A Low Carbon Route Map

Guidance for communities applying to the Climate Challenge Fund

Project Planning

It's our future

natural scotland

SCOTTISH GOVERNMENT

Foreword

All over Scotland and beyond, people are working together in communities to reduce CO2 emissions. These are early days and there is still much to learn about what works – and lots of new approaches and ideas to be tried and explored. Any community thinking of developing carbon reduction projects will be at the forefront of the journey to a low carbon society. This means that while there is much to learn from others' successes (and occasional failures), some of this is uncharted territory in which you'll be pioneers.

The Route Maps aim to help you and your community develop projects that are relevant, engaging and have maximum chance of success. Most of the Route Maps cover four areas to help you start your community's low carbon journey:

Surveying the landscape: Before starting any new journey it's important to learn as much as possible about what lies ahead. Here you'll find an introduction to the topic, relevant carbon emissions, and how they can be reduced.

Choosing your particular route: There are many ways communities can reduce CO2, and many different routes to success. Here you'll find information to help you think through different approaches and to choose ones that are right for your community, and, ideally, not only reduce CO2 but have other benefits as well.

Planning your journey: Here you'll find advice to help you make the detailed plans for your journey – and how to keep track of where you are so you know if you're making progress.

Signposts: To sources of further information and advice.

There are currently six Low Carbon Route Maps covering Project Planning, Energy, Travel, Food, Community Buildings, and Feasibility Studies.

Two warnings:

- The Route Maps don't replace the detailed Climate Challenge Fund guidance on completing an application – read that as well
- Not all the measures mentioned are eligible for funding from the Climate Challenge Fund – but they help present the bigger picture, and you may want to include them in a project with funding from other sources.

Every community is different; the aim of the Route Maps is not to tell anyone the 'best' way to do any project (because there is no one 'best' way) but to help you develop projects that work for your community.

Good luck – enjoy the journey!

The *Low Carbon Route Maps* have been researched, written and designed by Footprint Consulting Ltd; Environmental and Resource Economics Limited; and Alan Speedie Associates Ltd for the Climate Challenge Fund, July 2009.

Surveying the landscape

Climate change

The Earth's climate is changing as a result of human activity – carbon dioxide, methane and other gases are causing the atmosphere to act like a greenhouse, trapping the sun's heat and making the world warmer. Most of these gases occur naturally (in fact, without some greenhouse effect the planet would be too cold for life to exist) but we have been producing so much over the last 200 years or so, as the industrial economy and the world's population have grown, that they are building up to dangerously high levels in the atmosphere.

The so-called 'greenhouse gases' (GHGs) that cause climate change are mainly produced by human activity:

- Carbon dioxide (CO2) from burning fossil fuels, such as oil, gas and coal, to produce electricity, heat our homes, power our transport, and produce goods in factories.
- Methane (CH4) is produced mainly by agriculture: when pasture or forests are ploughed or destroyed, and by the digestive systems of cattle, sheep and other ruminants.
- Nitrous oxide (N20) is produced in agriculture from soil management, fertiliser use and manure. It is also produced from burning fuels and some industrial processes.

The Intergovernmental Panel on Climate Change and other experts agree that if we all act now to reduce greenhouse gas emissions, we have a chance of slowing, and eventually reversing climate change. This is why governments, businesses, communities and individuals across the world are taking action to reduce greenhouse gas emissions.

While a warmer climate might sometimes seem attractive in Scotland it will also mean more floods, storms, droughts and heat-waves. The world isn't just getting warmer: drier areas will become drier, wet areas wetter and there will be more storms and flooding. Beyond Scotland the changes will disrupt the livelihoods of people across the world.

As well as taking action to lessen climate change by reducing GHG emissions (often called ‘mitigation’), we also need to prepare for the inevitable impacts of climate change (often called ‘adaptation’). Many of the changes communities can make to lower GHG emissions, such as reducing energy use and generating renewable energy, also help us adapt to climate change, making our communities more resilient in the face of future uncertainties.

Both the Scottish and UK parliaments have passed legislation setting a target of reducing emissions to 80% of 1990 levels by 2050.

