The Carbon Co-op Manual

Moss Side edition
April 2010

By co-operating together we can save money on our household bills and help the environment.

We need your help to get the Carbon Co-op project off the ground in Moss Side.

We are a group of local residents who clubbed together to do something ourselves to tackle rising energy bills, improve our homes and address concerns about issues such as climate change.

Started by people in South Manchester we are now working with Great Western Street Residents Association to set up a new project on Deramore and Ossery Streets. We'll be giving simple clear advice on ways local people can save energy together. We'll run events and look at more ambitious ideas, who knows, maybe these will be the first streets in Moss Side to be entirely powered by solar panels?

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How to use this booklet

This booklet is a practical guide to help Manchester residents make savings on energy bills and reduce their carbon emissions at the same time. There are 8 sections, each one includes:

Answers information, facts & figures to answer questions and doubts, as well as good reasons to take the actions suggested.

Examples of what other residents and communities just like us have done to reduce their energy use, bills and carbon foot print - and how they have gone about it.

Actions practical guidance on what needs doing and how to get started - so if you want to know how to get on and do it, look for the actions in each section.

The Carbon Co-op

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What is the Carbon Co-op?

What is the carbon co-op?

A group of South Manchester residents who've begun to carry out these changes in their own houses and communities, who teamed up with a team of local architects to look at what more we can do in our areas.

The idea is that tenants around South Manchester band together in a bulk buying co-operative. We purchase low carbon technologies, everything from energy monitors to solar panels. Because we're part of a co-op we can buy equipment at a discount. The more people join the co-op, the cheaper the technologies and the more money members of the co-op save.

Both the Government and the Council are putting lots of public money into reducing the amount of energy our communities use, we want to make sure this gets put to good use and that our community benefits directly. We think that this money should benefit those on lower incomes, reducing energy bills, providing income for community projects, creating jobs and strengthening the local economy.

Most importantly of all we see this as an opportunity to get communities together to improve the area and the lives of the local residents. We see the move to low carbon living as a chance to reassess what's important, become more efficient and smarter about how we use resources. Rather than worrying about energy price rises, we should be taking control now, so that we can feel secure about the future. This booklet contains stories of groups that have done just that and have strengthened their own communities in the process.

We've teamed up with the Great Western Street Residents Association for this project, not only because they understand the needs of the area, but because we think they have the passion and determination needed to follow through with this transformation. We hope it's gonna be fun and that we'll all learn a lot.

Four very good reasons to join the Carbon Co-op

Why me?

The Carbon Co-op will help you save energy, cut your bills and stay comfortable!

Why as a community?

Because by working together we can achieve much more. As the houses are built to the same plan, what works in your house will, most likely, work in your neighbours. By sharing information and buying goods and services in bulk, it's less work for each of us and it's also more fun, so we're more likely to do it.

Why here?

There are communities getting together all over the UK, saving hundreds of pounds - why shouldn't you too? In-fact why shouldn't Ossery & Deramore Street lead the way in carbon saving Communities?

There is pride in this community and (as we've seen with projects such as the community gardens) people with the vision and dedication to make change happen.

Why now?

Because both the government and the council have made big commitments to cut carbon emissions, so it's going to happen anyway and soon. We need to be in there shaping the way it happens in our communities (and making the most of the funding that is out there at the moment – it won't last for ever!)

Convinced?

Keep reading this booklet which is full of practical ideas to help make this as easy as possible.

Need a bit more convincing – or want to know what made us and other communities start doing this in the first place? – turn to the inside-back page for more information.

What's happening on Ossery and Deramore?

We'll be holding a number of events to get everyone who's interested together, to look at what can be done to transform the houses on both streets into smart, energy efficient homes.

We're working with the Energy Saving Trust to offer free energy audits to anyone interested in finding out what can be done to reduce there energy bills as well as providing free energy meters, so you can see for yourself how much the measures you've put in place are saving.

Example
It can be done! Sanford Walk residents green social housing

Housing Co-op, New Cross, London.

Sanford Walk was the UK 's first purpose-built housing co-op, built in the 1970's to house people in vulnerable housing situations. After 30 years, the houses needed a lot of repair work and the 130+ residents started thinking about how they could combine the renovations with energy saving measures. The community worked with architects and green energy experts to design their own solutions. They replaced the old gas boilers, with super-efficient wood-pellet burners, solar hot water, roof and loft insulation, new kitchens, ventilation systems and double glazing.

Amazingly all of this for only £5 a week each (added on to their rent).

The renovation cost around £900,000 in all - they were able to raise £125,000 in grants and got a mortgage to cover the rest (paid by raising the rent from £50 a week, to £55).

The utility bills for the street are now less than half what they were previously and their carbon emissions have fallen by 60% from 228 tonnes in 2003 to 91 tonnes in 2008.

Keeping it Cosy

Q: I don't see that this insulation business is going to make a blind bit of difference – it's what I put into the meter that keeps my house warm.

A: It's true you do need to pay to heat your house, but once it is warm keeping it that way is cheaper then you might think...

10% Off Energy Saving Purchases

OFFER

Cheatham Hill B&Q: Carbon Co-op members will get a 10% discount off all energy saving purchases on a Wednesday. Carbon Co-op membership cards must be shown. Get together, go in one car and buy in bulk.

