

funding revolution

**A guide to establishing and
running low carbon
community
revolving
funds**

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The guide was written by Forum for the Future in collaboration with Bates Wells & Braithwaite solicitors and sponsored by the Department of Energy and Climate Change.

Forum for the Future is the UK's leading sustainable development NGO. We work internationally with business, government and public service providers, helping them to develop strategies to achieve success through sustainability, to deliver products and services that enhance people's lives, are better for the environment and to lead the way to a better world.

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For more on our work on finance visit www.forumforthefuture.org/projects/finance

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executive summary

smart communities

Building a low-carbon, sustainable economy is one of the biggest challenges of our time. Climate change, rising oil prices and energy security are all powerful reasons why this is fundamental to our future wellbeing.

We will need to generate renewable heat and power from the sun, earth, wind and rivers and retrofit our buildings to save energy. This guide is designed to show communities how they can use smart finance to kick-start carbon saving projects like these in their area and make their investments go further.

But this is about more than finance and technology. If local people run these projects and invest their own money it brings them closer together, enriches their lives and keeps the benefits in the community. Carbon saving projects can empower people and engage them in the promise of a sustainable future so they use less energy, shop locally and grow their own food.

We have learnt a great deal from the bold and determined pioneers who are already funding projects to tackle climate change in their area. We want to share this knowledge and give other communities the tools they need to seize the opportunities of a low-carbon future.

smart finance

Pioneering communities around the UK are already using revolving funds to finance community energy projects which cut carbon emissions and benefit local people.

This guide is designed to help local authorities, housing associations and community groups follow their example and set up schemes such as making private homes more energy efficient or installing solar panels on factory roofs.

It gives step-by-step guidance on how to set up a revolving fund for groups getting community energy projects underway as well as detailed advice on how to make the most impact with a fund for those who are further ahead.

The essence of a revolving fund is that the initial investment in a local energy project is repaid by returns, freeing up cash to invest in further carbon reduction schemes. Revenues from reduced energy bills, selling energy, and feed-in tariffs can fund a community's activities for decades on a steady, predictable basis. By reinvesting returns, or spending them on other carbon saving projects, the community can multiply the impact of its investment and avoid the need for continual injections of grant funding.

But a revolving fund can be much more than an abstract financial tool. Many communities are selling shares to local homeowners and organisations. By allowing them to invest in projects and have a say in the running of the fund, they create a spirit of individual and collective ownership and pride in becoming a low-carbon community. This can lead to positive impacts beyond the immediate energy projects. These include households becoming more energy conscious, people taking an interest in the environment and becoming a closer community, more resilient to economic and social pressures.

Funding revolution provides sound guidance and advice on all aspects of setting up and running a revolving fund including: suitable legal forms; most appropriate ownership models and structures; governance and fundraising issues; managing risks; financial aspects and tax considerations.



Community groups can raise funds from individuals, businesses, community organisations, charities, trusts, and government. Groups can issue shares and bonds, take out loans or apply for grants. Communities can make a local share issue that sells a stake in the community enterprise to investors. Some communities have become incorporated as Industrial and Provident Societies to sell shares, creating a one-shareholder-one-vote system for making decisions on running the group. This can raise funds for investment and allow the local community a way of owning and controlling the community activities. Local authorities can also issue bonds to borrow money for a revolving community fund. A local authority or community enterprise can also borrow money from a bank or building society.

A successful community can do a lot more than just establish a fund and make investments. Many organisations, businesses and households in your area will be able to finance installations themselves. Those that cannot may be deterred from making changes to their property by a lack of understanding of what is involved, by the hassle of making decisions or by the demands of the installation works. The role of the community group should be to act as trusted expert advisor and as the coordinator of the process. Experience from pioneering projects such as Kirklees Council, Refit West and others shows that providing this hand-holding and independent advisory role can be just as important as covering upfront costs.

The guide shows how the right governance and legal form allows income generated from energy projects to stay within the local area and not be extracted by commercial investors. It is designed to give community groups, local authorities and housing associations confidence to be bold and lead their community to a low-carbon future. It will also be of interest to other organisations that provide advice to communities, companies interested in working with communities on carbon reductions, central government departments and academics.

pioneers

Across the UK a growing number of communities have set up revolving funds to achieve their goals. Here are three of these exciting pioneers.

Kirklees Council launched their £2.7 million Re-Charge fund in 2008. It is now nearly completely lent out, with loans made to around 285 local households. Collectively, they have installed 300 renewable energy or low carbon technologies, such as solar PV panels and biomass boilers. Under the scheme, the council offers homeowners an interest-free loan of up to £10,000, the loan is secured to the property and is repaid to the council when the property ownership changes. Around 20% of the funds have supported households in fuel poverty.



Alison Cotterill at her home in Dewsbury with her new biomass boiler that was paid for by a loan from Kirklees Council's Re-Charge fund. *Courtesy of Kirklees Council*



Installation of 100kWp of solar PV panels on the Matthew Arnold secondary school in West Oxford. *Courtesy of David Hammond*

West Oxford Community Renewables (WOCR) is installing solar panels on roof space belonging to supermarkets, schools and other private and public sector organisations, and has plans for a hydro project and wind turbines. WOCR leases the sites and owns the installations, or develops them on behalf of other community-based organisations, and receives the feed-in tariffs. It sells the electricity to the site owner and the surplus to an energy supplier.

WOCR is a community-owned Industrial and Provident Society that has raised money with a local share issue and by winning public grants. It will donate a proportion of revenues from energy generation to the Low Carbon West Oxford (LCWO) charity. LCWO funds local low-carbon projects, such as providing household energy advice, with the aim of achieving an 80% reduction in emissions in West Oxford by 2050.

Hook Norton Low Carbon in Oxfordshire is another Industrial and Provident Society, which has been helping its 2,500-strong community reduce its carbon footprint for a number of years. It is spending a £400,000 grant on several projects, all of which will feed their revenues back into a rolling low-carbon fund so that the community can continue to take action for decades to come.

Its first projects include many changes to the local primary school (solar PV and thermal, heat recovery and roof insulation upgrades). It provides interest-free loans for the whole-house retrofit of six homes and insulating and installing renewable technologies such as wood pellet boilers, air source heat pumps, solar PV and thermal panels on a further 20 homes. It is tackling transport, too, by installing a

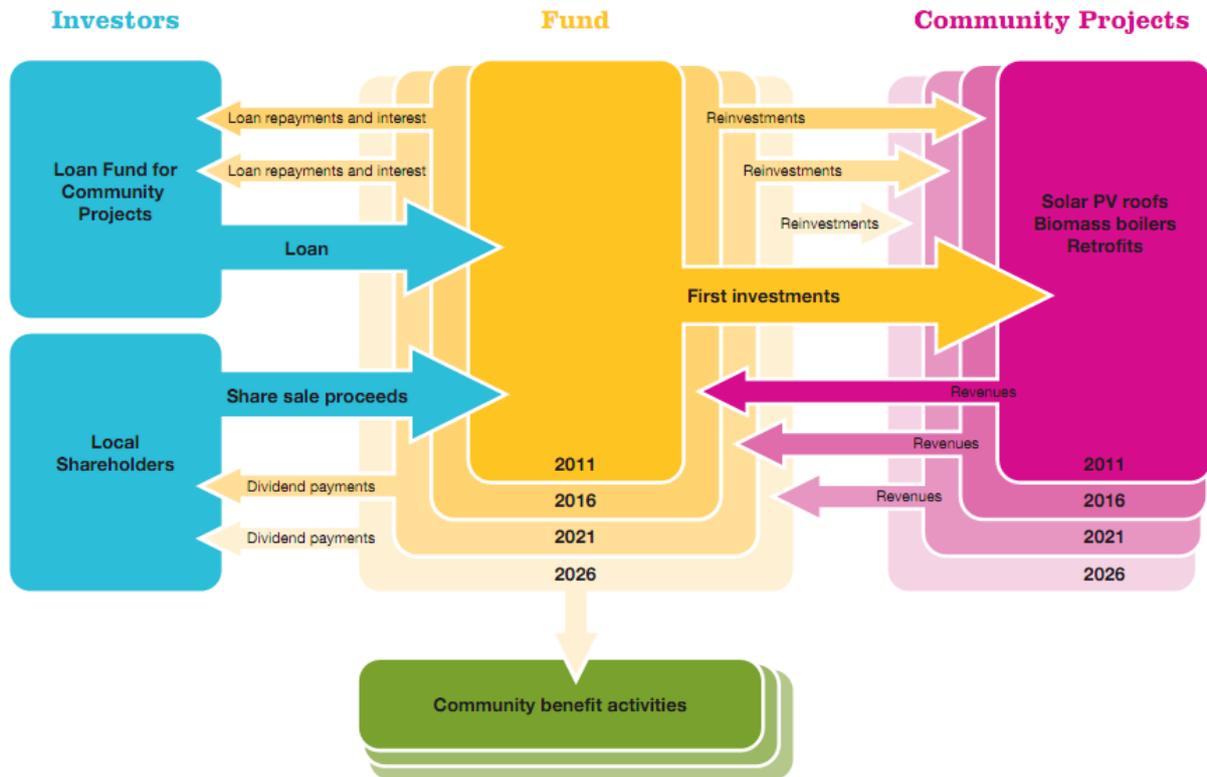
5,000-litre biodiesel tank at the Hook Norton Brewery to supply waste oil derived biodiesel for 50 private cars and the 3 community pool cars. And it is installing a 40m meteorological mast to measure wind speed to explore the potential for a 330kW community turbine.



Multifoil insulation installed behind a reed mat to be lime plastered later as part of Hook Norton Low Carbon's energy efficiency improvements to Hare Cottage and Barn. *Courtesy of Hook Norton Low Carbon*

revolving funds

This diagram shows how a revolving fund works and how it can grow its activities over time by channelling money from investors into projects, and reinvesting some of the revenues.



A revolving fund is a legal “vehicle”, and often set up as an Industrial and Provident Society for Community Benefit, governed by shareholders and members from the community. This means it can make agreements with investors and lenders, purchase assets such as energy generation equipment, lease places to install equipment and make loans to carbon saving projects.

In this example, the investors are a loan fund designed for community projects (e.g. Finance South East’s planned Community Generation Fund) and local shareholders. Like Hook Norton Low Carbon and other pioneer examples, the fund uses this money to install renewable energy technologies and make loans to households to pay the up-front costs of retrofitting.

These projects create financial revenues, including feed-in tariffs, sales of energy and loan interest and capital repayments, which go back to the fund. In a similar way to West Oxford Community Renewables and other revolving funds, the fund repays some of this money to its lender and pays dividends to shareholders.

The fund reinvests the surplus into more energy projects and donates to a sister charity that works with disadvantaged households to find ways to reduce their energy bills. The charity does not charge these households, so does not make money but its work creates large carbon savings and reduces fuel poverty, increasing the revolving fund’s carbon and social impact.

Over time, the fund is able to reinvest money out of its surplus so the value of the fund grows as it increases the number of community projects. After 15 years, it has repaid the start-up loan entirely and so has the choice of taking out a new loan to increase its scale, making greater payments to its shareholders or reinvesting the money it was repaying on the loan. It is able to continue to ‘revolve’ and grow indefinitely without public grant funding, acting as a hub in the community’s sustainability activities.



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1. introduction

Small-scale carbon saving projects – such as installing a solar panel on the roof of a house – cost a lot of money. This is a barrier to a low-carbon future. But most carbon saving projects do provide a financial ‘payback’ over time, through the money they save or generate. For instance, the householder will have a reduced energy bill and ‘cash back’ every year from ‘feed-in tariffs’. The problem is that even though these revenues make carbon saving pay financially, many householders and businesses are put off by the upfront costs and the hassle, complexity and uncertainty involved in making changes to the buildings or land that they own.

Revolving funds can be used to pay the upfront costs and share the revenues so that more projects are undertaken within your community. It is not just about finance. A well run, trusted community enterprise can help people to choose the right option, secure bulk deals to reduce costs, and help ensure the project is completed and continues to work. A community enterprise can encourage demand from across the community, stimulating action even from those who are sceptical about climate change. This demand, delivery and finance ‘one-stop-shop’ approach can accelerate community action on climate change.

The value of a revolving fund can be shared within your community. Returns can be used to fund more carbon savings. Revolving funds that are well designed and run can enable communities to continue making carbon savings without the need for continued grant capital. They also open up the possibility of raising money from shareholders and bank loans.

The feed-in tariff policy has created a new revenue stream for low-carbon energy projects that make it easier for communities to make a fund ‘revolve’. For electricity generation projects, these work by paying the ‘generator’ a fixed feed-in tariff (FiT) for each unit of electricity produced. The tariff varies between solar, wind, hydro and other technologies and also according to the size and scale of the installation. The aim of these FiTs is to ensure that all well sited projects return 5-8% of their upfront costs every year. Renewable heat incentives, which work in a similar way, are planned for low-carbon heating technologies such as solar thermal hot water systems.

This guide is for community groups and local authorities interested in funding carbon saving projects in their areas, in ways that maintain value. It takes you through the process of deciding whether your community should establish a revolving fund, what kind of fund to establish and what that fund should do. It also contains information on how to set up funds of different types, and how to engage with your potential customers and the wider community that would benefit from the funding.

What is a revolving fund?

A revolving fund is a legal ‘vehicle’, such as a company, that can be used to make agreements with investors and lenders, purchase assets such as energy generation equipment, or the lease of places to install such equipment, or the making of loans for other carbon saving projects. It ‘revolves’ by receiving incomes from loans, or from the generation of heat or power, and using these revenues to repay investors and put the surplus into more projects.



Our guide gives advice on the main considerations for community leaders and representatives that want to reduce their carbon footprint and improve the well-being of community members. We have included:

Benefits and examples: Our overview of the benefits of revolving funds for low carbon communities, including examples.

Needs and means: How can revolving funds help your community to fulfil its vision and objectives? Which ownership model is best for you, and what should your fund be used to finance?