This reduction is achievable but will require action by governments, businesses and communities. It will require not just new technology and better use of existing technology but also changes in the way we live, work and organise our society. Many of these changes could also improve quality of life, health and wellbeing, as well as making communities stronger and more resilient.

Figure 1 shows the sources of current UK greenhouse gas emissions and the reduction required.

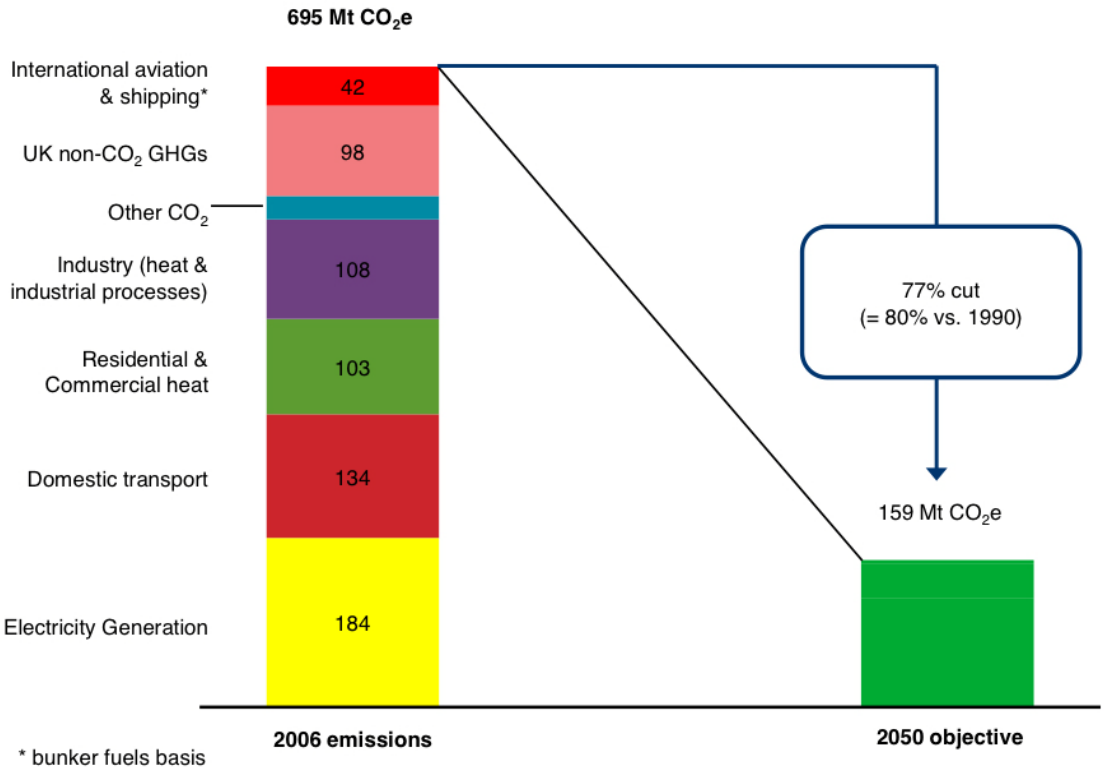

Figure 1: UK CO2e emissions and the reduction required[i].

You can find links to more information about climate change in 'Signposts' at the end of this Route Map.

Talking carbon

Each of the greenhouse gases causes different amounts of warming – a tonne of methane, for example, has the same effect as 23 tonnes of carbon dioxide. To make it easy to compare the effect of different greenhouse gases, the 'global warming potential' of each gas can be expressed as so many tonnes of 'carbon dioxide equivalents', often written CO2e.

Generally when people talk about 'reducing carbon by 10 tonnes' they mean 'reducing emissions of greenhouse gases by an amount equivalent to 10 tonnes of carbon dioxide'. In this document we use 'carbon' and CO2, as a shorthand for the carbon dioxide equivalent of greenhouse gases.

If you are using 'carbon' figures from other sources, they will usually be as CO2e – but do check carefully as occasionally figures are presented as tonnes of *carbon* equivalent Ce. (To convert Ce to CO2e, multiply by 3.67)

How to reduce carbon emissions

Most people know there are lots of simple actions we can all take to reduce carbon emissions – like saving energy, driving less and so on. But first, let's step back and take a look at the bigger picture.