Get the latest offers!
Before you go on that low-carbon spending spree, ring The Greater Manchester Energy Saving Trust Advice Centre to find out about their latest offers. With heavily subsidised insulation, it might be cheaper to get a professional in than to do the job yourself

Freephone 0800 512 012 or cheap from a mobile 0161 234 5461

Fact

In any home the most important thing for saving energy is insulation. In an average house the main sources of heat loss are:

Draughts	25%
Roof	15%
Windows	20%
Walls	30%
Floors	10%

Action

Luckily for us the most urgent insulation issue is also the cheapest and easiest to solve. We lose up to 25% of the heat in our houses through draughts. So don't worry yet about loft insulation or double glazing, start with strips of insulation around doors and windows or a flap over the letter box, it's one of the cheapest ways not only to save energy, but to make your house feel cosy too.

The Cuppa Example

1. Boil 3 pints of water

2. Pour 1 pint into each of the 3 shown below...

Each has taken the same amount of energy to heat, but while the first will be cold after 20 mins, the second might last twice as long and the thermos should still give you a good brew 5 hours later.

So basically, it's all about insulation!

Dealing with draughts

Doors and windows ····→ Draught-strips around the sides
Gaps in floor & skirting boards ····→ Fill in with mastic
Holes around pipework ····→ Fill with expanding foam
Old fire places ····→ Block-up chimney (with insulation)

Cost A few pounds for materials
Annual Saving Up to £100
Carbon Saving 1 to 1.5 tonnes

Next check your loft - it should be insulated to at least 270mm (11 inches). Again this is an easy and obvious saving. There are lots of subsidised schemes available that will do this for around £150 or for free if you are eligible for a grant. If you have old thin insulation that has shrunk away from the joists and is weighed down by dust it may well be next to useless, and you could save £100 a year by replacing it.

If you are over 60 or on certain benefits you can get this covered by the warm front team (see the index pages at the back).

Cost £150 (free if you are eligible)
Annual Saving At least £100
Carbon Saving 1.5 tonnes

So what about the biggest of them all... the walls. Well there's good news and bad news, as the houses on Ossery and Deramore are terraces there's only the front and back wall to worry about, however they do have solid walls (meaning that there is no cavity in them to be filled with insulation). Much more heat is lost through an uninsulated solid wall than an uninsulated cavity wall.

It is possible to put insulation on the inside or outside of the wall, this can be really worthwhile especially if you have problems with weatherproofing or have re-plastering that needs doing. The Carbon Co-op is currently looking into what the best value for money options would be, so let us know if you are interested.

Action

Have a nose around and try to work out where your draughts are coming in - gaps around windows and doors are usually the most likely. It is also worth checking for obvious gaps around skirting boards, in floor boards, around loft hatches and chimney openings.

Finally, (if you've not already been up there for the Energy Saving Trust check) go up to your loft, pop your head through the hatch and see what insulation you've got. Measure how thick it is with a ruler and if it's less then 270mm (11 inches) top it up.

Example Community Energy Saving Projects

Transition Black Isle

In Scotland the Transition Black Isle are looking at ways to cut energy costs together as a community and have started by taking a number of simple steps:

- **Smart Meter Project: Lending out 13 smart (energy) meters to the community, together with a book called 'Carbon Detox'. Householders have them for 3 months then pass them on to another set of households as by then they will have learnt how to reduce their households energy.**
- **Skills and ideas sharing day: folk were invited to go round and see what their neighbours had done to update the efficiency of their homes.**

The Isle of Eigg

The Isle of Eigg (http://islandsgoinggreen.org/) Residents are getting together to cut their energy use in a number of ways, from 'All island insulation' – insulating all the houses in turn and making dramatic savings; a Solar water heating pilot on 2 houses; and education and outreach events.

They are also offering islanders 50% (up to £300) off the costs of items which reduce their CO_2 emissions, which have included: insulation, poly-tunnels for home grown food, stand-by switch off devices and thick curtains.

If there's enough sun in Scotland to make solar worthwhile, there's got to be hope for Manchester! Let's have a word with the City Council - could they put up some cash for something similar here?

Your Appliances

If you've any old fashioned light-bulbs in your home, don't bother waiting till they go, change them right now for low energy versions. There's lots of offers out there making them cheaper than ever and for each bulb you fit, you could save 44 kg of CO_2 and £7 every year.