The different ownership models: An explanation of the different ways that you can use a revolving fund within your community.

Going with the flow: The energy and cash flows and carbon savings from household energy measures, with worked examples.

Sharing the benefits: The energy, cash and carbon flows of energy projects, and how to share the upfront costs, risks, carbon reductions and financial rewards.

Running a revolving loan fund: The options you need to consider when establishing a fund for household energy measures.

Governance: How should you manage and control your community endeavours and the revolving fund itself?

Considering risk, finance and tax: How to manage risk, finance and tax considerations.

Legal forms: The pros and cons of the different legal entities that can be set up.

Raising funding: The types of investor and finance open to a community, and the legal considerations for accessing each.

Communication, marketing and public relations: What to consider when promoting your fund.

Checklist of key decisions: A summary of the key decisions that you should consider.

There are also appendices with sources of further information, links to model documents and the details behind the modelling we have used.

The decision tree on the next page highlights the main decisions you will need to take when considering whether and how to establish a revolving fund. It shows the first steps in establishing a low carbon community enterprise, which include deciding whether a revolving fund would help deliver the vision you have. It also asks whether you have the right resources to deliver the projects that your community identifies in its 'project pipeline'.

The types of project you should prioritise and how you share the benefits with your community are decisions that should be taken in the light of your immediate priorities. If you decide that your community should establish a revolving fund to support the projects you favour, you will need to decide which ownership model is best. Legal form, structure, governance and fundraising are also important issues that should be considered in the light of your vision, goals and resources.



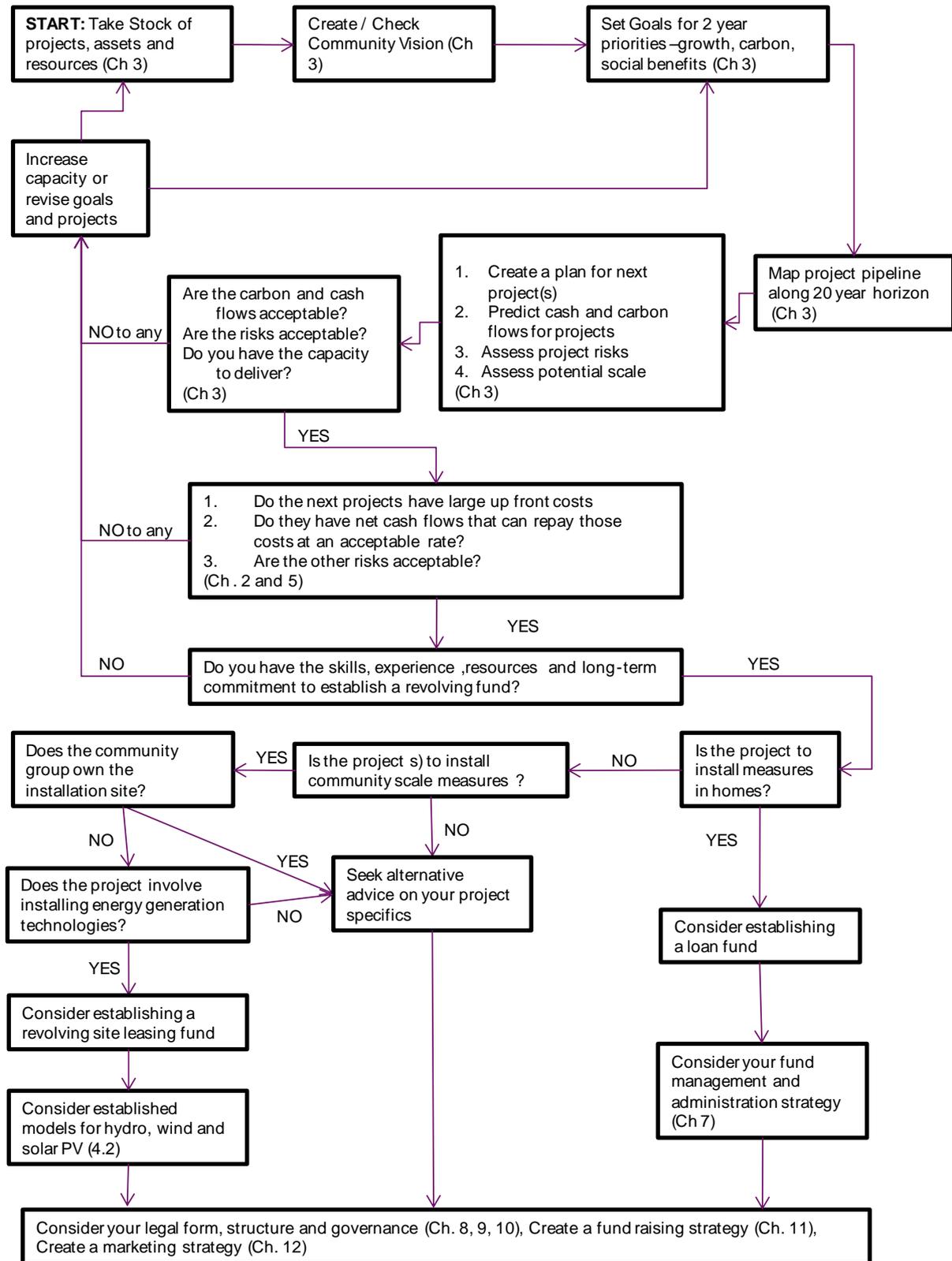


Figure 1. Decision tree for communities that you should use, cross-referenced to the relevant chapters and sections of this guide.



2. overview, and examples of community revolving funds

Introduction to community revolving funds

Communities can set up revolving funds to benefit the community and reduce carbon emissions. These are run by representatives of the community within local authorities or community enterprises that are controlled by community members. The money for the fund is raised from grants, selling shares or borrowing. The fund members work with local homeowners or businesses to invest the fund in low-carbon projects. The number of projects will depend on how much money is raised and the cost of each project. Projects usually target reductions in emissions from one of the following sources:

Energy generation

Energy savings

Transport

Waste

As the rest of this guide will show, revolving funds are very flexible. You can use them to fund any carbon saving projects that create a revenue stream to pay back upfront investment and running costs. Some types are more appropriate at the community scale, because of the relative complexity of certain projects and the costs and returns associated with them. Revolving funds work best for projects that have the following characteristics:

Low-risk transactions: where there is a high probability that the revenues will be paid to the revolving fund

High return on investment: the revenues will be sufficient to pay back the initial costs of setting up the project

Predictable costs and revenues: the costs and the revenue streams for each project can be quantified in advance.

There is abundant opportunity to increase energy saving and generation projects at the community scale. These projects can have relatively low risk, and yet they can generate profitable and predictable revenue streams. Transport and waste challenges can be tackled at a community scale as well, but there is not the same level of opportunity to make financial savings using a revolving fund. Transport and waste projects tend to be higher risk, with lower returns and less predictability. This guide therefore concentrates on energy projects but much of the information is valid for non-energy projects.

Examples of communities using revolving funds

There are some great examples of communities that are using or plan to use revolving funds for community carbon reductions.

West Oxford Community Renewables (WOCR) is creating a 'community renewables building society' that will support the development of an integrated approach to low-carbon living in West Oxford. It has won a grant of £800,000 from the Low Carbon Communities Challenge. This funding will be used, with other finance, to develop an initial £1.6m pipeline of renewable energy projects.

WOCR uses a site leasing model to secure sites. This includes using roof space belonging to a range of private and public sector organisations, including supermarkets and schools, to install PV panels, as well as planning a hydro project and wind turbines. WOCR owns the installations, or develops



them on behalf of other community-based organisations, and receives the feed-in tariffs. It sells the electricity to the site owner and the surplus to an energy supplier. WOCR is a community-owned Industrial and Provident Society that has raised further money by issuing shares. WOCR leases the roof spaces from the building owners, usually for a nominal rent. The building owners purchase the electricity generated from WOCR, and WOCR receives the feed-in tariffs.

Revenue from energy generation will be donated to the Low Carbon West Oxford (LCWO) charity. LCWO funds local low-carbon projects, such as providing household energy advice, with the aim of achieving an 80% reduction in emissions in West Oxford by 2050. LCWO also plans to establish a revolving loan fund to fund home energy efficiency and renewable energy installations in the community. For more information on 'the West Oxford model' see their free 'Low Carbon Living' guide¹.

Hook Norton Low Carbon (HNLC) is another Industrial and Provident Society, also located in Oxfordshire. It has been helping its 2,500-strong community to reduce its carbon footprint for a number of years. It is spending a £400,000 grant on several projects, all of which will feed their revenues back into a rolling low-carbon fund so that the community can continue to take action for decades to come.

HNLC's first projects include many changes to the local primary school (solar PV and thermal installations, heat recovery and roof insulation upgrades). It is also providing interest-free loans for the whole-house retrofit of six homes, and is installing insulation and renewable technologies (such as wood pellet boilers, air source heat pumps, solar PV and thermal panels) for a further 20 homes. HNLC is tackling transport, too – by installing a 5,000-litre biodiesel tank at the Hook Norton Brewery. This can supply biodiesel derived from waste oil for 50 private cars and the community's three pool cars. HNLC is getting ready for the next project by installing a 40m meteorological mast to measure wind speed as part of exploring the potential for a 330kW community turbine. For more information on this community loan fund see their free guide².

Kirklees Council launched its £2.7 million Re-Charge fund in 2008. It is now nearly completely lent out, with loans made to around 285 local households. Collectively, they have installed 300 renewable energy or low-carbon technologies, such as solar PV panels and biomass boilers. Under the scheme, the council offers homeowners an interest-free loan of up to £10,000. The loan is secured to the property and is repaid to the council when the property ownership changes. Around 20% of the funds have supported households in fuel poverty.

Transition Town Totnes is launching Transition Streets, an initiative involving 12 streets across the Devon town. The participating streets were chosen so as to represent the demographics and housing stock of Totnes as a whole. They will undertake a programme of behaviour change called 'Transition Together'. Participants are then eligible to apply for subsidised retrofits and a rolling fund for low-interest loans for domestic renewables, harnessing feed-in tariffs to enable the repayment of the loans.

Haringey Council and the Muswell Hill Low Carbon Zone in North London is a partnership between a local group of people and the local authority. The initiative's plans for its Low Carbon Community Challenge activities include leasing roof space at four schools and installing solar PV panels. This will be used as a learning tool and to encourage behaviour change. The income from the

¹ By visiting the LCWO website, <http://www.lowcarbonwestoxford.org.uk/index.php>, you can download a free guide on their low-carbon communities model, 'Low Carbon Living – Power to Make it Possible'. This includes guidance on leasing sites: <http://www.lowcarbonwestoxford.org.uk/images/documents/lcwo/lcwo-low-carbon-living-v1a.pdf>.

² Local United Diffusion Pack on Sustainable Community Loan Fund can be found here on the National Energy Foundation website: http://www.nef.org.uk/communities/documents/Local_United_Sustainable_Community_Loan_Fund_Diffusion_Pack_Jan2011c.pdf



panels will be used to fund other carbon reduction measures in the community, such as a mobile sustainable learning facility and cycle parking.

Whitehill-Bordon in East Hampshire aims to build on its 'eco town' status by making its Low Carbon Communities Challenge grant available for households to borrow. Residents who take advantage of this will be able to install energy efficiency measures and renewable technologies, to save energy and save money.

Awel Aman Tawe, in the Upper Amman and Swansea Valley in South Wales, plans to put two wind turbines with a capacity of 4MW on the Mynydd y Gwrhyd mountain. Fuel poverty is a major concern for the 13,500 people living in the 12 villages in the area. The installations will be financed by a Low Carbon Communities Challenge grant and bank loans. The community has plans to use revenue from the turbines to open a zero-carbon cafe, allotments and a biodiesel pump in the headquarters car park that can be used by the public. It is also considering using the revenues to create a loan fund for local households to install renewable energy and energy efficiency measures.

Refit West is a community-interest company providing a 'one-stop shop' to homeowners in the Bristol city region who want to conduct whole-house low-carbon retrofits. Refit West coordinates a consortium of loan providers, advisors and builders. It was established by Forum for the Future to design and establish a large-scale private sector housing whole-house retrofit service. Its aim is to cut the energy bills and CO₂ emissions of a thousand homes by a minimum of 30%. Refit West is coordinating works on the first ten homes that will act as demonstrations to create publicity and stimulate demand. Forum for the Future is keen to share the learning from this project with other communities and local authorities interested in establishing retrofit loan funds.



3. needs and means: when is it right to establish a revolving fund?

Any community group establishing a revolving fund will find itself carrying a considerable responsibility. Once established, a revolving fund is likely to commit a group to its management for at least ten years – and most probably 20 or more. Your group will need to allocate the time and expertise needed to set up a revolving fund properly. You will need to have the right structure and the right mix of experience, resources and skills to be able to run a fund effectively. This section aims to guide you through the process of deciding if a revolving fund will benefit your group and community. We take you through the process of deciding whether a revolving fund is needed, and whether you have the means to establish one.

Figure 2 (p.19) shows the process for deciding if your community is in a position to benefit from a revolving fund. Starting with 'Taking stock', the skills needed are listed, together with the right assets and resources to have fundable projects. Next, the vision of the community is important. Although unique to every community, the elements of a vision usually include these main ambitions:

Social – helping improve the well-being of residents, particularly disadvantaged households

Carbon – low-carbon emissions

Growth – increasing the size and reach of the organisation.

A vision may also include considerations of what the group is, who owns it and how it operates. The social, carbon and growth components can have equal importance in a vision, and a single community revolving fund can work towards all three over time. However, every group has a limit to its capacity. You will need to be realistic about what you can achieve. It is crucial to set goals that prioritise the parts of the vision that your community is capable of promoting and building upon in the first one or two years. These goals should be ordered into a project pipeline, as shown in Figure 2 (p19).

