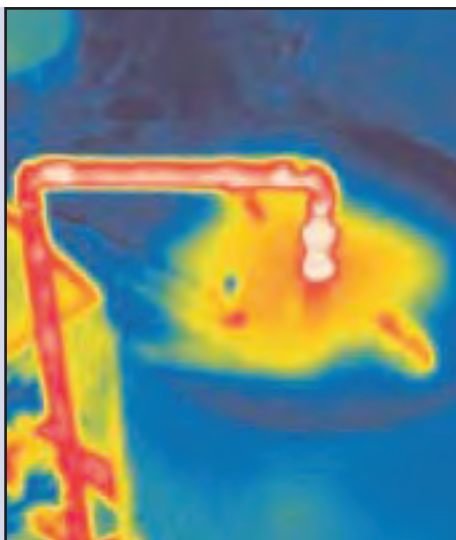


Photo: Dylan Pankow

Comfort:



Savings:



around £100+/year

Initial cost:



around £15

Time to install:



an hour

DIY skills required:



Mucky job? No

### Why do it?

About a third of the energy in an average home goes into heating water. Insulating your hot water tank costs very little, but can produce an immediate return. Most people have some tank insulation, but in this case it is always worth fitting more, even if your tank has a foam covering. Realistically you are unlikely to ever fit too much insulation to a tank!

### The cost?

A tank jacket from a DIY store costs about £15, but you may wish to use old blankets and duvets at little or no cost.

### What you will need

**Tank insulation** - the tank jackets in stores usually consist of an insulated padded case or strips of insulation that you strap around the jacket. Check that it is the 75mm British Standard. However these can slip over time, so it is worth collecting additional insulation such as large sheets of bubble wrap, duvets and blankets.

You could use any old ones that you would throw out, or buy them from charity shops or car boot sales.

**Two metres of pipe insulation** - to insulate the pipes entering the tank.

**Gaffer tape** - to wrap around the tank

**Upholstery needle and button thread** - for joining insulation around the tank.

### How to do it

Start by lagging all the accessible pipes entering the tank, especially those coming out of the top, with pipe insulation. Even if you are not running any water, heat can be lost through these. There is more information on the 'Lag Hot Water Pipes' sheet.

If you have no existing insulation, buy and fit a new 75mm British Standard jacket. These come in different sizes, so take your tank measurements to the shop.

If you already have insulation (or you have just fitted a new jacket), wrap additional layers of home-made insulation, one layer at a time, secured by tape or sewn together. For example, you could add several layers of bubblewrap secured with tape and covered with a duvet or blanket that is sewn together tightly. Be sure to wrap all around the tank including under the tank if you can reach it.

If you have a tank thermometer on the tank (typically a small box and cable attached half way up) fit the insulation loosely over it or provide a flap so that you can still access it if needed.

# Factsheet:

## Cavity wall insulation

### Why do it?

Most houses in the UK built from around 1930 onwards have cavity walls – there is an inner and an outer brick wall with an air gap in between. Filling up this air gap with insulation helps to keep the heat in during the colder months. Most homes built in the last ten years or so will already have this insulation, and nearly 4 in 10 older homes have had it retro-fitted. Cavity wall insulation is one of the most effective measures you can take to make your home cosier.

Cavity wall insulation isn't normally suitable for most houses built before 1930. Some flats can be insulated in this way, but the work will need to be done for the whole block.

There is more information about how to work out if you have the right sort of walls here: <http://tiny.cc/Climate632>

Cavity wall insulation can only be undertaken by a qualified professional. Most cavity wall insulation is subsidised, and will cost around £250. Those qualifying for a warm front grant may be able to get it for free.

The installation process will usually take a few hours. The contractor will drill holes at regular intervals in the brickwork, and then inject the special foam. The contractor will refill the holes in the brickwork as they go. On painted brick or rendering, they may not be able to match the colour exactly, so it's certainly worth getting the job done first if you are thinking of getting the brickwork repainted anyway. On normal, unpainted bricks the filled holes will blend in very well. The drilling is very noisy, but its a clean job and there shouldn't be any clearing up for you to do.

Comfort:



Savings:



between £60/year (mid terrace house)  
and £120/year (detached house)

Initial cost:



around £250

Time to install:



half an hour per door or window

DIY skills required: Professional  
job only (no skills needed by you)

Mucky job? No



Photos: Septuagent







# Hot-spots: Cosy Home

This form helps you to find the 'Hotspots'- the places where you are wasting the most heat - so you can focus on the actions that have the biggest effect.

This is only looking at the waste you can avoid, not your total energy use so there are still plenty of other ways to improve your energy efficiency after you have completed the simple and lower cost measures in Cosy Home.

## How to use this hot-spots form

Print out this page. Then fill in the number of squares in the answer to make a solid block for each question.

## For example:

Do you have feel draughts through your ground floor and skirting? If yes, fill in 3 boxes for each room. You feel draughts in two rooms, so you fill in six boxes:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

When you have finished the form you will soon see the areas where you can make the biggest changes. You can add up the boxes to estimate your possible £ or CO<sub>2</sub> saving. Then go to the Activity sheet for that Topic - for example *Insulation* - to find the actions you can take.