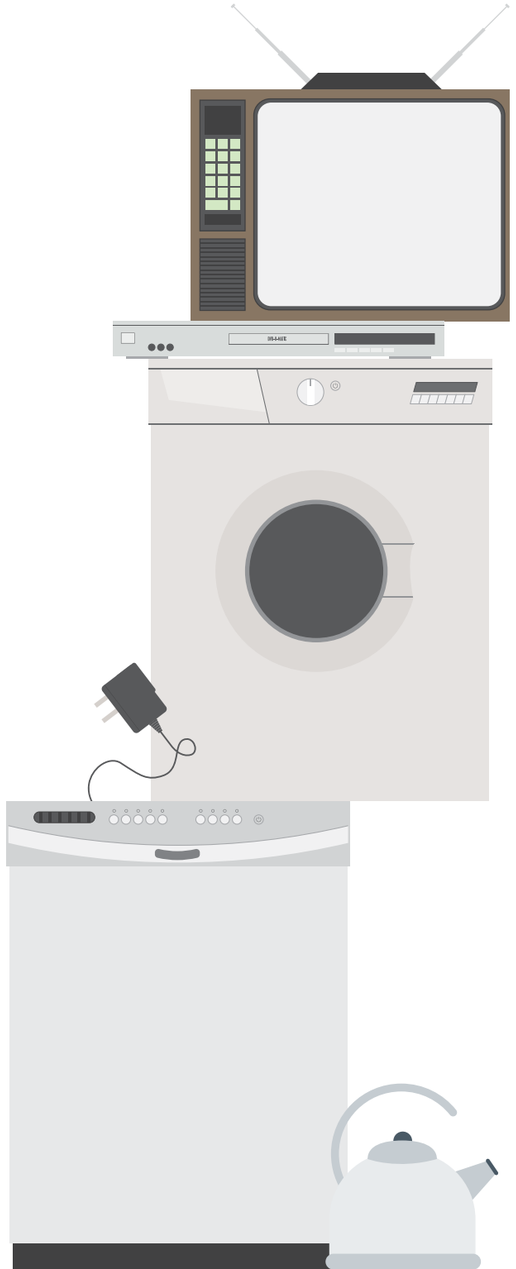
That might not sound much, but if every UK home replaced three old fashioned bulbs with modern energy-saving ones, we would save over 1.5 million tonnes of CO_2 annually - and the electricity equivalent to the output of a typical power station every year.

Eaga's Free ShowerSmart

OFFER

The Eaga ShowerSmart is a small device (approx 5cm high and 2cm wide), which can be fitted to non-electric mixer showers or bath/shower mixer taps. According to Eaga it'll save an average family of 4 about £30 off their gas bills and over £30 off their water bills (where metered) per year. This could equate to £900 over its lifetime and will typically save more than 1 tonne of CO_2. They've got one for every household (while stocks last), so tell your friends about it too!

To apply for your free ShowerSmart visit:
www.shower-smart.co.uk
or phone Eaga on 0191 247 3800



The vampire in your home....

Energy vampires are the things that carry on costing you money and using energy even when you're not using them.
That's why a mobile phone charger is always so warm even though its not charging anything (because whenever its plugged in it's sucking electricity).

The average household wastes £37 each year by leaving appliances on standby. Add to this the £55 wasted by not turning off lights when leaving a room and you have a pretty big chunk of your electricity bill!

Appliance	Carbon saved	Annual Savings
Stereo	66kg	£12
DVD	44kg	£8
TV	20kg	£3.70
Set-top box	48kg	£8.70
Video	40kg	£7.40
Mobile Phone Charger	10.5kg	£1.90
Unnecessary Lights	370kg	£55
Total Annual Savings	**598.5kg**	**£96.70**

There has been a transformation in the performance of electrical appliances over the past ten years.

If you replace a 1990s appliance with a new A or A+ energy rated model, each year you will save 230 kilos of carbon for a freezer, 160 for a dishwasher; 105 for a fridge and 60 for a washing machine. For a fridge/freezer that could mean a saving on your electricity bill of about £45 a year! With A rated models now available at about £100, it could pay for itself in just 2 years, after that you're quids in every year.

Stop, put down that store card!

While we're all used to searching for what's the best value to buy, we don't always spend time investigating what's the best value to run. If that £80 tumble-dryer on offer in the supermarket has an energy rating of 'E', it'll be costing over a £100 a year to run (whereas an 'A' rated machine might cost a bit more to buy, but will cost half as much to run). So what seems like a bargain now, might end up costing you a packet every year.

www.sustit.net have average running costs for most current model electrical goods (and some discontinued ones if you are buying second hand), you might be surprised at the results. For example, say you wanted to go High Definition with a new TV...

Toshiba 19AV506DB 19" HD Ready LCD TV	
In-Use	95W
CO_2	89.46kg
Annual Cost	£29.06

Panasonic TX-L19X10 19" HD Ready LCD TV	
In-Use	36W
CO_2	33.90kg
Annual Cost	£11.01

LG 19LU7000 19" HD Ready LCD TV with Built-in DVD Player	
In-Use	38W
CO_2	35.78kg
Annual Cost	£11.63

The TV's seem the same but one costs more than twice as much to run. The really smart money goes with the third option as it's got the DVD built-in (you could be paying another £12 a year to power your separate one). This is only for a pretty small TV, imagine the cost differences for one of those massive ones!

Checking with Sustit whenever you buy a new item could save you hundreds off your bills every year.

Your 21st Century Home

Solar PV panels

Generate your own power and get paid by both the energy company and the Government.

Roof Insulation

270mm is the minimum, but up even to 400mm it all helps.