Each project will usually focus on one aspect of the vision – social, carbon or growth. According to the emphasis chosen, your project could be one of the following:

Social first – with a main focus on improving the well-being of citizens, particularly those in most deprivation

Carbon first – primarily concerned with reducing your area's carbon emissions

Growth first – generating high financial returns on investments so that your group's activities can increase with time.

Each focus can benefit from a revolving fund, and that fund can be set up to include social, carbon and growth-driven projects. You will need to make choices – such as what measures to fund – and your project vision should help shape such decisions.



How to make your community's vision a reality

Figure 2 (p.19) shows the five areas of activity that you will need to coordinate to set up a low-carbon community group and get the most out of it. You can use this as a tool to ensure you continue to work towards your vision and revise your goals as you learn and progress.

The first three activities set out how to engage your community and manage your group. The fourth shows typical projects at different stages of the development pipeline and the fifth looks at communication. The time horizon indicates the need to plan these activities for the present, medium and long-term.

1. **Take stock** – You need to regularly take stock of your current resources and assets. These include roofs and hill top sites. Ask what skills are available, like accounting and management and what can you do with these. Identify gaps that are holding you back.
2. **Create vision** - Think big and envision together what you want your community to be like in 15-20 years time. This shared vision is crucial to engaging and exciting your community and in getting agreement on the kinds of changes you want your group to make happen. For example, your priority might be to maximise carbon reductions or to help bring households out of poverty.
3. **Set goals** – You should set realistic goals for the next 1-5 years. It is important to get your first activities going early to create a sense of achievement, action and excitement so you should have some projects that are easy to get started. You should also review stage 1. To meet your goals you may need more resources, for example, an engineer or lawyer.
4. **Create a project pipeline** – Plan specific projects over the time when they will start. Communities typically start with activities which cost little or nothing. However, as their ambitions grow they develop projects which can benefit from revolving funds. Here is a typical project pipeline:
 - a. No or low cost activities include working with households or businesses to reduce their environmental impacts by suggesting measures to save energy and water and sharing experience.
 - b. Low cost energy saving measures might include installing loft insulation in a whole street. You might set up a revolving fund to make small loans or you might find an energy company will work with you and do this for free under their obligations to cut demand.
 - c. Renewable energy infrastructure projects such as hydro, wind, solar PV and anaerobic digestion have high up-front costs. Communities are increasingly using revolving funds to pay for this, drawing on revenue streams from feed-in tariffs and renewable heat incentives.
 - d. Some communities, such as Hook Norton are planning to use a revolving fund to finance 'whole house' retrofits of homes including energy efficiency measures, which can create greater carbon savings than renewables. At present, these schemes tend to generate a lower return on investment than renewable energy but the government's Green Deal is likely to change this.
5. **Communicate** - Tell your community what you are doing to engage them in your vision, involve them in your activities, and encourage them to invest in your fund or borrow for projects. Once you have built up experience, other groups will want your advice. It is possible to turn this into a paid for advisory service that generates additional income for your group.



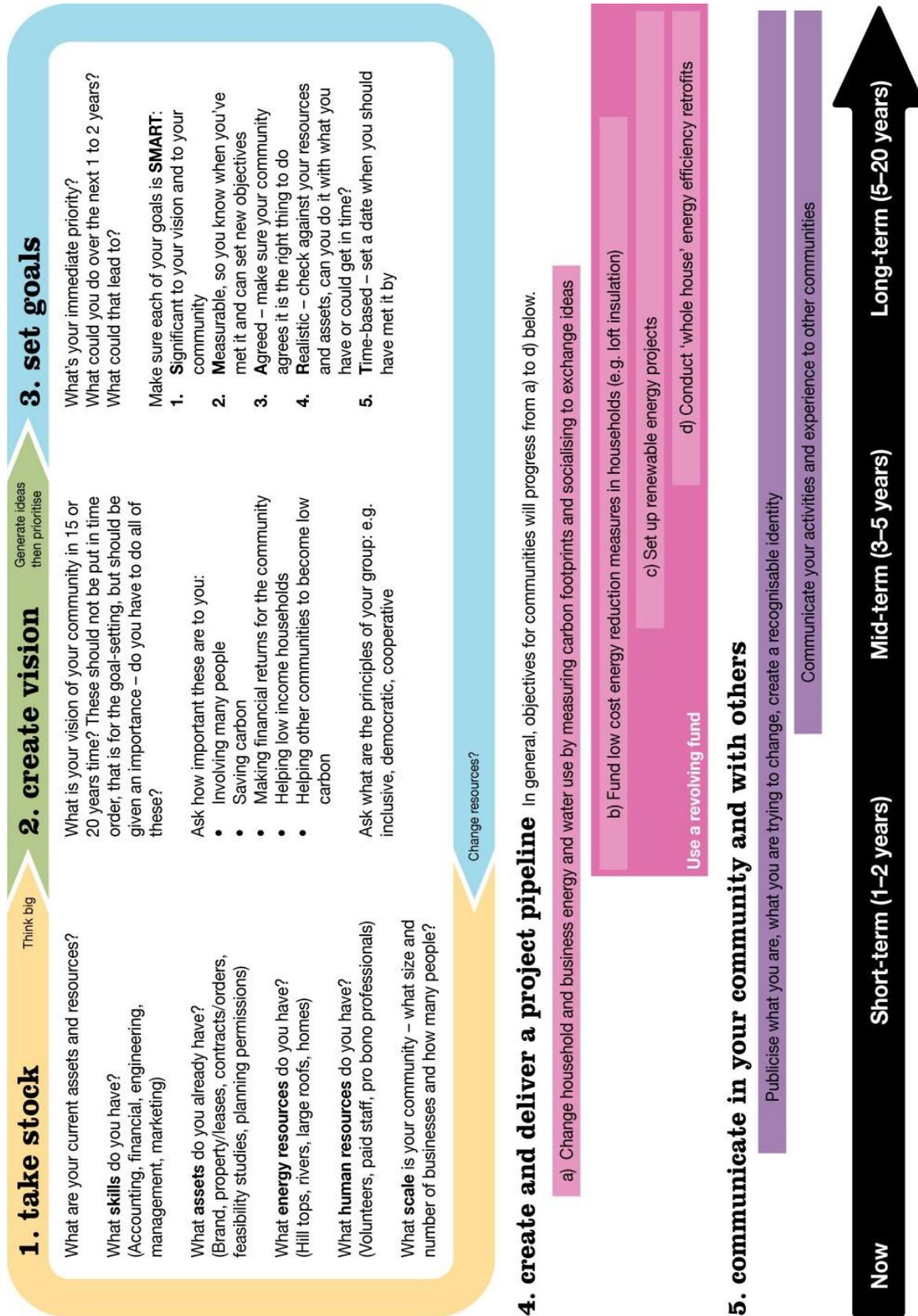


Figure 2. Community decision process of directing a low carbon community and creating a pipeline of projects. The red box shows the implementation phase during which a community group develops the projects that would benefit from establishing a revolving fund. This phase usually occurs two to three years after a community group has formed.



4. the different ownership models

Introduction to the models

Once the need for establishing a revolving fund has been identified and the community is ready to get going, the next decision is to choose between the two main ownership models. These ownership models are called *site leasing* and *lending*. The difference between them is who owns the revenue-generating measures (e.g. solar panels). Under site leasing the community maintains ownership of the technologies, or 'kit', while another body owns the building or land where it is installed. The community leases this site from its owner, installs the kit and may divide the financial returns with the owner³.

If you adopt a lending model, you will need to establish a loan fund to lend money to a company or individual to cover the cost of installations. The loan agreement between the group and the householder or organisation will cover how this loan, and any interest, should be repaid to the fund. The fund may have the 'security' to take ownership of property in particular situations, such as payments not being made as and when they should be, but in normal situations the borrower is the owner of any kit bought with the money lent to them. Such permutations and eventualities, and how to cover for them in loan agreements are covered in Chapter 17 (p.54).

In summary, under site leasing the community owns the assets and has the right to use the site. Under loan agreements, on the other hand, the borrower owns the assets and the community has the right to be repaid. The loan agreement can also allow the community to take ownership of the assets or other property if repayment is not honoured.

Deciding between different ownership models

Deciding what is the right approach for you – site leasing or loan agreements – depends on the scale and types of project your community wants to create.

Table 1 (p23) outlines the best models for different types of energy projects. It shows that site leasing works best for energy generation projects at the community scale and above, not for energy efficiency. Loans work best for energy efficiency at all scales and energy generation at the household scale – solar PV roofs, for example. The following is an explanation of this guidance, with examples of where each approach has been used.

Community scale

The site leasing model for solar roofs has been developed successfully at the community scale in the UK by West Oxford Community Renewables Ltd (WOCR)⁴. WOCR is an Industrial and Provident Society that developed out of the Low Carbon West Oxford charity. WOCR leases sites for renewable energy installations and issues shares to raise investment and enable members of the community to

³ In some cases high-profile site owners, such as a national chain of supermarkets, have not taken a financial return from a site lease on their property because it raises the green profile of their company. They have bought the energy from the community group at a market rate and charged the community a nominal rent. The 'lease' is required to show a 'consideration' that binds the parties into the agreement. Drawing up a deed could also be used for the same purpose in law without rent being paid. The term lease is used here to cover both eventualities – a material rent being charged by the site owner or not.

⁴ By visiting the LCWO website, <http://www.lowcarbonwestoxford.org.uk/index.php>, you can download the free guide on their low-carbon communities model, 'Low Carbon Living – Power to Make it Possible'. This includes guidance on leasing sites: <http://www.lowcarbonwestoxford.org.uk/images/documents/lcwo/lcwo-low-carbon-living-v1a.pdf>.



have a stake in the enterprise. A cooperative model for developing and financing community-owned wind farms has been developed by the Energy4All Cooperative⁵. H2OPE⁶ and Green Valleys⁷ have developed a community-owned model for hydropower. These organisations are helping other communities to use their models to similar effect. Sharenergy is working in the West Midlands to develop community-scale site leasing energy generation installations, including anaerobic digesters and hydroelectric turbines⁸.

Community-scale energy generation measures are larger than household scale. Community-scale sites, such as the roofs of buildings where carbon reduction measures are installed, are likely to be owned by businesses or public organisations. It is possible for your community to establish a loan fund to lend money to these organisations for the purpose of installing measures. However, for these organisations access to finance is not usually a barrier to installing energy generation technologies; they can usually borrow from banks, building societies or the Public Loans Works Board.

There are exceptions to this: small community organisations such as youth centres, charities and some schools may not be able to access finance for energy projects. For the majority of organisations, however, a loan fund is unlikely to increase energy generation at the community scale.

Site leasing will generally be more effective at the community scale. This is because businesses and public bodies value the reputational boost that comes from working with or helping a local community group. A site leasing model, allowing the community to use a roof space or piece of land, fits well with this. Borrowing money from a community fund could have a negative impact on reputation, as it could be seen as taking funding away from others that cannot access funding elsewhere.

It is probably less feasible for your community group to fund community-scale energy efficiency initiatives, as it is more difficult for a community to capture the cash flows of energy efficiency directly. Energy efficiency measures, such as cavity wall insulation, have very little intrinsic value once installed. Another complication is that they tend to be installed in many parts of a building. When this is the case, it is not feasible for a community group to maintain ownership of all the measures installed over a building in a site leasing agreement. This is because there is very little value in such measures, and the lease would need to cover much – if not all – of the building.

There are also implications for registering for FiTs, and potentially RHIs when they are established, if the organisations or individuals involved have received a public grant. It is the owner of the equipment that makes the registration – the borrower in the case of the loan model and the revolving fund in the case of the site lease model. This could be important because if an organisation has received public grants, and depending on the current interpretation of state aid rules, the equipment owner may not be eligible to register for FiTs (see Chapter 11, which covers fundraising, for more information).

It is feasible for your community group to lend money for energy efficiency to community-scale buildings, such as schools, churches and businesses. As with energy generation, you should consider whether this is the best use of your limited funds if the organisations involved can access finance elsewhere.

⁵ http://www.energy4all.co.uk/energy_home.asp. Energy4allSteps is a helpful guide to community wind projects – see <http://www.energysteps.coop/>

⁶ <http://www.h2ope.org.uk/> H2OPE website

⁷ http://www.thegreenvalleys.org/index.php?option=com_content&view=article&id=121:hydro-electrics&catid=51:case-studies
Green Valleys hydro website

⁸ <http://www.sharenergy.coop/>



Under a different approach, communities may also be able to establish an energy service company (ESCo) at the community scale. This model involves the community group selling an energy service to householders, businesses or other organisations at a flat rate, rather than an energy supplier charging per unit of energy. It is therefore in the interest of the ESCo to pay for and install measures to reduce the energy use of its customers. Local authorities have established a number of ESCos in the UK. As ESCos are not revolving funds, they are not covered in the rest of this guide.

Household scale

At the household scale the significance of access to finance as a barrier to installing energy generation or efficiency measures will vary greatly. Other factors - such as hassle and disruption of works, lack of trust of installers and people's level of knowledge of the right measures for their property - are also important. Providing a service that reduces these barriers can be more important than providing finance in your community. When it comes to ownership models, it is possible to use a site leasing model at the household scale. Under the feed-in tariff regime, this has the benefits of the community group being the 'generator' and so having the right to collect the feed-in tariffs.

However, there are liabilities that can arise from leasing a domestic roof. Can the assets installed be protected from theft and damage? What are the implications for the householder's mortgage terms? What happens if he or she wants to sell the property? Householders may prefer to own the energy generation measures rather than leasing the site. They may also be more comfortable with a loan model if they more readily understand what a loan is.

Wessex Home Improvement Loans⁹ and South Coast Moneyline¹⁰ are Community Development Finance Institutions (CDFIs) that have loan products available to households for home improvements in conjunction with groups of local authorities. While the primary purpose of the works covered by these loans is not carbon reductions, the model can be applied. Wessex Home Improvement Loans has recently started to provide loans for domestic renewable energy installations.