Modern society runs on energy – we need energy for commuting to work, shopping and visiting friends and relatives; the food and other goods in the shops and supermarkets often comes from the other side of the world and energy is needed to produce them and transport them to us. We

need energy to heat our houses and workplaces and to run equipment from computers to fridges, televisions to dishwashers.

We can reduce CO2 emissions by replacing energy from fossil fuel with renewable energy such as biomass, wind, solar and wave power. Other possible sources of 'low carbon' energy are nuclear power and fossil fuel power stations, which capture and store the CO2 emissions; these are unlikely projects for community groups.

We can also reduce emissions by using less energy in total – and we can do that by using more efficient equipment (such as a car with better miles per gallon) or by using existing equipment less (for example walking or cycling instead of driving).

It is possible to reduce CO2 emissions to the levels needed to contain climate change. To succeed we need to do all of these things, and do them fast. We need to think – and act – BIG:

- **Behaviour Change**: Change our habits and expectations so that we choose lower carbon options and avoid using energy when it's not necessary
- **Install Efficient Technologies**: Use energy much, much, more efficiently by insulating buildings and using more efficient equipment and transport
- **Generate Renewable Energy**: Increase the amount of renewable and low carbon energy we produce. (Note that the capital elements of projects to install energy generation equipment are excluded from the Climate Challenge Fund but not the preparation for energy generation as part of a wider CO2 emissions reduction plan.).

Who can reduce emissions?

Success in reducing CO2 emissions needs action at every level. Some changes can only be made by governments. Government policy and regulations affecting energy production for example, can make it easier for individuals, communities and businesses to take effective action. Another example is the new feed-in tariff which comes into effect in April 2010, which will give people an incentive to install micro-renewables as it guarantees that the National Grid will buy any surplus energy they produce.

Government action is also important to encourage and support big infrastructure projects such as public transport that make it easier for people to choose the low carbon option. Businesses can also reduce the energy they use and develop products and services that use less energy.

There is a lot that individuals can do by themselves, for example, taking simple actions to save energy and installing efficient technologies in their homes, and even installing micro-renewables. But often people aren't aware of the possibilities, or are unsure about which actions are really effective.

This is where community projects can play a vital role. Community projects can bring people together to achieve changes that are difficult to carry out as an individual. They can encourage and support behaviour change such as making more journeys by foot, cycle and public transport, and fewer by car. They can work with other organisations to insulate homes and community buildings, and to install wind turbines and other sources of renewable energy.

Why *do* people reduce emissions?

In this section we explore three reasons why some people take action to reduce emissions:

- Reducing emissions without thinking about it
- Taking specific steps to reduce emissions
- Becoming actively engaged in tackling climate change.

In each case we consider what this might mean when developing community carbon reduction projects.

Reducing emissions without thinking about it

In many cases people will automatically reduce their emissions because they make choices, based on other criteria, which also happen to reduce emissions. For example, people might decide to travel by bus instead of car because it saves cost and the hassle of finding somewhere to park. Or they may buy local, seasonal fruit and vegetables because they prefer the flavour and like buying from a local producer.

There are likely to be ways in which projects can make changes so that people automatically take the lower carbon option. However, there is no evidence that people taking these sorts of steps will be any more likely than other people to take specific steps to reduce emissions.

Taking specific steps to reduce emissions

People will take specific steps to reduce emissions for two main reasons:

- Because they see it as being in their self interest – it will save them money, make them look good (or stop them looking bad!), make life easier for them and so on; or
- Because they believe reducing emissions is important for the sake of the planet, other people, our children etc.

Neither of these reasons are 'wrong', but it is important to realise the difference because there are important implications:

- People who take particular actions – suchas installing insulation – to save money etc., are no more likely that anyone else to take further steps to reduce emissions
- If people take action because they believe, in their hearts, that it is important and worthwhile, they are more likely to continue taking the same action, and to take other actions to help the environment and other people
- This means that getting people to take small easy steps (e.g. turning off lights) doesn't always lead to them taking more difficult ones (e.g. driving less) later.