Solid Wall insulation

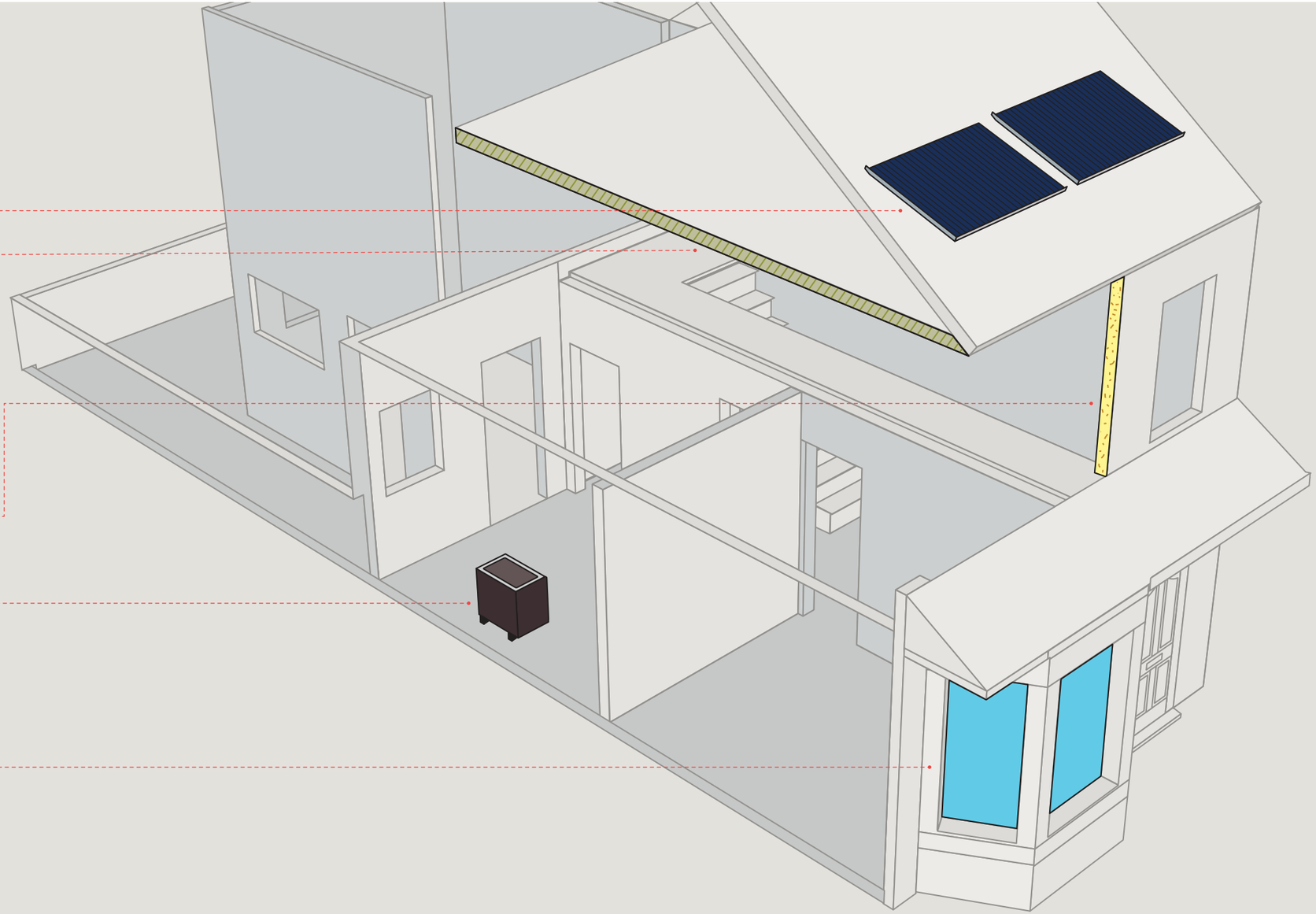
Cladding solid walls with insulation will make heating your home easier and cheaper.

Wood-burning Stove

Run on renewable materials, provides heat direct where you need it and a back-boiler fitted for your hotwater.

Windows

Double or triple-glazing windows will keep the heat in.



Community Power
Make your own energy

Imagine your house as a power station, where rather than you paying the power companies they were paying you! Large power stations waste a lot of energy moving it round the country as part of the national grid, if we can generate power nearer to where we need it, we can be more efficient.

The government has recognised that emitting carbon has a cost to the country as a whole that is much more expensive than the cost of the fuel. This means that while energy prices might seem expensive at the moment, they don't cover the cost of the damage done by the carbon emissions. In order to try and balance this out, they are offering individuals and communities that generate their own energy sustainably an additional payment on top of what they get by selling the energy they produce.

Here's how it works for a solar system fitted to an existing house	
What you pay the electricity company for their electricity from the grid	10-12p per kWh
What the electricity company will pay for you for yours	5-6p per kWh
Additional payment from the government as part of the 'feed-in tariff'	41p per kWh

£150 in energy cost savings from using solar will be topped up with a further £900 in government subsidy, which suddenly makes solar panels a much better investment. They reckon this should give investors a 9% return on cash spent on solar, and as they're guaranteeing these payments for 25 years and linking them to inflation rate, it might be about the best investment around these days.