Some householders, particularly those in priority groups and in fuel poverty, are highly debt averse. This means that loans may not always be the most marketable option. Other models include the equity release Housing Improvement Scheme that the London Rebuilding Society has developed¹¹. This is a 'social first' project with a shared ownership model. London Rebuilding Society becomes the owner of a proportion of each property. The scheme has benefited disadvantaged and vulnerable households in East London.

An 'energy cooperative' model - where householders are members of the community group and therefore all have a shared ownership of all measures - could also be possible. Going one stage further, it is possible to create a micro-grid within a community so that generators sell surplus electricity directly to other members of the community group via a physical electricity network. This is an approach being developed by Ashton Hayes Going Carbon Neutral.

The energy cooperatives model has been established at a community scale. But because the concept is untested, you should think carefully before developing a site leasing approach for householders. Community lending, on the other hand, is well developed at the household scale in the UK. This is the approach that is explored further in this guide, and is the recommended starting point for communities.

⁹ <http://www.wessexhil.co.uk/loans.html> - Wessex Home Improvement Loans website

¹⁰ <http://www.scmoneyline.org.uk/home-improvement-loan-information> - South Coast Moneyline Home Improvement Loans website.

¹¹ <http://www.londonrebuilding.com/information/89717/housing/> London Rebuilding Society information on shared equity financing of home improvements.



Much the same reasoning applies to household energy efficiency funding as community scale. Site leasing is inappropriate because the lease would need to cover much of the property and the measures would have little or no value to the community group once installed. The energy savings could not be captured by the community group as they would be in the form of reduced energy bills. However, an ESCo model that sells energy service to households for a fixed fee could be successful at the household scale as an alternative to the above approaches.

To meet the UK's carbon reduction targets, measures that currently cost thousands of pounds will need to be installed to most buildings. Community revolving funds can play an important role in this by providing funding to cover the upfront costs of the works, coordinating the delivery and creating demand. The Energy Bill introduced to Parliament in December 2010 includes provision for a new 'Green Deal'. The Government is establishing a framework to enable private firms to offer efficiency improvements for homes, community spaces and businesses at no upfront cost. Repayments are to be recouped through a charge in instalments on the energy bill. This first 'Green Deal' will not be on offer until autumn 2012 at the earliest. There are currently five pilots of models for schemes similar to the Green Deal coordinated by the Energy Saving Trust¹². These pilots are helping to test the best potential mechanisms. Until the details of the law are decided upon, it is not clear what the best roles for community revolving funds will be in the Green Deal offers.

Lending to households is a well-established approach, making it the most feasible approach for most community groups. More detailed guidance on household lending is given in Chapter 6 (p45).

Model	Household-scale projects		Community-scale buildings or renewable sites	
	Energy generation	Energy efficiency	Energy generation	Energy efficiency
Site leasing	✓ / ✗	✗	✓	✗
Loans	✓	✓	✓ / ✗	✓

Table 1. The suitability of site leasing and loans for funding energy generation and efficiency measures at the household or community scale.

Projects at different scales, and mixing ownership models

As an example, a community with a fund of £500,000 could develop up to ten sites for renewable energy installations. With household loans, this size of fund could finance 30-60 household-scale projects. A community could also develop the larger leased sites and use the revenues from these to make loans at a rate of about £40,000 per year, making four to ten loans per year.

¹² <http://www.energysavingtrust.org.uk/Home-improvements-and-products/Pay-As-You-Save-Pilots>



5. go with the flow: cash, energy and carbon flows of energy projects

Introduction

The choice of energy measures that a revolving fund invests in, and the agreements with other parties involved, can have a large impact on financial flows, the profit or loss generated and the reduction in carbon emissions. This section gives an overview of the financial and carbon flows that energy projects deliver. First we show the flows that occur with measures while operating, on an annual basis. These measures also have upfront or capital costs of thousands of pounds, which we look at in detail in later sections.

The quantified examples used here are all at the household level, to give you some idea of how different measures create revenues and save carbon. It could well suit the aims of your community to install larger community-scale measures, such as larger solar PV installations, wind turbines or hydroelectric turbines. But the costs, revenues and carbon savings at this scale are specific to each site. You should not base decisions on generic comparisons of technologies. Use site surveys and feasibility studies instead. Issues such as planning and gaining land owner permissions can affect your capital costs. Support for community carbon reduction projects is available from the Energy Saving Trust¹³.

The data in our worked examples, designed to explain the cash and carbon flows of energy projects, are at the household scale. The same types of flows also apply to community-scale projects (e.g. upfront capital costs, maintenance, feed-in tariffs). The aim of feed-in tariffs is to make electricity generation projects have net revenues of 5-8% of the upfront costs each year. To achieve this aim feed-in tariffs are lower at the community scale. This is because community-scale projects produce more energy per pound of capital costs than household scale (see Table 3, p29 for the tariffs by technology and scale).

The capital costs that we have used to model energy and cash flows are taken from a report prepared for the UK Government by Element Energy in early 2010. There is evidence that the capital costs for some technologies have significantly decreased since this was prepared. In February 2011 two reviews of the FiT were announced that could change the feed-in tariff for future projects (see p35). If changes to FiTs are introduced by the Government following these reviews, our modelling may no longer be accurate. The FiTs that we have used are for projects installed in the period 1 April 2010 to 31 March 2011. They do not include announcements on adjustments due to changes in the RPI (although inflation assumptions are included).

On-site generation reduces carbon emissions from the energy used in the home. But it does not *reduce* the use of energy in the home¹⁴. With around 26% of carbon emissions coming from homes, reducing energy demand in our existing housing stock is an effective way to reduce a community's carbon emissions. This can be done by fitting insulation, more efficient appliances and smarter

¹³ <http://www.energysavingtrust.org.uk/cafe/Green-Communities/Project-Support>

¹⁴ There is some evidence that on-site domestic generation encourages higher energy awareness, and therefore changes in behaviour to reduce demand for energy. For more information see <http://www.sd-commission.org.uk/publications.php?id=239>.



control systems into homes. There are measures that can be taken for a few hundred pounds, such as insulating the cavity in the external walls of newer homes and lofts, lagging pipes and boilers and draught-proofing.

To meet the UK's carbon reduction targets, measures that currently cost thousands of pounds will need to be installed to most buildings. Community revolving funds can play an important role in this by providing funding to cover the upfront costs of the works, coordinating the delivery and creating demand. The Energy Bill introduced to Parliament in December 2010 includes provision for a new 'Green Deal'. The Government is establishing a framework to enable private firms to offer efficiency improvements for homes, community spaces and businesses at no upfront cost. Repayments are to be recouped through a charge in instalments on the energy bill. This first 'Green Deal' will not be on offer until autumn 2012 at the earliest.

Energy generation

With the introduction of feed-in tariffs, there are now new cash flows associated with renewable electricity installations that have a capacity below 5MW. Table 3 (p. 29) lists the FITs for the first three years of the scheme for qualifying technologies and scales. The Renewable Heat Incentives (RHI) scheme is planned for introduction in 2011 – see box below for further information on FITs and RHIs policies. As the RHI scheme is currently under consultation, quantified examples are not given in this guidance. The remainder of this section discusses renewable electricity generation, which qualifies for FITs.

The new revenue streams: feed-in tariffs and Renewable Heat Incentives

Feed-in tariffs (FITs) became available on 1 April 2010. This initiative has created a new revenue stream for low-carbon electricity generation projects. FITs are available for new installations on sites with a total generating capacity of up to 5MW. Energy suppliers pay the 'generator' a fixed 'generation tariff' for each unit of electricity produced. Installations that are connected to the National Grid and export all or some of their electricity to the grid for others to use will be paid a separate export tariff for each unit that is exported rather than being used on site. For small-scale installations this exportation will not be separately metered and will instead be deemed to be 50% of the electricity generated. The level of the tariff varies both between solar, wind, hydro and other technologies and according to the size and scale of the installations. The goal of FITs is to ensure that all well sited projects return 5% to 8% of the upfront cost every year. See Table 3 for the tariffs. In February 2011 the Government announced a fast-track review of tariffs for solar PV installations with a capacity greater than 50kW, and also a longer, more comprehensive review – see page 36 for details.

Renewable heat incentives (RHIs) will give incentives for renewable heat installations such as air- and ground-source heat pumps, biomass boilers, solar-thermal water heaters and combined heat and power (CHP) plants that use renewable fuels. The Department for Energy and Climate Change (DECC) states: "The scheme will make payments to those installing renewable heat technologies that qualify for support, year on year, for a fixed period of time. It is designed to cover the difference in cost between conventional fossil fuel heating and renewable heating systems (which are currently more expensive), plus an additional rate of return on top." The DECC also states that "the Renewable Heat Incentive (RHI) will go ahead in 2011 and we [DECC] expect to be in a position to announce the details of the scheme, including RHI tariffs and technologies supported, shortly." For up to date information visit DECC's RHI webpages:

http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/policy/incentive/incentive.aspx



Renewable electricity

There is a difference between community-scale and household-scale renewable installations. Households will use the electricity generated on site, whereas larger community installations (such as those on large leased roofs or wind turbines on open ground) may be 100% exporters (meaning that the community group does not use any of the electricity generated but exports all of it). The site owner may purchase electricity from the community as part of the lease (or through a separate power purchase agreement) but this is classed as an export as the site owner does not own the installation¹⁵. At community and domestic scales energy efficiency funding is usually by loan agreements¹⁶.

Figure 3 illustrates the cash and energy flows from an on-site domestic installation of a 2.5kW solar PV panel.

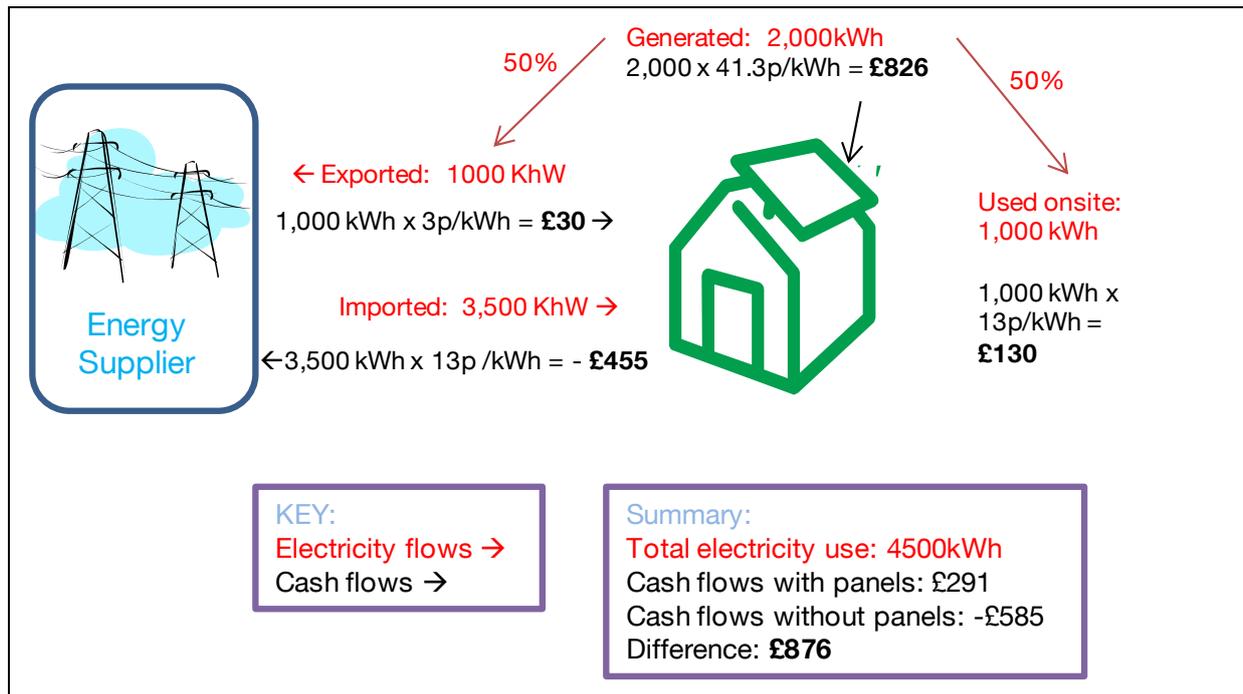


Figure 3. Illustration of electricity and cash flows for a self-funded 2.5kW solar PV panel and on-site generator that falls into the 'less than 4kW' Solar PV bracket for FiTs (nb the example 2.5kW PV installation used later in this guide generates 2,125kWh, rather than the 2,000kWh shown above, and so has higher cash flows).

In the example in Figure 4 the panel generates 2,000 kWh per year of electricity, which is metered using the site's generation meter. For each of these 2,000 kWh, the energy supplier pays the householder 41.3p. This adds up to £826 of income for the household. When there is demand for it,

¹⁵ For more information see the Department for Energy and Climate Change government responses and decisions in relation to the Renewables Obligation and feed-in tariffs (FiTs): http://www.decc.gov.uk/Media/viewfile.ashx?FilePath=Consultations\Renewable%20Electricity%20Financial%20Incentives\120100204120204_e_@@_FiTsconsultationresponseandGovdecisions.pdf&filetype=4

¹⁶ Energy performance contracting is a developing model that may work at the community scale. It involves an energy service company taking over utility contracts and agreeing a reduction in utility bills with a customer, and then making changes that will reduce demand. For more information on how Berlin city region is using this model see http://www.c40cities.org/bestpractices/buildings/berlin_efficiency.jsp.

Refer to p9 for an example of shared equity for home improvements for disadvantaged and vulnerable homeowners offered by the London Rebuilding Society.

this electricity is used in the house, or on site. When the panels are generating more electricity than the household is using, the surplus is exported to the grid for others to use. The amount that is used on site and exported in this example is the same: 50%. The actual amount will vary between installations.