If you aim to encourage people to change their behaviour, understanding the difference will be important when planning your project:

- If you just want people to take specific, simple steps, then focusing on cost saving and so on, will be important
- But if you hope to influence people to actively and enthusiastically make choices to reduce emissions, you'll need to engage their hearts as well as their minds. Making the actions easier and affordable is also important to *enable* people to take them.

Engaging hearts as well as minds

This is the holy grail of climate change projects – if we can crack this we'll see massive changes. These are early days however, and although people across the world are experimenting with different approaches, there is no blueprint. There are, however, some hints emerging about what works and what doesn't.

'Want to' versus 'ought to'

People will take more action – and keep on taking it – if they actually *want* to take action, rather than feeling they *ought* to. So people who take public transport because they actively *want* to, in order to help the environment, will do it more than people who know they *ought* because they've been told it's good for climate change.

Think of major changes you or people you know, have made – for example, giving up smoking or becoming vegetarian. You'll probably find that the changes which have lasted are ones which people really wanted to make, because it was important to them – and not changes which advertising or persuasion by others told them they should make.

Emotion versus logic

If you're convinced about the importance of acting on climate change, it's easy to believe telling others the facts about climate change and its effects should get them to see things the same way. Generally it doesn't. Although people understand the facts, they don't engage with the issue at a deeper, more emotional level. This means they are not motivated to take action.

It is essential that communication about climate change and the benefits of your project are based on good evidence but successful projects will engage people's interests and emotions in more subtle ways.

Hope versus fear

There is little evidence that trying to engage people at an emotional level by scaring them works. The most likely response is 'denial' – where people blank the message from their minds to avoid distress and carry on with their lives as before.

People are much more motivated by hope than fear. If people not only see the likely effects of climate change but also see ways forward and that others are taking action, they are more likely to accept that change is both necessary and possible.

Finding common ground

We all have different values and beliefs which influence our behaviour and how likely we are to change. People are more likely to adopt changes that are in tune with their existing values and beliefs. For example, people who believe that wastefulness is plain wrong, are more likely to avoid wasting food than people who believe that worrying about waste is a form of meanness, showing a lack of generosity. Neither one is necessarily 'wrong' or 'right'.

A useful starting point for any project touching on this area is to find out what people's beliefs and values are. Then find the common ground on which people agree and work from there – accepting the differences and putting them aside.

Believing it will make a difference

People are more likely to take action, and keep on taking it, if they believe their actions will really make a difference in the bigger scheme of things.

This is where community projects can add a special dimension to climate change action. A community project can demonstrate how each of our actions can add up to real reductions.

And in community projects the difference is not just about the specific CO2 saving – it can also be about the potential of all the projects across Scotland to demonstrate to others that people do care, change is possible and emissions can be reduced.

Sources of further information about behaviour change are listed in the Signposts at the end of this document.

Choosing your particular route

Now you have surveyed the landscape you can start thinking about which particular route you'll choose to achieve CO2 savings and other benefits in your community. The other Low Carbon Route Maps provide lots of information about possible projects. It's also worth looking at what other communities and organisations are doing. Some links to case studies and other projects are in the Signposts section.

There's no need to slavishly copy other projects, but it's well worth taking the time to explore what is already happening. This will help you learn what works, help you avoid dead ends, and gain inspiration. This might be inspiration to adapt a successful project for your community, or perhaps to combine different activities into something bigger – or it might spark ideas leading to something completely new.

Of course reducing emissions has to be central to any community carbon project. But there's no point in developing a project which could in theory deliver massive CO2 reductions if no one is interested in getting involved or there are practical difficulties which can't easily be overcome.

Here are some questions to ask as you try to decide what your project might cover and the route it might take:

- Will people – and other organisations – be interested?
- How much will emissions be reduced by?
- What other environmental, social and economic benefits could it deliver?
- What resources and support – equipment, funding, people, expertise – will be needed and how might you find them?

Will people be interested?

It's easy to assume that other people will be just as interested as you are in the project. It's likely that many people will be but it's important not to take that for granted. Some people will be inspired by the ambition of the project and its potential to help address global warming. Others might have no particular interest in CO2 reduction at the moment, but are keen on some of the other benefits – perhaps your project helps older people suffering from high fuel bills. And some might be mainly motivated by the opportunity to get involved in a local project.