A company in Yorkshire has just opened to take advantage of this, with plans to put solar panels on 2,000 roofs in Yorkshire and Nottinghamshire for free. They'll fit and maintain the panels, sort out the electric meter, and give the householders all the energy produced by the panels for free! Doesn't seem to make sense does it?

Well, it's not as daft as it seems, the company gets to keep the subsidy and that's what makes the money. Maybe by clubbing together we could do something similar here, where we get to keep both the energy and the subsidy.

This 'Feed in Tariff' (FIT) doesn't only apply to solar panels, it also makes payments for power produced by wind turbines and Micro Combined Heat and Power (CHP). CHP is an exciting technology that does exactly what you think it does – creates both heat and power. Current units are about the same size as a gas combi boiler and work in much the same way. CHP works particularly well for heating larger spaces, so could be used to heat a number of houses on one street, with government subsidies lowering everyone's fuel bills.

The deal was publicised to all their neighbours, hoping to find 25 interested Households. In the end, 270 registered to take part!

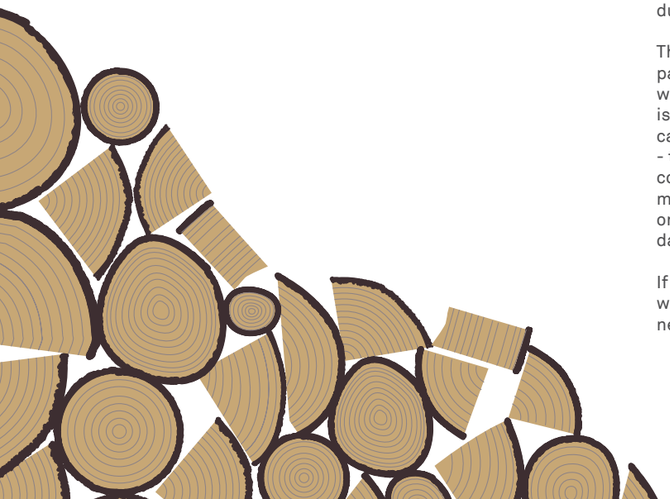
Example
South Hobart Sustainable Solar Group

South Hobart Sustainable Solar Group (in Tazmania) got together to research the best suppliers of solar panels and solar water heating and to find the best deal for them as a group. They publicised the deal to their neighbours, aiming for about 25 households, and 270 registered to take part! Community buying power and bulk buying has removed a lot of potential barriers to domestic solar heating for this group, by securing cheaper deals, negotiating interest free credit for low income residents as well as free installation of the panels.

Heating your Home

Getting shot of the old boiler!

If you have a gas boiler (the type with a constant pilot light) that is over 15 years old you should be entitled to a £400 government payment under the boiler scrappage scheme. To qualify you need to be a home owner or privately renting and be replacing a working boiler with a modern A rated version or with a renewable energy system (like solar thermal). If you are over 60 you can even get cash to trade in a broken boiler - good news for those who's boiler's packed-up in the cold spell.



Heating with renewables

Returning to heating with wood might seem like a step back in time, but modern wood burning stoves are far more efficient at getting heat where you need it than gas central heating. This doesn't mean it's worth just taking a lump hammer to the wall and opening up any old fireplaces you've got, old fashioned open fires offer 25% efficiency at best and can be as low as 5%. It's also worth bearing in mind that the chimney on an open-fire will be sucking heat out of your house whenever the fire is out.

Stoves also produce a lot less smoke than open-fires, but you still need to get a 'smoke exempt' model (which burns wood at a higher temperature) for burning in the city – due to clean air regulations. It's possible to get a back boiler for your wood burner that will provide for all your hot water as well as your heating during the winter months.

This can work particularly well when combined with solar thermal panels, as they produce all the hot water you need in the summer when you don't want to have your fire blazing away. Solar thermal is different from solar panels that create electricity normally called Solar PV - or Photo Voltaic for those who were dying to ask - they don't create electricity but simply heat up your hot water by concentrating the suns energy on a series of water filled tubes. It may sound crazy but you have to be careful not to scald yourself on the water that comes out of the hot tap on a warm summer's day in Manchester.

If you've an old outside loo or a bin shed, this could be used as a wood store and you might think about sharing wood deliveries with neighbours to reduce costs.

Example
Co-op Power (New York, USA)

They have 325 co-op members and 5,000 supporters and investors who've been working for 5 years to try to work out the best way their area can move to sustainable energy. Over this time they've gotten together engineers, financial experts, green building specialists, community economic developers, lawyers and business planners to help groups of people in a community research, design, fund-raise for, and launch their community owned sustainable energy businesses.

What Co-op members get —

Advice and technical support

Big discounts on energy products - as the co-op negotiates great deals by buying in bulk

Group installation solar thermal panels (cutting the cost by about 50%)

Cheap to the door wood and bio-fuels deliveries

The chance to part own and run their own power company

The next step is to create community-owned green jobs and green energy - including community scale solar, wind and biomass projects as well as a variety of small "green job" business development projects.

One of the first of these has been the building of a community-owned sustainable biodiesel plant, that will make 10 million gallons of biodiesel a year from recycled cooking oil (a waste product). They raised $2.35 million in Co-op Power member equity, grants and loans to build the plant.