**Each square represents a wastage of around £4 in fuel bills, or around 20kg of CO<sub>2</sub>/yr.**

## Action Topic: Draughtproofing

**Can you feel draughts through your ground floor and skirting?**

If yes, fill in 3 boxes for each room.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

**Do you have draughts through external doors?**

For each draughty external door fill in 3 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

**Do you have draughts through windows?**

For each draughty window fill in 1 box.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

**Do you have a well insulated hot water tank?**

If your tank has no lagging fill in 12 boxes. If it is an old tank with loose or badly fitted lagging fill in 6 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

## Action Topic: Insulation

**Are your hot water pipes insulated?** If not fill in 4 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

**Do your central heating pipes ever go under the ground floor, into a cellar or into the ground?** For every metre the pipes are uninsulated outside the warm part of the house fill in 10 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60

**Do you have any radiators on the external walls of the house?**

Fill in 5 boxes for each radiator without a reflector behind it.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**Do you have cavity wall insulation?** If not fill in 30 boxes for a detached house, or 22 boxes for a semi-detached or end terrace house, or fill in 15 boxes for a mid terrace house or a flat.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**Do you have loft insulation?** If you have none fill in 40 boxes. If you have a bit (some old stuff between the joists) fill in 35 boxes. If it is just one thin layer fill in 20 boxes.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**Do you have double glazing on all your windows?**

If not fill in 2 boxes for each medium sized single glazed window.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

**Do you have a gas boiler?** If it is more than ten years old, or if it is a non-condensing boiler fill in 40 boxes. Otherwise add nothing.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

## How did you do?

I filled in a total of \_\_\_\_\_ boxes

This represented a wastage of around £ \_\_\_\_\_ (at £4 a box) producing \_\_\_\_\_ kg of carbon dioxide (at 20kg a box)

My biggest hotspot was \_\_\_\_\_

My next biggest hotspot was \_\_\_\_\_

## How do you want to save money and CO<sub>2</sub>?

My target in the next 6 months is to drop \_\_\_\_\_ boxes, saving me £ \_\_\_\_\_ (at £4 a box) and reducing my contribution to climate change by \_\_\_\_\_ kg of CO<sub>2</sub>.

We are planning an on-line tool to help you measure progress on cutting your gas use. Please use the **Group plan** to keep track of the action that you are taking.

# Cosy home shopping list

Item	Notes	Check / measure
<b>General Materials</b>		
Stanley knife or modelling knife	These are useful for a number of the jobs below, particularly pipe insulation	yes / no
Strong adhesive tape (gaffer, duct or foil-backed)		yes / no
<b>Hot water tank</b>		
New jacket	If your tank hasn't got a jacket, or it's old and saggy, get a new one.	Diameter of boiler: _____
Extra insulation	This can be old blankets or bubble wrap, you don't have to buy stuff	yes / no
Upholstery needle and button thread	For joining insulation around the tank	yes / no
2 metres of pipe insulation	For the pipes leading into the tank	yes / no
<b>Windows</b>		
Rubber draughtproofing strip	Use the palm of your hand or a feather to spot the draughts. For hinged windows measure all sides.	Total metres: _____
Brush seal (for sash windows only)	For sash windows measure the top and bottom	Total metres: _____
Plastic window insulation sheets	Usually come in a kit	Width and height of each window (in mm)
Double-sided sticky tape	Often comes in a kit with window sheets	yes / no
<b>Doors (Outside doors and internal doors that open from a hot to a cold space – e.g. into a garage, or an unheated stairwell)</b>		
Draughtproofing strip	Measure top and sides	Total meters: _____
Draughtproofing brushes	Measure bottom of door	Numbers and sizes
<b>Floors</b>		
Sealant cartridges	For narrow gaps (2mm or less)	yes / no
Cartridge gun	For applying sealant	yes / no
Wooden insulation strips and panel pins	For larger gaps (over 2mm)	Total metres: _____
<b>Loft</b>		
Rolls of loft insulation	Measure the area to be insulated	Square metres: _____
Face mask (and goggles)		yes / no
Work gloves	For handling glass fibre	yes / no
Solid foam insulation sheets	Only for sloping ceilings and/or loft storage space	Square metres: _____
Sheets of chipboard or MDF	Only if creating loft storage above the insulation	Square metres: _____
100mm screws		
<b>Radiators</b>		
	<i>NB: Ignore radiators on internal walls</i>	
Reflective foil – rolls or sheets	Measure space behind radiators	Total metres: _____
Strong tape, velcro sheets or adhesive	For attaching to the wall	yes / no
<b>Hot water pipes AND central heating pipes</b>		
Insulation for 15mm (narrow) pipes		Total metres: _____
Insulation for 25 mm (thick) pipes		Total metres: _____
<b>Big ticket items</b>		
Cavity wall insulation	Only needed on exterior walls	Number of walls: _____
Efficient boiler		Age of boiler: _____ yrs