In total the household uses 4,500 kWh of electricity a year at a cost of 13p/kWh¹⁷. Before installing the solar panels it would have bought or 'imported' all of this electricity from its electricity supplier. However, now the household uses 1,000 kWh of the energy from the panels. This reduces its spending on electricity from £585 to £455, a saving of £130. The on-site use of the electricity generated is thus worth £130 to the household.

The householder is also paid an 'export tariff' of 3p for every kWh of electricity that is generated but not used on site. This adds up to 1,000 kWh, meaning that the household earns £30 from its electricity exports.

Before the installation the householder spent £585 on electricity. After the installation, they will earn the generation tariff of £826 and the export tariff of £30 (a total of £856), and spend £455 on electricity. They will also spend £110 a year to clean and service the panels. This means they will have gone from electricity costing £585 a year to a net income of £291. This is a difference of £876 a year for the householder, as summarised in Table 2.

	Scenario: 2.5kW PV panels	
Cash flows	Before installation	After installation
Income		
Generation tariff	n/a	£826
Export tariff	n/a	£30
Expenditure		
Imported electricity	-£585	-£455
Maintenance of panels	n/a	-£110
Net income	-£585	£291
Difference from before installation	n/a	£876

Table 2. Household annual cash flows from 2.5kW PV panels example.

¹⁷ This figure is taken from the example given in the Government response to the feed-in tariffs consultation, but will vary with the consumer price of electricity. See section 5, p17 for more information.



To summarise energy generated on site, from installations that qualify for FiTs, will create three different incomes:

- The generation tariff: A fixed price for each unit of electricity generated, determined according to the generation tariffs table. This price will remain throughout the lifetime of an installation's eligibility for FiTs payments. However, it will be adjusted annually by the change in the Retail Price Index. This is called 'indexation'.
- Export tariff: A fixed payment for exported electricity – this is 3p/kWh for every technology and scale, and will also be indexed.
- Electricity used on site: A reduction in the amount of electricity purchased from the supply company.

100% export renewable electricity installations

Installations that export 100% of their electricity will not have income from electricity used on site but they will have a larger income from the export tariff. However, most 100% exporters will choose to opt out of the export tariff and sell the electricity privately at a higher rate than the export tariff.

Carbon flows from renewable energy generation

Electricity generated in the UK and fed into the National Grid comes from various sources. Some are renewable while others, such as coal-fired power stations, cause high carbon emissions. The average carbon emissions for electricity imported from the grid is currently 0.544 kg Co₂e per kWh¹⁸. The carbon saving from electricity generated by a renewable installation is calculated by the reduction in demand for electricity from the grid. In the example of this 2.5kW solar PV panel generating 4,500kWh in a year, the saving is 2,448 kg of CO₂e (2.448 tonnes).

¹⁸ Using Defra's greenhouse gas conversion factors – see the guidelines at <http://www.defra.gov.uk/environment/business/reporting/pdf/20090928-guidelines-ghg-conversion-factors.pdf>



		Year of installation ¹⁹²⁰ (1 April – 31 March)				Export tariff (p/kWh)	Tariff lifetime (yrs)
		2010/11	2011/12	2012/13	All years		
Technology	Scale	Generation tariffs (p/kWh)					
Anaerobic digestion ²¹	500kW	11.5	11.5	11.5	3	20	
	>500kW	9	9	9		20	
Hydro	15 kW	19.9	19.9	19.9		20	
	>15-100 kW	17.8	17.8	17.8		20	
	>100 kW-2 MW	11	11	11		20	
	>2 MW – 5 MW	4.5	4.5	4.5		20	
Micro CHP ²²	pilot >2 kW	10	10	10		10	
PV ²³	4 kW (new build ²⁴)	36.1	36.1	33		25	
	4 kW (retrofit)	41.3	41.3	37.8		25	
	>4-10 kW	36.1	36.1	33		25	
	>10-100 kW	31.4	31.4	28.7		25	
	>100kW-5MW	29.3	29.3	26.8		25	
	Stand-alone system ²⁵	29.3	29.3	26.8		25	
Wind	1.5kW	34.5	34.5	32.6		20	
	>1.5-15kW	26.7	26.7	25.5	20		
	>15-100kW	24.1	24.1	23	20		
	>100-500kW	18.8	18.8	18.8	20		
	>500kW-1.5MW	9.4	9.4	9.4	20		
	>1.5MW-5MW	4.5	4.5	4.5	20		
Existing microgenerators transferred from the Renewables Obligation		9	9	9		to 2027	

Table 3. The feed-in tariffs as set by Government for the first three years of the Clean Energy Cashback Scheme. The tariff paid per kilowatt hour generated varies by technology and scale. The tariff is set on the date of installation and lasts for a set number of years, but will change with the Retail Price Index.

¹⁹The generation tariff is the rate at which schemes starting in that year will be paid for the tariff lifetime, subject to inflation or deflation. See the Ofgem website about feed-in tariffs for the latest tariffs: <http://www.ofgem.gov.uk/Sustainability/Environment/fits/Pages/fits.aspx>

²⁰In 2011 the feed-in tariffs will be comprehensively reviewed, with the possibility of changes impacting registrations made after 1 April 2012. The impact may be felt sooner for solar PV installations of over 50kW if the Government determines that this is necessary. See the DECC FIT site for more details: http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/feedin_tariff/review/review.aspx

²¹ Alongside the fast track review of tariffs for solar PV installations above 50kW, DECC will also undertake a short study into the take-up of FITs for farm-based anaerobic digestion plants due to the low number of registrations so far.

²² Note that the microCHP pilot will support up to 30,000 installations with a review to start when the 12,000th installation has occurred.

²³The Secretary of State for Energy and Climate Change announced in February 2011 that as well as the First Review of the FIT, there would be a 'fast-track review' of the feed-in tariffs for solar PV installations over 50kW in capacity. This affects the 1-100kW, 100kW-1MW and stand-alone bands (for installations over 50kW only). For further details and the latest announcements, see http://www.decc.gov.uk/en/content/cms/news/fits_rev_wms/fits_rev_wms.aspx

²⁴ 'Retrofit' means installed on a building which is already occupied. 'New build' means where installed on a new building before first occupation.

²⁵ 'Stand-alone' means not attached to a building.



Energy efficiency measures for existing homes

The carbon, cash and energy flows associated with energy efficiency are simpler than for renewable electricity generation because there are no incentives for making changes to housing stock. Therefore, the only income stream is from the reduction in heating and electricity bills. The carbon flow is calculated in a similar way to energy generation: it is the reduction in energy use multiplied by the average carbon emissions from that source of energy. The difference is that energy efficiency measures will save electricity and heating fuel, and these have different conversion factors²⁶.

Unlike generation measures, the changes in on-site use of energy from retrofitted energy efficiency measures are specific to the type of house, other measures already installed and the behaviour of the residents. As such, they will vary from household to household very significantly.

To give an example of the amounts of energy and carbon that can be saved from a large-scale or 'whole-house' retrofit of an existing home, the following is based on a three-bedroom semi-detached Georgian period house, with solid walls and supplied by mains gas with the following measures²⁷:

- Draught proofing
- Roof insulation
- New windows
- New boiler and controls
- Internal wall insulation
- Floor Insulation

The reduction in carbon emissions resulting from the installation of these measures was calculated as 9,967 kg CO₂e per year. The household spend on energy before the measures were installed was £1,425²⁸. These measures reduce this by 53%, saving £760 a year. These measures will be effective for different periods of time. For instance, a new boiler should last for 10-15 years, whereas insulation should be effective for 25 or more years. So conservatively, these savings have an average lifetime of 15 years. These changes are summarised in Table 4 on the next page.

²⁶ <http://www.defra.gov.uk/environment/business/reporting/pdf/20090928-guidelines-ghg-conversion-factors.pdf>

²⁷ The data on costs and performance of these measures for this type of house were provided by a study conducted by ARUP and ROK under Forum for the Future's Engineers of the 21st Century programme - <http://www.forumforthefuture.org.uk/project/retrofit-at-scale-bristol>

²⁸ Calculated using USwitch.com engine for a poorly insulated three-bedroom house with five occupants.



	Scenario – energy efficiency	
Cash flows	Before installation	After installation
Income		
Generation tariff	n/a	n/a
Export tariff	n/a	n/a
Expenditure		
Gas and electricity	-£1,425	-£665
Maintenance of boiler	-£100	-£100
Net	-£1,525	-£1,060
Difference from before installation	n/a	£760

Table 4. Annual operational household cash flows from whole-house energy efficiency measures (example).

Combining energy efficiency and renewable electricity

This section gives an example that combines the carbon, energy and cash flows of the 2.5PV installation and the energy efficiency measures referred to above. The efficiency measures mostly reduce the use of fuel rather than electricity. Because of this they will change the proportion of generated electricity used on site only by a small amount. In this example it is 50%, the same as for the 2.5kW PV example above.

	Scenario: 2.5kW PV panels and energy efficiency	
Cash flows	Before installation	After installation
Income		
Generation tariff	0	£826
Export tariff	0	£30
Expenditure		
Gas and electricity import	-£1,425	-£535
Maintenance of panels	0	-£110
Maintenance of boiler	-£100	-£100
Net	-£1,525	£121
Difference from before installation	n/a	£1,646

Table 5. Annual operational household cash flows from whole-house energy efficiency measures combined with 2.5kW PV panels.



The carbon savings of the two technologies combine to give a total annual saving of 12,415 kg CO₂e (12.415 tonnes). The combined effect of the installation of the energy efficiency measures and the 2.5kW PV panels on the household cash flow is given in Table 5 above. This shows that the annual net cash flow to a household from installing these combined measures is £1,646 in the first year²⁹.

Capital costs of measures, and rates of return

The previous section worked through the carbon, energy and cash flows on a year-by-year or 'operational' basis for energy efficiency and renewable electricity generation measures at the household scale. This showed that after installation householders would have a significant income from reduced energy bills and, in the case of renewable electricity, from feed-in tariffs. Renewable heating measures will earn renewable heat incentives (RHIs), once these subsidies are introduced in 2011.

While there is a positive impact on cash flow over the lifetime of the technologies, these measures have upfront or capital costs of thousands of pounds. The purpose of a revolving fund is to remove these upfront costs and recover them over time by sharing positive cash flows or 'revenues'. The ways in which revenues can be shared were discussed in Section 5 above, and will be looked at in more detail in later sections.

This section looks at the capital costs associated with these measures, and shows how they compare to the revenues over time for different measures and technologies at the household scale. This comparison gives a 'rate of return'. Here the only scenario being examined is a householder paying for the capital costs themselves, the 'self-funded' scenario.

Return on investment in the first year

Table 6 (p.33) shows the capital costs of a range of scales for wind and solar microgeneration technologies at the household scale, together with maintenance costs and load factors³⁰. It draws upon data in the *Quantitative Analysis of the Design of Feed-in Tariffs* report³¹. This report gives capital costs, maintenance costs and load factors for the range of technologies and scales covered by the feed-in tariff scheme. The energy efficiency data is taken from the Arup, ROK and Forum for the Future report into the costs and carbon savings of 'at scale'³² retrofitting existing homes in Bristol that is given as a worked example above.

Net annual incomes are calculated in the same way as for the worked examples given above. The at-scale cost is a 10% reduction on the capital costs given in this *FIT Design* report. This is because the capital costs given there are for individual installations, and there is a bulk cost reduction if a fund co-

²⁹ The PV panels are expected to operate for 25 years, as stated in the Element Energy Design study. As stated in the energy efficiency example, the energy efficiency measures in this scenario will be effective for different periods of time. For instance, a new boiler should last for 10-15 years, whereas insulation should be effective for 25 or more years. So conservatively, these savings have an average lifetime of 15 years. These changes are summarised in the table on the next page.

³⁰ The load factor is the average power divided by the peak power, over a year of average environmental conditions (eg wind speed and solar radiance). The power rates of generation technologies are given as peak power, so the load factor is used to convert this to the total electricity generated in a year. For more information see the Element Energy report.

³¹ Element Energy and POYRY - Quantitative Analysis of the Design of Feed-in Tariffs report - http://www.decc.gov.uk/Media/viewfile.ashx?FilePath=Consultations\Renewable%20Electricity%20Financial%20Incentives\120090715135352_e_@@_RelateddocElementPoyryreportonquantitativeissuesinFITsdesignFINAL.pdf&filetype=4

³² At scale is defined as 15 properties at the same time in an area of one square mile or less.



ordinates works at 15 or more homes with the contractors³³. For a full explanation of inputs to the modelling, see Appendix I³⁴.

Technology	At-scale capital costs (£)	2010 generation tariff (p/kWh)	Net income in 2010 ³⁵ (£)	Return on investment in 2010 (£)	FiT period (yrs)	Technology lifetime (yrs)
Solar PV 1kW – retrofitted	£5,850	41.3	£421	7.2%	25	25
Solar PV 2.5kW – retrofitted	£11,925	41.3	£1,054	8.8%	25	25
Solar PV 4kW – retrofitted	£18,000	41.3	£1,685	9.4%	25	25
Wind 1kW – building mounted, rural setting	£4,950	34.5	£299	6%	20	10
Wind 1.5kW – building mounted, rural setting	£5,850	34.5	£458	7.8%	20	10
Whole-house energy efficiency retrofit	£8,703	n/a	£760	8.7%	n/a	15-25 years
Energy efficiency and Solar 2.5PV	£20,628	41.3	£1,814	8.8%	25	15-25 years

Table 6. The capital costs, net income in Year 1 and return on investment in Year 1 of measures included in the worked examples.³⁶

³³ The costs for energy efficiency were calculated by quotes from ROK and local specialist builders in the Bristol city region. The savings calculated in this example are a 57% cost reduction over a one-off installation. The 10% reduction in the cost of installing PV was taken from supplier quotes, and the same reduction was applied to wind installations.