They've also installed a 30 kilowatt solar electric system on the roof a new food cooperative and are now talking to the local authority about buying several dams in the area for hydo-power.

Basically they've got together as a community and sorted it out.

Nice Idea
But who's going to pay for it!?

In the long run we are all going to be hit by higher energy bills, before we even get into the potential costs of failing to deal with problem of climate change. The problem is most of us don't have the money up front to invest in long-term savings.

Luckily, for once there's a bit of money about. In December the Government picked Greater Manchester as the UK's first Low Carbon Economic Area (LCEA) in terms of it's buildings. This means they are putting £650 million into schemes in the city over the next 5 years – maybe one of them could be ours?

Grants

The Warm Front scheme gives grants of up to £3,500 towards energy efficiency measures to households in receipt of certain benefits. Check page (index) to see if you are eligible.

There are also a number of other schemes offering grants aimed specifically at community energy projects at the moment, the website below has a database which shows what's out there. http://www.energysavingtrust.org.uk/cafe or call 0844 848 0077

Interest free loans

Manchester City Council's Home Energy Loan Plan (HELP), is available to all owner-occupiers in Manchester with an income of less than £35,000.

It offers loans of up to £5,000 interest free and could pay for...

New or top-up loft insulation

Cavity wall insulation

Draught Proofing

Hot water cylinder insulation

New or upgraded central heating system and controls

Replacement central heating boiler

Replacement windows and doors

They can help you to select a reputable contractor and will supervise the work whilst it is in progress. They do charge a small fee for this service, but it can be included in the loan amount.

For example if you were to borrow £2,000 to replace your ageing central heating and insulate your loft (opting to pay it back over 5 years) you'd be paying £33 a month (with no interest) which you should more than save on your winter heating bills. Throw in the boiler scrapage payment as well and your quids in!

Get in touch and find out how to apply: Call 0161 872 5500 or email mail@careandrepair-manchester.org.uk

How the Carbon Coop can help...

We all know things are cheaper in bulk – by combining our buying power we can get the best prices on everything from light bulbs to triple-glazed windows.

We can help you find out what grants are available and help with funding bids.

We can work out the most cost effective way of getting the money together and negotiate with building societies and credit unions to get to best deals.

Together with our architects we can help you with the practicalities of making your plans for your house and community a reality. We can provide information sessions, to get the community together to learn more about effective carbon reductions.

Example
Financing community micro-generation

Torrs Hydro's in New Mills

If you've ever been on the train towards Sheffield you'll have noticed the huge drop from the rail track down to the Victorian water works at New Mills. The local community have got together to put a section of this back into use, by installing an hydro-power system, know locally as 'Archie'. Archie is designed to produce around a 250 000 kWh of electricity over a typical year. This is the equivalent of the annual electricity consumption of around 50 typical British homes and saves over 150 tonnes of carbon emissions.

In total, the scheme cost around £330 000. A community share issue raised over £125 000, with grant funding providing another £165 000. The 235 shareholders are mostly local people and businesses, most made an investment of £250.

Why not visit, it's less than half-an-hour from Oxford Rd Station. They have open day's on the following days in 2010.

– Sunday 25th April
– Saturday 3rd July
– Saturday 4th September
– Saturday 30th October
– Sunday 28th November

Although we don't have a river round here, we could do something similar with solar panels on our roofs and there's loads that we can learn from the way that this community got together to make it happen.

Saving energy when you're out of the house

Reducing our energy use, and the related costs, may start at home but it certainly doesn't have to stop there. There are a number ways that we can cut our energy use through the way we travel and the food we eat, that will also save us money, reduce our carbon emissions and make us healthier!

Transport

Regular cyclists enjoy a fitness level equal to a person 10 years younger. Even if you just do short trips when the weather is good, this can really reduce your likelihood of heart problems or strokes. Research has shown that cyclists not only look and feel physically better, they are also happier!

Carbon emitted per mile	
Small car	0.28 kilos
Large car	0.43 kilos
Bus	0.17 kilos
Bike or feet	none

Before you buy that expensive new bike....

Bike ownership has gone up dramatically over the last 20 years, but the number of miles cycled has stayed the same – due to hundreds of failed New Year's resolution. Ask around to see if your uncle, cousin or mate has a bike getting dusty in a back room or shed, or look into buying one second-hand.

Get the boss/tax man to buy you a bike

Well... OK, not all of it, but nearly half. If you are working and paying PAYE you could get 42% off the cost of a new bike. Your work buys the bike and you pay for it directly out of your wages each month. Any UK company that doesn't have charitable or NHS trust status can take part and most are keen to do so if it's suggested. Why not suggest it to your boss or union rep.

This is how it works...

Shiny new bike: £250

Helmet: £30

Bike lock and lights: £50

Total cost of bike and accessories: £330.00

Tax man then takes money off VAT (£44.68), Income tax (£62.77) and NI (£31.39)

Total saving: £138.84

Final cost of bike & accessories: £191.16

Monthly amount taken direct from your salary £15.96.

Basically for less than £4 a week out of your wages for 1 year you get a new bike which is yours to keep afterwards. Starts to make that bus pass seem expensive, eh?