It's worth thinking about your project ideas from three perspectives:

- How does the project meet people's needs?
- How can the project help other organisations achieve their objectives?
- Are there any particular local traditions or interests that the project can tap into?

Meeting people's needs

People's needs and desires are complex and changing. Some are fairly straightforward – we all need food and a safe place to live. We also need to relax and enjoy ourselves – and these needs can be met in very different ways from sport to watching TV, from volunteering to spending time with family and friends. We also need to feel comfortable about ourselves and our place in the world - a sense of belonging and being valued by others. Some people argue that excessive

marketing leads some of us to seek satisfaction by buying stuff we don't need – a form of satisfaction that doesn't last long after the shopping bags are unpacked.

The point here is not the detail but that projects can meet peoples' needs in very different ways, sometimes in ways that might not be expected.

At the simplest level, if people are in fuel poverty a project could help them enjoy a warm house without spending money they haven't got – and even save money. Projects can also help meet people's need for being involved in activities that they see as worthwhile – helping others, strengthening community, or helping the environment – or just getting together with other people.

As you develop your project think about how it could meet the range of different needs that people have.

Helping other organisations meet their objectives

There are lots of organisations working on issues relating to carbon reduction and climate change. Many of these are members of the Climate Challenge Fund Supporting alliance – see Signposts below for details. The alliance includes environmental campaigning groups such as WWF and agencies such as the Energy Saving Trust. They all have programmes or information and advice that can help community carbon projects.

Other organisations you should consider talking to include the local authority, local community groups, local businesses and public agencies:

- Local authorities are responsible for many services that might be relevant to your project – from aspects of transport to allotments. Most will have a Sustainability Officer or similar who will be able to advise you how the council might be able to help – and how your project might help them. For some projects you may need to get permission for certain activities e.g. planning – speaking to them early on avoids wasting time later.
- Local community groups can range from clubs for older people to the Scouts, from church congregations to youth projects. Few will be working directly on climate change issues but they might be working on related issues such as fuel poverty, healthy eating or allotments – or they might be interested in getting involved with new local projects. If you can help them achieve their objectives they might be able to help you achieve yours.
- Businesses – whether smaller local companies, or national companies operating in the area – can have a big influence on the community. Many will be interested in supporting local projects and perhaps getting involved – especially if it helps them get more local customers. Projects which address travel emissions or help save energy can also help businesses save money.

Organisations like these are most likely to be able to help if it's clear how your project will help them achieve their goals. Before you contact them it's worth taking a little time to look at what these organisations are trying to achieve.

Collaboration could be something really obvious such as talking to the bus company serving the area – your project might be interested in reducing car miles by shifting journeys to public transport and the bus company will be interested in having more passengers. At its simplest this might lead to working together to promote the bus service, or possibly carrying out a survey in the community to find out how timetable changes or extra services might increase usage.

Some collaborations might not be so obvious. A project looking at energy-saving, for example, might benefit from collaborating with the local history society. Exploring how people used to save energy in the past might lead to interesting projects with schoolchildren. It could also possibly raise awareness among older members of a community about grants for insulation and other energy-saving measures.

Don't forget that only certain types of organisation can benefit from CCF funding – check with the CCF team. But even if they aren't benefiting directly, organisations might well still be keen to support your project.

Local traditions and local interests

It's worth thinking about how your project can go with the grain in the local area – how it can tap into local interests and local traditions in ways that make the project really interesting and engaging for a wider range of people:

- In a crofting area you might think about how installing micro-renewables builds on the on the traditions of self-sufficiency and making use of a wide range of local resources.
- In areas where industry used to be powered by water mills, could these be restored or new technologies used to harness the power of the river again?
- Many areas of Scotland had particular local varieties of fruit and vegetable. Food growing projects can try and save these old varieties.

How much will emissions be reduced by?

You need to think about how much CO2 would be saved each year and over the lifetime of the project. For each of the three ways of reducing emissions – behaviour change, installing efficient technologies and generating renewable energy – there are particular issues to think about. Essentially though, there are two questions: *how much will this action reduce emissions by*? and *how long will the reduction last*?