³⁴ For the performance of real life projects of FIT and RHI qualifying technologies and scales, see the report Fit for the Future by Friends of the Earth and Arup, released in October 2010, which you can download here: http://www.foe.co.uk/resource/reports/fit_for_future.pdf

³⁵ This assumes 50% export and 50% on site use for all scales for electricity generating technologies installations. The figures are calculated in the same way as the worked examples in section 5.

³⁶ For a full list of inputs, see Appendix I



The returns on investment in 2010 are calculated by dividing the income in the first year by the capital cost. This gives the proportion of the capital cost that will be paid back by revenues one year after installation from the changes in cash flows that the measures cause. This means that the retrofitted 2.5 kW solar PV panels will create a revenue worth 8.8% of their capital cost in the first 12 months of operating. Therefore, the returns on investment in the first operating year give an indication of how quickly the capital cost can be paid back. These are shown in Table 6 (p.33). They range from 6% to 9.4%. The aim of the feed-in tariffs was to make all renewable electricity technologies and scales return 5-8% on investment. These calculations are based on the same assumptions, except that the capital costs are reduced to reflect an at-scale cost, so it is as expected.

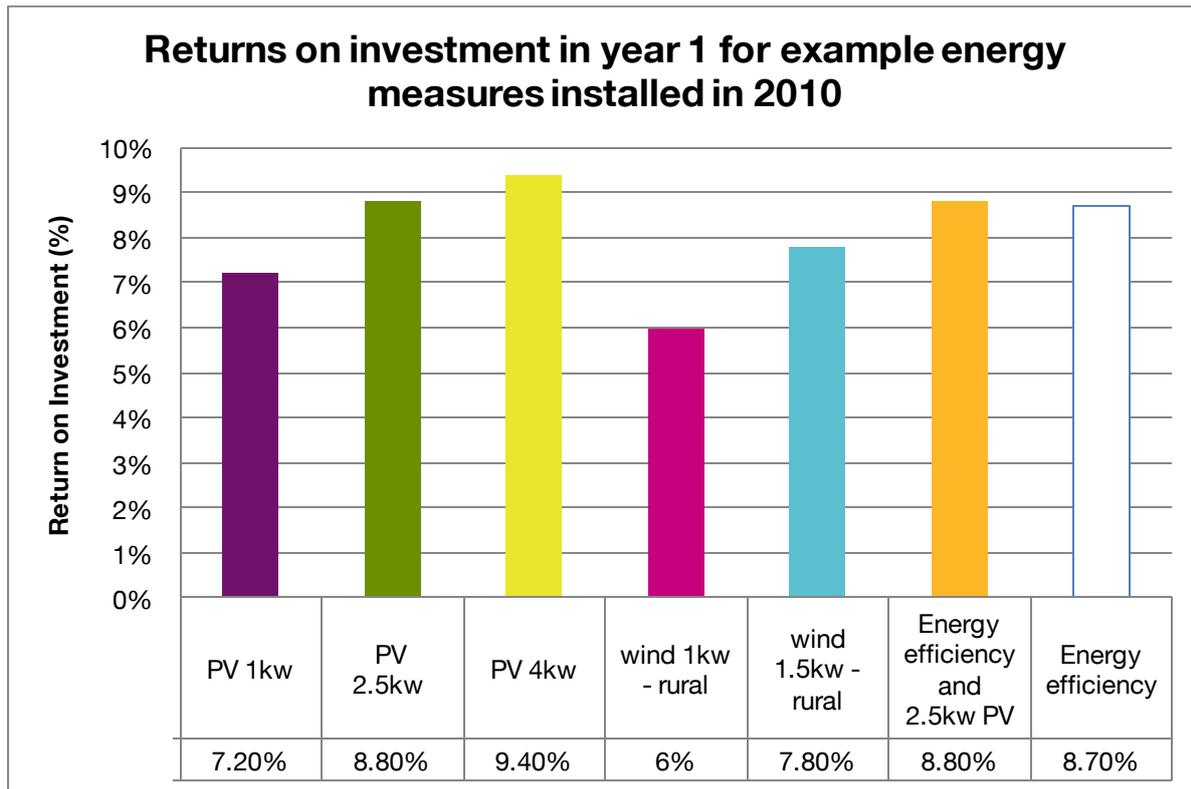


Figure 5. The returns on investment for a range of example installations of household energy measures in 2010 (Year 1).

Figure 5 (above) shows that the returns rise proportionally with the peak capacity in solar PV and wind. This is because although they are different peak capacities (e.g. PV ranges from 1kW to 4kW), they gain the same generation tariff as they are within the same scale bands for their technology type (e.g. solar PV up to 4kW). However, the capital cost per kW reduces with scale so the return increases. Therefore, more energy is generated and more feed-in tariff income is received per pound of capital cost. The rate of return is therefore higher for installations at the top of their feed-in tariff bands.

Payback periods

If these rates of return were to be the same continuously into the future, then they could be used to calculate how long it would take for total revenues to equal the capital cost. This is called the 'payback period'. It is calculated by dividing 100% by the annual rate of return. This gives a range of payback periods, from 16.7 years for 1kW wind (rural) to 10.6 years for 4kW solar PV. However, this may not be the case in practice: as the next section shows, there are several factors that can cause the revenue to change with time.



Changes to energy, carbon and cash flows over time

While the projected payback periods are accurate if cash flows stay constant over time, this is not usually the case. There are several factors that could alter revenues in future years. Principally, these are as follows in the next section. Each factor we describe can affect rates of return over time.

Indexation

The feed-in tariffs will change each year by the rate of inflation, measured by the Retail Price Index (RPI). It is not possible to know what the RPI will do over the period in which FITs will be paid.

Energy prices

It is predicted that energy prices will rise above inflation because of an increasing cost of electricity generation³⁷. However, you may find it easier to assume that energy prices change at the same rate as feed-in tariffs, i.e. with the RPI.

Feed-in tariffs degression

Once an installation is registered it will receive the same generation and export tariff for the period that it is eligible to do so, except for adjustments due to indexation (see above). However, there is an expectation that projects registered in future years will be more cost effective and will therefore require a lower level of support from feed-in tariffs. Therefore, the feed-in tariffs for registrations made in future years are set to reduce over time. The extent to which next year's tariff will be lower than the previous years is known as the 'degression rate'. This varies by technology and scale. Currently it is only the tariffs for wind installations below 500kW and solar PV tariffs that have degression rates.

Policy risk and the Government's reviews of feed-in tariffs

Most projects require time and money to be invested before revenues can be collected. If these revenues are from public subsidies (e.g. tariffs, incentives, grants or tax breaks) there is a risk of changes occurring that might affect the finances of a project between the start of feasibility works and the installation phase. If this happens you may lose your investment in the feasibility stage if your project is rendered unviable by policy changes.

The Government's review of the feed-in tariff regime, announced in February 2011, is an example of the risks introduced by policy changes. There are two elements to this review. Firstly, the Department of Energy and Climate Change has brought the comprehensive review of feed-in tariffs forward by one year. This creates the possibility of changes impacting FIT registrations made after 1 April 2012 (unless the Government determines that the review reveals a need for greater urgency). This will not retrospectively affect registrations made before the date of changes. See the DECC FIT site for more details:

http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/energy_mix/renewable/feedin_tariff/review/review.aspx

Secondly, and in addition to this comprehensive review, the Secretary of State for Energy and Climate Change announced in February 2011 that there would be a 'fast-track review' of the tariffs for solar PV installations over 50kW in capacity. This potentially affects the 1-100kW, 100kW-1MW and stand-alone tariff bands (for installations over 50kW only).

³⁷ Ofgem Scenarios in 'Project Discovery' -

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Discovery_Scenarios_ConDoc_FINAL.pdf&refer=Markets/WhIMkt/Discovery



The broad terms of reference for this fast-track review state that any resulting changes to the tariffs will take place as soon as is practical. At the time of writing it is not possible to state the earliest point in time that any changes could come into force, but the review will involve an eight-week consultation process and parliamentary procedures. It is important to note that this is in addition to the comprehensive review, which could lead to separate and different changes being made in 2012 to feed-in tariffs for projects greater than 50kW. It is possible that tariffs will change twice within a short period of time for solar PV greater than 50kW. For further details and the latest announcements, see

http://www.decc.gov.uk/en/content/cms/news/fits_rev_wms/fits_rev_wms.aspx

Neither the fast-track review nor the comprehensive review will result in retrospective changes to tariffs for installations that have already been registered before the changes occur.

Feed-in tariff periods

The length of time for which a site with renewable electricity installations will gain feed in tariffs is given in Table 3 (p.29). This varies by technology. After this period an installation will no longer receive any feed-in tariffs but may still be generating electricity that can be used on site or exported.



Technology lifetimes

The expected technology lifetimes will vary between technologies, scales and even between manufacturers for the same technologies and scales. At the end of the technology lifetime the installation will no longer perform its function of generating or saving energy. As a result of this the carbon, energy and resultant cash flows will change accordingly. The revenue from that measure is presumed to become zero. The technology lifetimes of household-scale measures are given in Table 6 (p.33).

Theft, damage, breakdown and disconnections

If renewable electricity technologies are removed or stolen, or break down for any reason, they will stop producing electricity for a period of time. When this occurs, revenues will fall to zero during that time. This can be covered by buying insurance premiums and maintenance contracts that cover such eventualities³⁸.

Changes to environmental conditions

The load factor will vary over time, and may change on a long-term basis if environmental conditions at a site change (if trees near a PV installation grow and put the panels into shade, for example). If the climate changes significantly this could have an impact on cash flows from renewable electricity and energy efficiency measures³⁹.

Changes to rate of return over time

As the previous section shows, there are several factors that could cause revenues to change with time and affect the rate of return on investment. The factors that are important to note and how they can affect rate of return are as follows. Technological lifetimes and indexation should certainly be taken into account when predicting possible rates of return over different time periods. This will be demonstrated in the next section, which shows the effects of these factors on the value of measures.

Technology lifetimes

Once the technological lifetime is reached, our models assume that cash flow becomes zero. For instance, the wind 1kW example would not pay back after 10 years, 6.7 years short of the payback point and ten years before the end of the FIT period.

Indexation

If the Retail Price Index increases, so will the revenues from feed-in tariffs and therefore the rate of return from renewable electricity installations. It is not possible to know what the RPI will do over the period when FITs will be paid. In the past ten years inflation has averaged 2%⁴⁰. The effect this can have on returns is shown in Figure 6. This shows that if inflation were 2% in every year until 2034, the example 2.5kW solar PV installation would have FIT payments of £1,464 in 2034, compared to £910 a year at the beginning. Without inflation the payments in each year would stay at £910.

Until 2009 there had not been a period of negative growth in the RPI for more than 50 years. In 2009 it fell to -1.6%, then increased to 2.4%⁴¹.

³⁸ The examples in this guide include the costs of maintenance given in the Element Energy Design study but do not include insurance premiums. This is because some home insurance policies cover microrenewables that are attached to the property.

³⁹ The renewable electricity examples in this guide assume that the load factors given in Appendix I: Financial modelling data and assumptions remain constant and do not account for any environmental changes.

⁴⁰ Office of National Statistics data on RPI <http://www.statistics.gov.uk/CCI/nugget.asp?ID=21>

⁴¹ http://www.statistics.gov.uk/downloads/theme_economy/Rp04.pdf



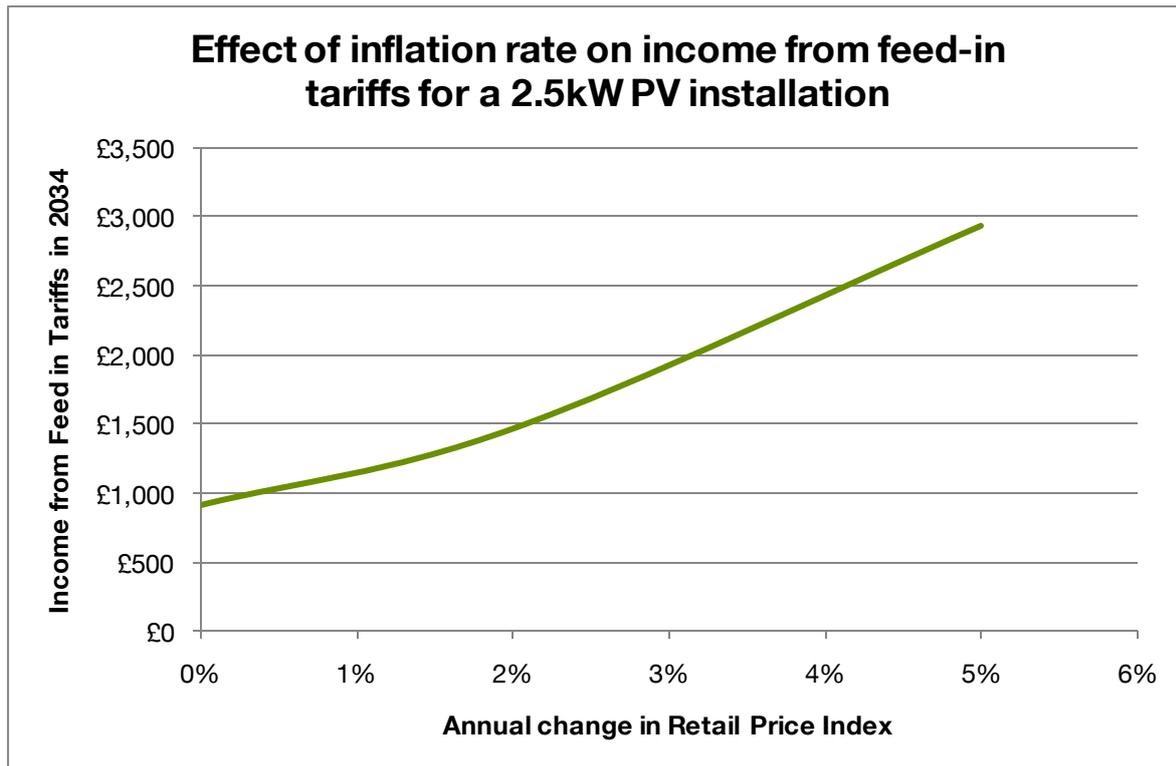


Figure 6. The effect of inflation on income from feed-in tariffs on a 2.5kW PV panel installed in 2010.