There are currently 6 small bike shops, within 2 miles of M14 which are involved in the scheme, which means you put money into the local economy and help keep local jobs.
For more info www.cyclescheme.co.uk

Still need a car?

City Car Club is the pay-as-you-go alternative to owning your own car. Book a brand new City Car by the hour, day or as long as you want. Short enough to do your weekly shop or long enough for a weekend away.

Hiring a car costs £4.95 an hour plus a mileage charge (of 0.16p) per mile you drive which covers the cost of fuel (so you don't pay for your own petrol). They take care of insurance, tax, servicing, parking permits and cleaning.

Booking is online or by phone, 24 hours a day, 7 days a week. Unlock the car with your membership card, enter your PIN and drive away. Return the car at the end of your booking, lock the car with your membership card and walk away. The best thing of is that you only pay for a car when you need one, which can save you hundreds or thousands of pounds a year.

City Car Club 1/2 Price Membership OFFER

City Car Club is offering half price membership for your first year to all members of the Carbon Coop (membership currently costs £50 per year).

Food

Buying fresh veg rather than ready-meals will have the most impact on your food related carbon emissions as well as reducing your shopping bill. Cooking food at home will use only a third of the energy needed to cook and refrigerate processed foods, and it reduces packaging too.

One less burger....

There's been loads of press lately about certain people telling us to go vegetarian and other people being outraged about that. The issue is that meat & dairy is responsible for over half of the carbon emissions caused by the food supply chain. So while you may not fancy going vegetarian eating less meat and diary can have a pretty big impact (and could lower your cholesterol at the same time!). Rather then getting caught up in the usual media nonsense why not think about what you can do - you could decide to have a weekly meat free day. Why not suggest that your street, work, school, or clubs you are part of do it too? It's easier then doing it on your own – and will have a bigger impact too.

Buy local

Buying local veg in the local market cuts down the transport miles compared to stuff that's flown or trucked in from around the world. It's also fresher, healthier and often cheaper.

Put a lid on it

Putting a lid on your pots can save up to 90% of cooking energy (and you get to eat your tea quicker too!)

Go Organic

One of the greatest impacts of the fruit and veg we eat are the fertilizers used to grow it. Organic food not only gets rid of these it also helps to lock up 27% of carbon in the soil which is reason enough to turn the whole country organic!

Although we often think that organic food is too expensive and not for us, this isn't always the case. It's always worth checking the difference in price as sometimes it's only a few pence more (or even cheaper). Where we can't afford to buy all organic, we can grow it ourselves – cutting out the cost of synthetic fertilizers and pesticides and making for really local, fresh, chemical fee and tasty food!

Local, Organic and delivered to your door!

By buying a veg box, you get to take advantage of whatever's currently in season, this means that you get the best of British veg when it's cheapest, freshest and tastiest. DIG are a locally-based box delivery scheme who source most of their fruit and veg direct from farms within 50 miles of Manchester. A weekly box of organic Veg for 2 people is £10 but it's even cheaper for Carbon Co-op members.

Veg Boxes & Compost Bins! OFFER

If we can get three or more people to order a DIG veg box everyone will get 10% off.

Manchester Waste are currently offering buy one get one half price on all their already subsidised compost bins, why not see if your neighbour wants one? To order yours call 0845 130 6090.

Grow your own

It's the cheapest, healthiest and greenest way to eat.
Since the Jamie Oliver crowd have made it popular again, there can be a long wait to get your own allotment. However it's worth contacting your local allotment society anyway as there are often community plots for people just starting out, which is a lot less pressure than a whole plot to yourself. Pop down to your local allotments and have a look or call the City Allotments Manager on 0161 2263322.

Urban growing is spreading like wild fire – you can grow food in your back yard, on your window sill, in an allotment or as part of a community garden. You can also grow what you like most (from tomatoes to yams), practically for free – making your own compost, swapping seeds with your neighbours – and swapping or even selling your end produce.

Example
South Hobart Sustainable Solar Group

Organic Lea, Walthamstow, London started with a community allotment where local residents could get involved through courses, workshops, regular volunteer opportunities and monthly open days with an introductory skill-sharing slot. They have now moved on to a 12 acre site supplying a market stall, box scheme and café. They also run a scheme called Cropshare to allow local home growers and allotmenteers with a surplus to sell their produce on the market stall, using the Wholesome Food Association principles as a guarantee of organic standards.

Help Available for Food – Co-ops and Buying Groups

Food Co-ops are a great way for members of a community to pool their buying power and order in bulk direct from farmers and suppliers. Working together, local communities can access a wide range of foods (including local and organic produce) at reasonable prices.