Taking the three approaches in reverse order, simplest first:

Generating renewable energy

Take installing a wind turbine as an example:

- How much energy will the turbine you are considering generate over a year? This will depend on the rated output of the turbine, and how windy the site is.
- How much CO2 will that renewable energy save?
- How long will the turbine keep on reducing those emissions? That's the expected lifetime of the turbine.

The Energy Route Map will give you more details and signpost you to further information. At heart though, it's fairly straightforward – all the information is readily available and where you need to make estimates, for example, how the windiness of the site will affect output, there is expert advice available.

Installing efficient technologies

Take replacing old-style (incandescent) light bulbs with energy efficient (compact fluorescent) light bulbs (CFLs):

- How much energy does each CFL save compared with an incandescent? The difference between the wattage of the bulbs tells you the saving.
- How much energy will be saved by replacing the bulb over a year? You can estimate how long each day the bulb will be used for, and then calculate that over the year.
- How much CO2 will that save?
- How long will the reduction last? This will depend on the average life time of the CFL and will be on the packaging.

Here, all the information is easily available except how long the bulb will be on. This you can estimate fairly readily. In fact, these sorts of savings have been calculated – more details in Energy Route Map.

Behaviour change

As we've just seen, when it comes to generating renewable energy and installing efficient technologies you're dealing mainly with hard facts and reasonably solid estimates. Barring disasters, once a turbine is running and CFLs are installed they keep on reducing emissions – regardless of what the people using them actually do. Behaviour change is much more uncertain. Take 'eco-driving' – adopting driving styles that reduce fuel use – for example:

- How much energy does eco-driving save? There are estimates available, but the actual savings will depend on the driving styles of the individual driver – both before and after adopting eco-driving.
- How much CO2 will eco-driving save? You can convert the fuel savings to CO2 savings.
- How long will the saving last? If someone decides to eco-drive how long will they keep on doing it? They might be keen to start with, but their enthusiasm might soon wear off and without realising it they're back to driving 'normally'.

With behaviour change projects, more than any others, the answer to the apparently simple question 'how much CO2 will be saved' is 'it depends'.

Take up and stickiness

With behaviour change projects there are three crucial factors:

- In principle how much CO2 will the activity save, which we looked at above;
- How many people will take up the behaviour, and;
- How 'sticky' is the behaviour change – if people do change their behaviour, how long will they keep it up?

It's obvious that not everyone who is targeted by an information campaign – whether that's commercial advertising or a local project – is going to take action as a result. So when you're planning behaviour change projects you should to think about what will encourage people to participate. This will mainly depend, not on the slickness of the campaign, but on how:

- The project helps them meet their needs
- How easy it is for them to adopt the change
- Whether or not it's in line with their personal values and beliefs.

These factors will also influence how sticky the change is – how long they keep it up. Other factors that influence stickiness are:

- How often people are reminded of the behaviour change – for example electricity monitors that show the cost of using power in real time and are placed somewhere visible, such as on top of the TV, literally keep the issue in front of people.
- If people are regularly coming together with others and sharing progress they have an incentive to keep on making the change – programmes like Weight Watchers use this approach successfully.
- If the behaviour change also meets other needs, especially in a very immediate way, it's likely to last longer – if cycling to work also provides a safe, quiet and scenic route, as well as gentle exercise, more people are likely keep on doing it.

Watch out for the rebound

One thing to bear in mind when planning your project is the 'rebound effect'. This is where CO2 savings in one area leads to increased emissions in another area. For example, installing energy efficiency measures leads to lower energy use and lower CO2 emissions – and also lower fuel bills. But if people spend the savings on activities which emit lots of CO2 – such as air travel – the total emissions can in fact go up.

The rebound effect is an important reason to combine information and awareness raising along with projects to install equipment and so on because it gets people thinking about the wider issues of climate change, not just the immediate financial benefit.

What are the other impacts?

Most carbon reduction projects will have other benefits as well. These can be worthwhile in themselves and can also be important in encouraging other people and other organisations to become involved.

Most carbon reduction projects will also have other environmental benefits. Saving energy and generating renewable energy reduces other forms of pollution, so does reducing car use. Food projects which reduce CO2 emissions will also reduce pollution of rivers and increase biodiversity.