Energy prices

It is predicted that energy prices will rise at a steeper rate than the rate of inflation because of the increasing cost of electricity generation⁴². Increases in energy prices will increase the rate of return from renewable electricity and energy efficiency measures over time, as the value of avoided energy importation will increase. Feed-in tariffs, the largest income stream for renewable electricity at the household scale, will not be affected by energy prices.

Other factors

The feed-in tariffs for schemes starting in future years are already set by government to be lower, in a process known as degeneration (see p35). It is theoretically possible for feed-in tariffs for existing projects to be changed retrospectively. However, there is strong general political consensus that changes should not be made retrospectively. The Government has stated clearly that its fast-track solar PV review and the comprehensive FiT review will not result in retrospective changes.

The **FiT periods** (see above) are at least as long as the technological lifetime of renewable electricity measures for wind and solar at the household scale⁴³. This means they will only have an effect on cash flow beyond the technological lifetime if that lifetime is exceeded. In this case, the income from

⁴² OFGEM scenarios in 'Project Discovery'

http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?file=Discovery_Scenarios_ConDoc_FINAL.pdf&refer=Markets/WhIMkt/Discovery

⁴³ Element Energy Design study



feed-in tariffs will stop after the FIT period is reached, and then only on-site use or private sale of the electricity will create an income.

If the levels of theft, damage, breakdown or disconnections rise in the future, this may make insurance more expensive and increase the risk of generation interruptions.

Changes to environmental conditions can be hard to predict, as can the effects they produce on rates of return. This unpredictability stems from the fact that, except for climatic changes, these changes will be site specific. A site survey can identify obvious issues such as potential for trees to grow and shade a roof being considered for solar PV panels.

Net present values of energy measures

The total cash flow to a household from a 2.5kW solar PV installation is shown in Figure 7 (p40). This shows the capital cost, with a negative cash flow in 2010, and the net income until 2034 – rising because of an assumed 2% rate of inflation. Each bar represents the net cash flow in a year. For 2010 this includes capital costs. The remaining years are positive, as the householder earns feed-in tariffs and has a lower electricity bill. Turning to Figure 8 (p40), this shows the cumulative cash flows over time. The point at which the cumulative cash flow is zero is the payback period (12 years), as the positive cash flows equal the negative cash flows to date. After this date the installation is generating profit. By 2034 the cumulative cash flow shows a profit of £18,300. The line, drawn by the tops of the bars, curves upwards because the feed-in tariffs and the energy price are assumed to be rising at 2% a year with inflation.

The installation is profitable over the 25 years. It might, therefore, appear that a householder with funds available would make the investment. However, there are other ways in which the homeowner could use that money, such as buying government bonds, or indeed a new car, so the choice to invest in the installation generates what is known as an opportunity cost. The homeowner also has to wait for 12 years to recover the initial investment. By that time inflation will mean that the £10,585 will be worth less than it was ten years before. Therefore there is a cost to the household to make the investment in the installation and wait for the returns to come in over time.

Net present value (NPV) calculations are used to compare the value today of the future cash flows of different investment decisions: a new car, a solar panel or a wind turbine for example. The main consideration when calculating the net present value of cash flows is the discount rate. This is the discount the investor would place on having a sum of money in one year's time instead of having it now. For a householder an investment in a 20-year government bond would return 4.2% a year. As this is an alternative investment option with a similar cash flow, it is the discount rate applied in this guide to self-funded measures to calculate the NPV of measures to a householder. If the cash flows were not discounted, then the NPV of the 2.5kW solar PV installation after 25 years would be £18,300. However, with the discount rate applied the NPV becomes £5,800. This means that investment in the 2.5kW solar PV installation is worth £5,800 more to the householder than investing the same amount into government bonds for the same period.



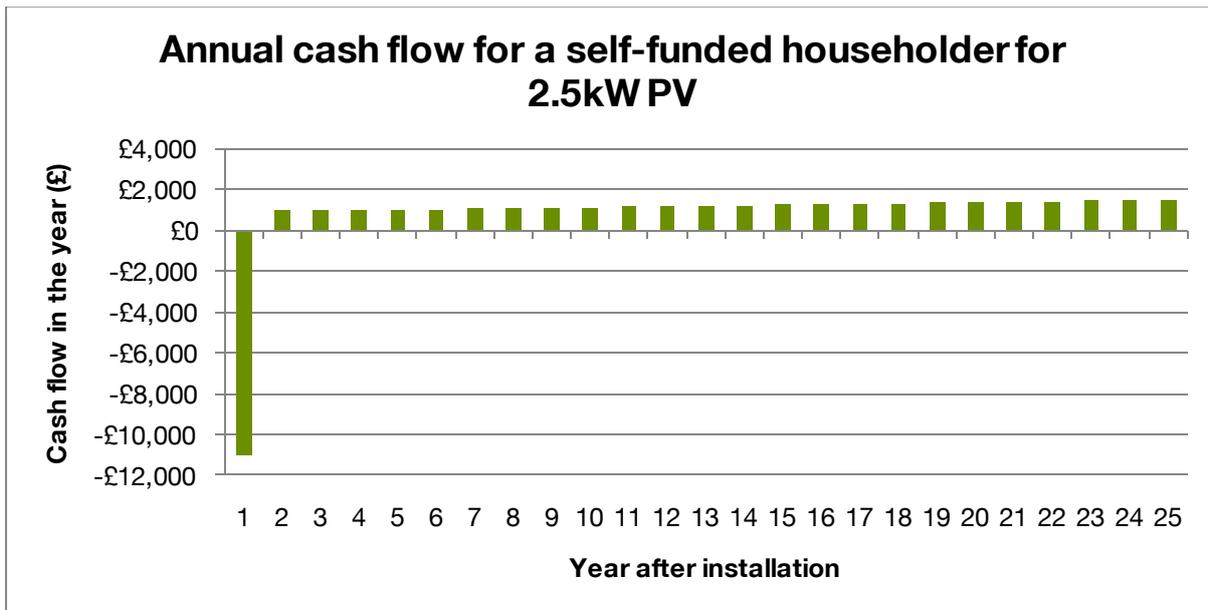


Figure 7. The cash flow from a self-funded 2.5kW solar PV installation, assuming 2% inflation.

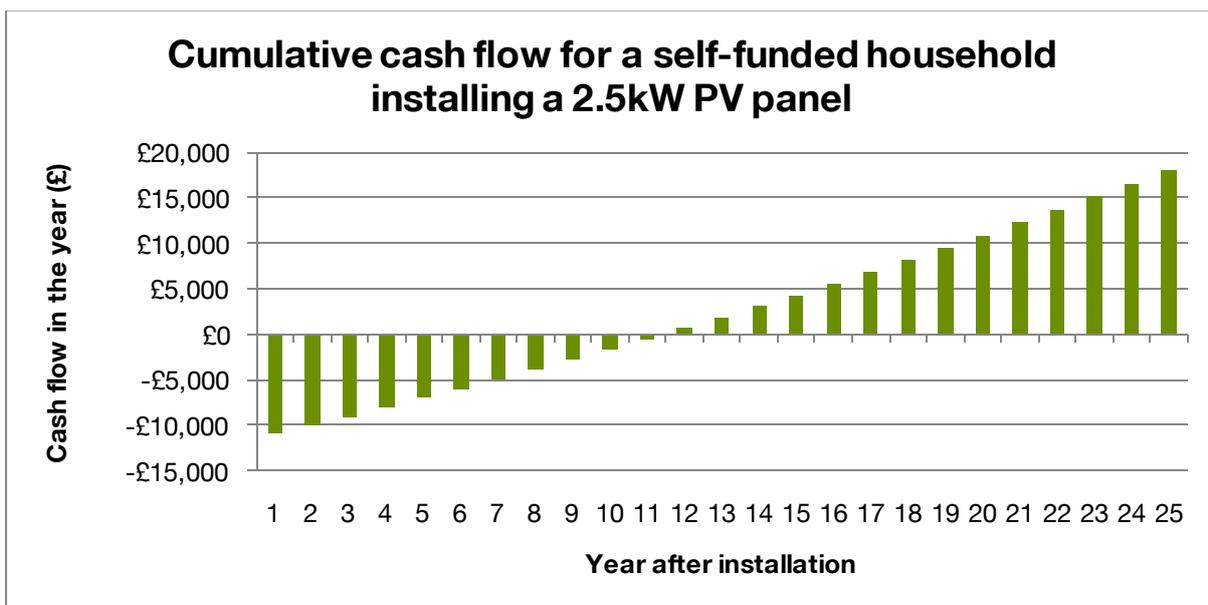


Figure 8. Cumulative cash flow from a self-funded 2.5kW solar PV installation, assuming 2% inflation.

The NPV of cash flows can be calculated for any number of years. Figure 9 shows the NPV after five, ten, 15 and 25 years for self-funding householders for the range of household energy measures shown in Table 6 (p33). The wind turbines in this example have a lifetime of ten years, so only the NPVs at five and ten years is shown. Figure 5 (p34) shows that all the measures have a return in the first year of 6–9.4%.

The NPVs show that the variations in cash flows after the first year and the inclusion of the time value of money to the householder reveal a different picture. Both wind scenarios have a negative NPV by the end of their life. This means that they are not a good investment for the householder to make. This is due to the ten-year lifetime of the wind turbines. In Figure 5 (p34) the energy efficiency



measures had a similar return in the first year to 2.5kW PV. However, over time the boiler would come to the end of its life and the returns from the 2.5kW PV's FITs would increase with inflation. This means that the NPVs are different. After 25 years, the energy efficiency measures' NPV is around zero, while the 2.5kW PV's is £6,000. This means that a householder with the money available would choose the 2.5kW solar PV installation option.

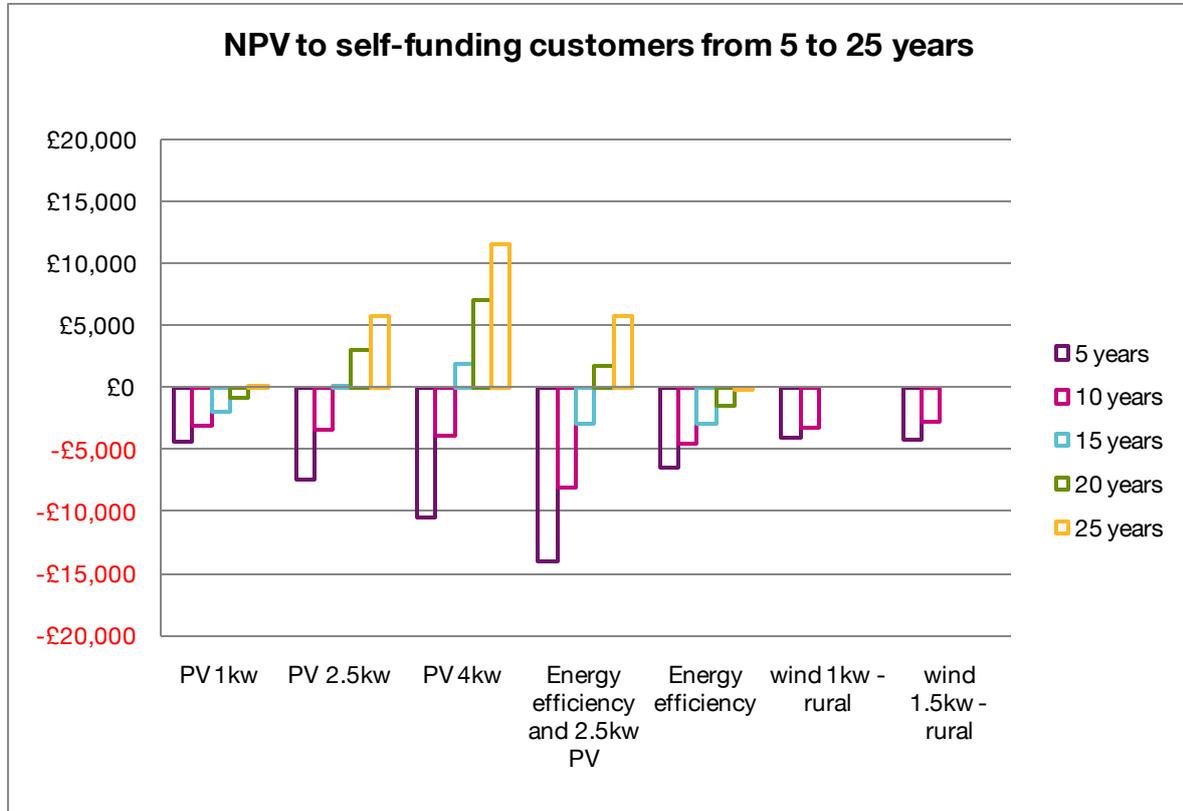


Figure 9. The net present values of different example measures to a self-funded customer over time.

The capital costs of the combined energy efficiency and 2.5kW solar PV installation and the 4kW solar PV installation are also similar. However, the lower capital costs per kW of capacity for 4kW PV over 2.5kW PV, and the lower cash flows over time of energy efficiency, mean that the 4kW PV option offers twice as much in terms of NPV as the similarly priced combined package. Again, a householder motivated by financial return would choose the 4 kW PV option.

The feasibility of these measures and their actual costs and revenues will vary between homes. However, if all options are available and the householder is motivated only by financial gain, then the net present values can be used to choose the best option. This shows that a 4kW PV installation would be best, followed by 2.5kW PV and a combination of energy efficiency and 2.5kW PV. The combination also has the benefit of saving the most carbon.