'Sustain: The alliance for better food and farming,' has just recruited 8 new food co-op advisors to work across each of the regions. They are available to give advice on all aspects of setting up and running a food co-op. Plus they can offer other support such as workshops and training days, or exchange visits to other food co-ops. Ruth K elly is the Food Co-ops advisor for the North West. I f you are thinking of setting up a buying group or would like any help with an existing one, she'd love to hear from you on call 0161 209 9945 or email ruth@sustainweb.org

The Technical Bit

Feed-in tarrifs (FIT) – Government payments for people that make their own power

Energy Source	Source	Tariff level (p/kWh)* for installations installed			
		Apr 2010 - Mar 11	Apr 2011 - Mar 12	Apr 2012 - Mar 13	
Anaerobic Digestion	←500kW	11.5	11.5	11.5	20
Anaerobic Digestion	>500kW	9.0	9.0	9.0	20
Hydro	←15 kW	19.9	19.9	19.9	20
Hydro	>15 - 100kW	17.8	17.8	17.8	20
Hydro	>100kW - 2MW	11.0	11.0	11.0	20
Hydro	>2kW - 5MW	4.5	4.5	4.5	20
Micro-CHP**	<2 kW	10.0	10.0	10.0	10
Solar PV	←4 kW new	36.1	36.1	36.1	25
Solar PV	←4 kW retrofit	41.3	41.3	37.8	25
Solar PV	>4-10kW	36.1	36.1	33.0	25
Solar PV	>10 - 100kW	31.4	31.4	28.7	25
Solar PV	>100kW - 5MW	29.3	29.3	26.8	25
Solar PV	Standalone	29.3	29.3	26.8	25
Wind	←1.5kW	34.5	34.5	32.6	20
Wind	>1.5 - 15kW	26.7	26.7	25.5	20
Wind	>15 - 100kW	24.1	24.1	23.0	20
Wind	>100 - 500kW	18.8	18.8	18.8	20
Wind	>500kW - 1.5MW	9.4	9.4	9.4	20
Wind	>1.5MW - 5MW	4.5	4.5	4.5	20
Existing systems transferred from the Renewable Obligation		9.0	9.0	9.0	to 2027

** These tariffs are index-linked for inflation*
*** This tariff is available only for 30,000 micro-CHP installations, subject to a review when 12,000 units have been installed*

Are you eligible for a warm front grant? www.warmfront.co.uk

1. Householders aged 60 or over in receipt of one or more of the following benefits:
   – Income Support
   – Council Tax Benefit
   – Housing Benefit
   – Job Seekers Allowance (income-based)
   – Pension Credit
   – Income-related Employment and Support Allowance

2. Householders with a child under 16, or pregnant women with maternity certificate MAT-B1, in receipt of one or more of the following benefits:
   – Income Support
   – Council Tax Benefit
   – Housing Benefit
   – Job Seekers Allowance (income-based)
   – Pension Credit
   – Income-related Employment and Support Allowance

3. Householders in receipt of one or more of the following benefits:
   – Working Tax Credit (with an income of less than £16,040, which must include a disability element)
   – Disability Living Allowance
   – Child Tax Credit (with an income of less than £16,040)
   – Housing Benefit (which must include a disability premium)
   – Income Support (which must include a disability premium)
   – Council Tax Benefit (which must include a disability premium)
   – War Disablement Pension (which must include a mobility supplement or Constant Attendance Allowance)
   – Industrial Injuries Disablement Benefit (which must include Constant Attendance Allowance)
   – Attendance Allowance

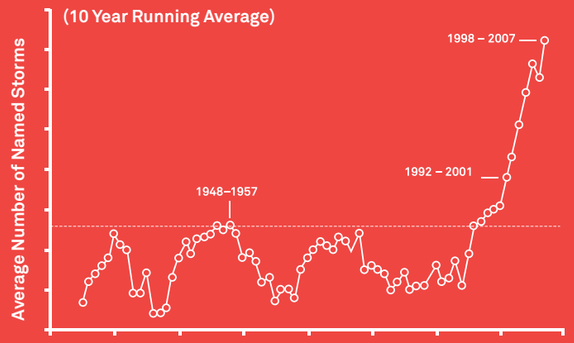
Still not convinced it's worth the effort?

Manchester City Council has made a commitment to reduce it's carbon emissions by 41% by 2020. That's just 10 years to reduce the amount of carbon we produce by almost half!

The aim of these reductions is to keep global temperature increases to under 2 degrees. If the scientists are right and we are able to achieve this, we will save many hundreds of thousands and perhaps even millions of human lives as well as countless species of animal and plant life that might otherwise be lost. That's got to be worth a go, eh?

We all hate graphs... but this one shows really well how hurricanes and tropical storms hitting the Caribbean have increased. The people living in this region are much more vulnerable to extreme weather than we are here. They are each producing less than a third of the carbon emissions of each of us, so they are already sustainable. I t's not really their problem, it's ours - but they're getting the brunt of it. I t's not fair and we can sort it out. So let's go!

Annual Frequency of North Atalntic Storms



Finding inspiration

While you'll find lots of high-tech solutions out there, some of the most incredible ideas have come from people just trying to improve their homes and save money, with a low budget. As we all know you have to be creative when you don't just have money to throw at a problem. Have a look at the sites below for some real life inspiration.

www.ecovation.org.uk – Started by a group based in Oxford but now with example houses all over the country. A good resource for practical inspiration.

www.sustainable-energyacademy.org.uk – Runs 'Old home, Super home' a network of older houses that have been made super-efficient by there owners. The organise open days so you can go and have a nosey about and see what's worked for other people. There's a couple in Manchester, maybe we could go for a visit?

Writing Credits

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