Likewise, carbon reduction projects often have social benefits. Energy reduction projects, for example, insulation, can help bring people out of fuel poverty. Projects to reduce the use of transport can make neighbourhoods safer and more pleasant. Food projects can help people eat healthier diets.

Many projects to reduce energy consumption will also save money on energy bills. In many cases, even after taking account of the cost of installing the equipment, the project will start paying back after a few years. Economic benefits might also come from creating local jobs and boosting the local economy as people spend more money locally – and less elsewhere.

What resources will be required?

As you develop your ideas for the project you need to think about the resources you will require for the project to have the best chance of success.

Time

How much time will people have to put in to the project? Think about the different groups of people who might be involved. The project will probably have a voluntary steering group; there may be volunteers delivering the project activities; you may plan to employ staff. Think also about the time that people in the community taking part in the project might have to give – for example do you expect people to give up time to complete surveys, take part in public meetings or attend training?

Knowledge and expertise

Across the world, successful community projects have been set up and run by people without any specialist knowledge or expertise – just plenty of common sense, some streetwise savvy and bags of commitment and enthusiasm. But it's also worth thinking about what other knowledge and expertise might be helpful to the project. This might change as the project develops and grows. Think about how you might get relevant advice and support from other organisations and from involving other people in the project.

Materials and equipment

What materials and equipment might your project need? How can you get these? What equipment might you need to buy, hire or borrow? Might you collaborate with other projects to share expensive items such as thermal imaging cameras? Do you really need an energy monitor for every house in the community or can you share them between households r even with other projects?

If your project is about awareness raising and behaviour change you might need information leaflets, posters, display boards etc. Do you need to write, design and produce these from scratch? Many organisations working on these issues will be delighted to work with community groups and to provide relevant material – and some might be willing to work closely with you and provide co-branded resources. The Climate Challenge Fund supporting alliance would be a good place to start.

Cash

Most projects will need financial resources of some sort – whether that is a few thousand pounds to support a volunteer information campaign or hundreds of thousands to install micro-renewables. Will the project be employing staff? Will you need to commission feasibility studies? Will you need to buy capital equipment? Are there ways of working with others to make the most of whatever money the project can raise?

The Climate Challenge Fund is the main source of funding for community carbon projects.

Goodwill

Goodwill is a vital ingredient for success. Will the project have the support of the local community? How do you know? How might you find out? Is the project supported by other organisations locally? And if it is, can you get letters of support to include in funding applications or to show you've got support when negotiating with other organisations?

Building goodwill often depends on making it clear how the project can deliver a range of social, environmental and economic benefits, not just CO2 reduction.

Deciding your destination

You've thought about different approaches to your project and different activities you might carry out. You've thought about all the different issues that might influence what you do and how successful it might be. You've found organisations or information that can help you. You might need to go around the loop a few times trying out different ideas. You should soon have a reasonably clear idea of what the project will aim to do and how you will go about it. You are now ready to start making more detailed plans.

Planning your journey

Estimating emissions

You'll need to work out what emissions the project will save – over the life time of the project for a short project. For a longer project you'll also need to calculate the savings made each year.

The section, 'How much will emissions be reduced by?', on page 9, outlines the process and you'll find worked examples and the information you need in the Route Maps.

Spell out your assumptions

When you estimate emissions you'll have to make lots of assumptions – about how many people will take part, how many of them will adopt the behaviour or install the equipment, how long the change will last and so on.

Some of the assumptions will be very accurate estimates while others will be little more than informed guesses. The point is to be clear in your project plan about the assumptions you're making and what information they are based on. The question to ask about assumptions is not "is it accurate?" but "is it reasonable?"

Here's an example from the Food Route Map:

Assumptions	Reason
20 households will be influenced by the cookery class	The cookery class has run for several years and 20 people is typical attendance.
25% reduction in food waste is expected	The course will focus on how people can eat more healthily, save money, as well as save CO2. Based on the type of food wasted (from WRAP report) we believe this is achievable.
4 months is the average time we estimate the reduction will last	The course lasts for eight weeks so we expect people to achieve high reductions initially, and that this will drop off after the course.

Be clear and consistent

As well as being clear about the assumptions you are making, it's important to be consistent. You need to be consistent with the emissions factors you are using: if you use the emissions factor for an average car at the start of the project you should do the same later on – unless there are good reasons to change, which you should explain.

You also need to be consistent in the way you collect and interpret information. For example if you are asking how many people car share when commuting to work, is it clear who you are counting? Do you mean the number of cars that are being used for car sharing? Do you mean the number of passengers, i.e. people who would otherwise be driving their own car? Do you means the total number of people in the shared cars – including the driver?

Collecting data and reporting results

Keeping track of your CO2 savings is important so you can manage your project, but you will probably also want to share your achievements with others – if you have funding or are working with partners you may need to do this.

Producing reports can be tedious and time consuming. You sometimes wonder who reads them. To making reporting less painful and actually useful think about:

- What information is needed to run the project effectively, as well as to report the results?
- Who needs the information and what will you – and they – actually do with it?
- How can you best communicate the project's progress and results to the local community? Not a fat report but perhaps a regular newsletter or posters? A column in the local paper?
- What is the minimum you *need* to collect? What extra information will it be *useful* to collect? Decide whether the extra time and effort for the 'useful' information is really worthwhile – will it actually *be* used?
- Decide how you will analyse your data and how you will present it in your report *before* you design the forms or spreadsheets for collecting the data.
- How can you collect the information as easily as possible? Ideally find ways of collecting the information as the project progresses – not all at the end.

Planning

For any project to succeed you need to be clear about:

- What the project is trying to achieve
- What success would look like
- What you need to know along the way to be sure you are on track.

If you work through all the steps in this document and make good use of the other relevant Route Maps, you should be able to set out clearly what the project is trying to achieve. For example:

> *We aim to set up a green travel project to reduce emissions by X tonnes per year*

If the project is successful:

> *Everyone in the village will be able to easily access low cost, low carbon transport for all their essential journeys*

And what you need to know to keep on track:

> *We'll record use of our commuter minibus daily; we'll receive details of passenger numbers from the bus company each month; and we'll survey a sample of the community twice a year.*

Once you've pinned down these key issues it's much easier to develop a clear, simple and workable plan. Key to effective planning is seeing it as an ongoing part of the project, not just something you do at the beginning.

Working through the following five stages should help you develop – and run – a successful project:

Reflect:

- What are you trying to achieve? Of course you want to reduce CO2 emissions, but what sort of scale? From what sources?
- What do you need to measure to know that you have succeeded? How will you communicate the results – and who to?

Plan:

- What needs to be done – not forgetting what needs to be recorded?
- Who's going to do it?
- By when?

Act:

- Do it!

Record:

- Keep track of what's been done – and what's changed as a result.

Communicate:

- Let people know what's changed as a result of the project – the community, partner organisations and funders.

For simple projects you may just need to go through each of these aspects once over the lifetime of the project. With larger and more complex projects you may need to go through the cycle several times as you tackle different aspects of the project and you learn what's working and what can be improved.

Signposts

Climate Change

Met Office: Your Guide to Climate Change
http://www.metoffice.gov.uk/climatechange/guide/

UK Climate Impacts Programme
http://www.ukcip.org.uk/

Intergovernmental Panel on Climate Change
http://www.ipcc.ch/

Case studies and projects

Centre for Sustainable Energy, Best practice review of community action on climate change, Final Report, May 2009
http://www.cse.org.uk/projects/view/1108

Big Green Challenge
http://www.biggreenchallenge.org.uk/

Climate Challenge Fund
http://www.infoscotland.com/gogreener/303.html

Behaviour Change

Sustainable Development Commission: I will if you will - Towards sustainable consumption
http://www.sd-commission.org.uk/publications.php?id=367

WWF: Strategies for Change – various reports, in particular: Simple & painless? The limitations of spillover in environmental campaigning
http://www.wwf.org.uk/what_we_do/campaigning/strategies_for_change/

Support

Climate Challenge Fund Supporting Alliance
http://www.sd-commission.org.uk/news.php/164/scotland/climate-challenge-fund-supporting-alliance

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[i] Building a low-carbon economy: The UK's contribution to tackling climate change. The First Report of the Committee on Climate Change. December 2008.

http://www.theccc.org.uk/reports/building-a-low-carbon-economy