The 1kW PV and energy efficiency examples have a net present value of around zero. This means that on a financial basis alone, a householder would be unsure as to whether these are worthy investments. In this context other values (see next section) become more important in making a decision to invest or not. At this micro scale, wind turbines have significantly negative net present value because of their shorter lifetimes in these examples. However, wind can be a worthy and attractive investment at larger 'community' scales, with significantly positive net present values.



Non-financial values for householders from low carbon energy measures

This section shows how householders might value the cash flows of different options. The cash flows with the highest value may not necessarily be those favoured by householders because there are other factors that they may value as well – factors that are not counted in these cash flows. In effect these can lower the discount rate for a householder. These factors include:

Status: Being seen to be green - by ‘displaying’ solar panels, for example – has a ‘status’ value to some people. They may be motivated by neighbours or friends who have done something similar, and they want to ‘be part of it’. Communities can be motivated by the recognition they receive for generating or saving energy locally. Energy generation projects can receive more recognition than energy efficiency measures as they are usually more visible – e.g. wind turbines and solar panels.

Being first: Some people are driven by a need to be different, so doing something innovative and new will hold a value for them. Communities can also be driven to be the first in the country or in their region to do something.

Self-sufficiency: Generating energy to use on site is a driver for some households – those that like the feeling that they are providing for their own needs rather than relying on the actions of others. Here the amount of energy generated or saved, and the amount that they then need to import from the grid, will influence their decision to invest and the option(s) they choose. A similar driver can also motivate communities to become self-sufficient.

Doing the right thing: Some people are motivated to be green, and saving carbon is a growing part of this.

These financial and non-financial drivers are picked up in later sections of this guide – those covering funding models for a community fund and marketing loans to householders. The carbon flows that might motivate householders driven by doing the right thing are shown in the next section.

Carbon flows from household energy measures

Carbon emissions reductions through renewable electricity and energy efficiency measures are discussed in the preceding sections of this chapter. This section shows the carbon savings that result from the household energy measures in the worked examples given in these sections. Our aim here is to help householders and communities that are motivated to reduce carbon emissions in making decisions about options. Figure 10 shows that the energy efficiency example measures save much more carbon than the renewable electricity measures. This means that a householder motivated by doing the right thing in carbon terms may favour energy efficiency measures over renewable electricity measures of similar cost.



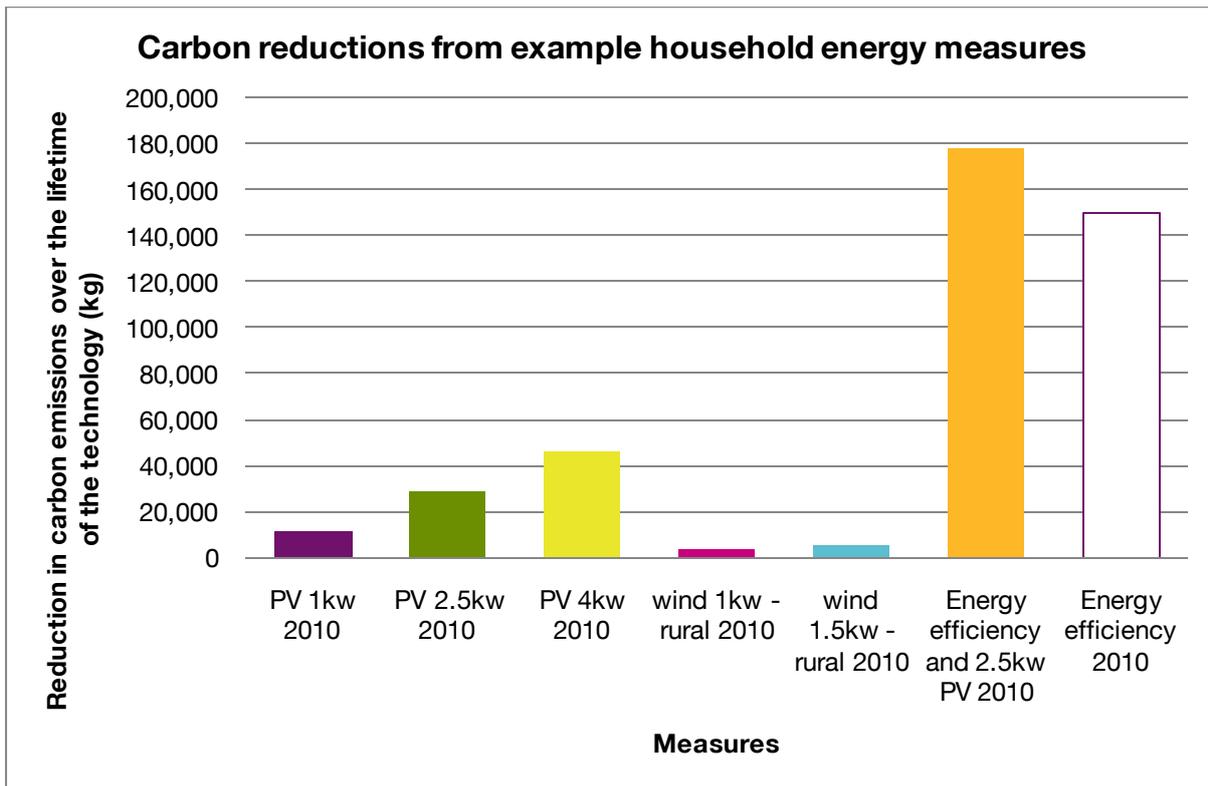


Figure 10. Comparison of total carbon reductions over the lifetimes of our example household energy measures.

The example measures have different capital costs. In order to compare the relative carbon savings that could be achieved with a given amount of money, a householder or community would need to compare the carbon savings per pound of capital expenditure. This is shown in Figure 11. It is clear that energy efficiency measures offer the cheapest and most cost-effective carbon savings, while due to the tariff bandings 4kW PV is the cheapest solar option per tonne of carbon. This means that funding installations near the top of the tariff brackets is likely to generate more renewable electricity and therefore save more carbon per pound invested.

It could be argued that feed-in tariffs are an inefficient way to fund carbon savings, given the comparison of costs in Figure 11. However, the purpose is to boost the uptake of renewable electricity technologies at the sub-5MW scale; to encourage technological innovation and increase manufacturing capacity to reduce the capital cost over time.

Investing in renewable electricity generation may be relatively cost-ineffective now but the technology should become more cost-effective in the future. There is much uncertainty, however, about the possible future capital costs of renewable electricity measures. To help you make a comparison, Figure 11 includes the costs of solar PV 2.5kW installed in 2015 and 2020. These are taken from the assumptions in the Element Energy Design study⁴⁴ that the other renewable electricity costs are based on. It shows that the cost effectiveness of 2.5kW solar PV installations will fall significantly over the next ten years. However, energy efficiency in 2010 when delivered at scale is still several times more cost effective as a means of reducing carbon emissions.

⁴⁴ Element Energy and POYRY - Quantitative Analysis of the Design of Feed-in Tariffs report - http://www.decc.gov.uk/Media/viewfile.ashx?FilePath=Consultations\Renewable%20Electricity%20Financial%20Incentives\120090715135352_e_@@_RelateddocElementPovryreportonquantitativeissuesinFITsdesignFINAL.pdf&filetype=4



All the figures in Figure 10 and Figure 11 are based on at-scale capital costs. However, to show the importance of delivering whole-house energy efficiency measures *at scale*, the cost per carbon tonne saved of the same package of measures when delivered not at scale is also given in Figure 11. It shows that the carbon savings possible with the same financial capital are more than twice as much when energy efficiency is delivered at scale than with one-off installations in the worked example in this section. The report that these figures are based on shows that this difference varies between housing types and measures, and also varies according to whether things are done street by street or via a dispersed delivery. However, the saving shown here is not exceptional. This highlights the role of local authorities and community groups in coordinating the demand, delivery and financing of domestic energy efficiency.

Communities that are motivated by carbon reduction can use this analysis to consider which projects to undertake next, given their particular resources (see Figure 2, p.19). They may also wish to fund projects that have no or low financial returns but create large carbon savings. These could include household energy management programmes that lead to behaviour change-led savings on energy use. This model has been pioneered by Low Carbon West Oxford⁴⁵.

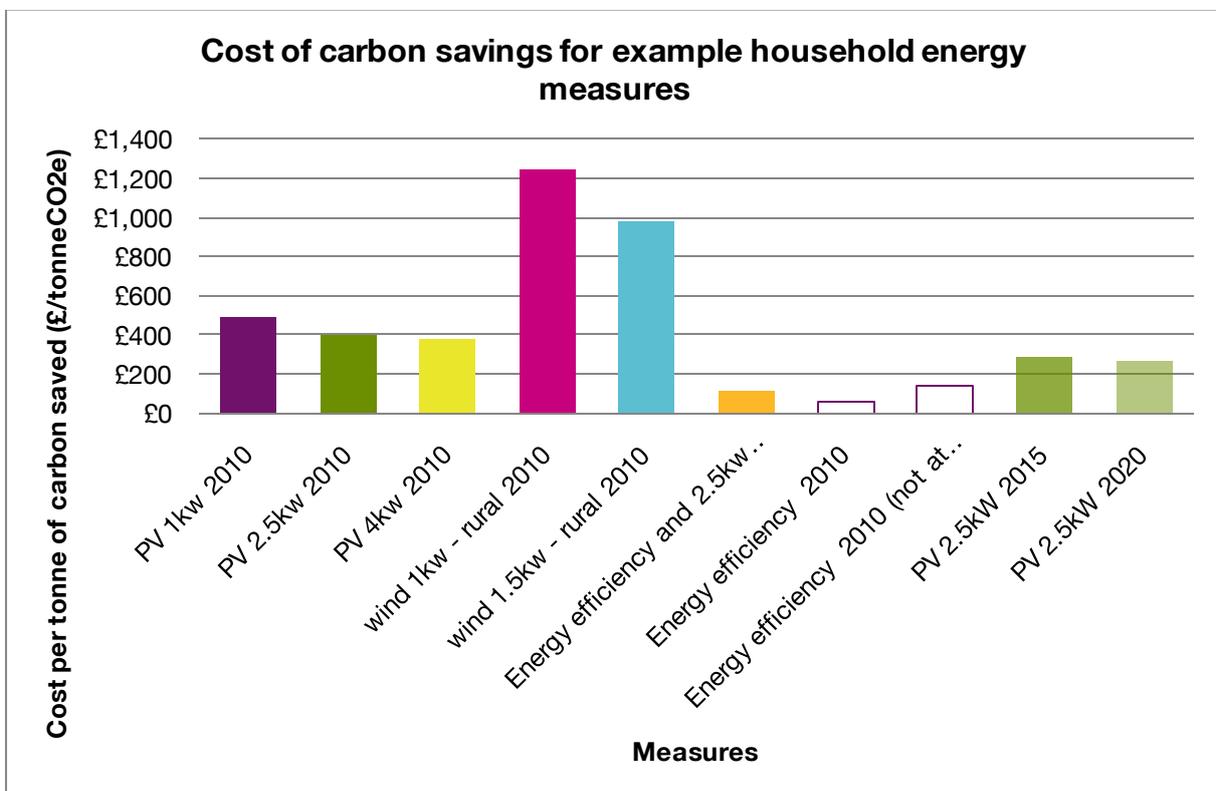


Figure 11. The capital costs, compared to the lifetime carbon savings, of example household energy measures.

⁴⁵ By visiting the LCWO website, <http://www.lowcarbonwestoxford.org.uk/index.php>, you can download a free guide on their low carbon communities model, 'Low Carbon Living – Power to Make it Possible': <http://www.lowcarbonwestoxford.org.uk/images/documents/lcwo/lcwo-low-carbon-living-v1a.pdf>.



6. sharing the benefits: funding low-carbon energy in communities

Chapter 4 showed that revolving funds are best used for projects that have a high upfront cost and positive cash flows over time that can be used to repay that cost. Chapter 5 showed that funding renewable electricity, renewable heat and energy efficiency measures can be financially attractive to householders with the financial means to do so. The value of the financial returns varies between different options, and some are unattractive. There are also other value drivers, such as status, being first, self-sufficiency and doing the right thing. These apply to the community and household scales as well.

A community group that is helping households and businesses to generate renewable energy or save energy can and should do more than just help finance the upfront costs. The lack of trustworthy advice and information on options, procurement, delivery, quality control and ongoing maintenance services are barriers to those that do have the financial means to self-fund. A community group can help overcome such barriers, and is likely to be well placed to increase support for energy measures as well.

While providing a one-stop shop for low-carbon energy locally can increase uptake considerably, there are many householders that simply do not have the financial means to pay the upfront costs. Indeed, many organisations believe that those unable to pay should be supported the most. This would be a 'social first' approach to a revolving fund.

This chapter shows the different options for using a revolving fund to remove the upfront cost to householders via loan agreements. The principle is to look at the cash flows of the measures available, as our worked examples in this chapter do, and see how these can be used separately and in combination to pay for the upfront costs to the fund over time. The same principles apply when using a site leasing approach for community-scale renewable electricity measures (see Chapter 4 for more information).

The costs and benefits that can be shared between a community fund and householders

Chapter 5 showed that energy measures have the main operational cash flows shown in Table 7, below.

Income	Expenditure
Generation tariff	Capital costs
Export tariff	Maintenance costs
Avoided energy importation	

Table 7. The operational cash flows from household energy measures.

Table 8 below shows the capital costs of installing the example household energy measures given in our worked examples, and how long they are expected to work for.



Technology	At-scale capital costs (£)	Technology lifetime (yrs)
Solar PV 1kW – retrofitted	£5,850	25
Solar PV 2.5kW – retrofitted	£11,925	25
Solar PV 4kW – retrofitted	£18,000	25
Wind 1kW – building mounted, rural setting	£4,950	10
Wind 1.5kW – building mounted, rural setting	£5,850	10
'Whole-house' energy efficiency retrofit	£8,703	15-25 years
Energy efficiency and Solar 2.5PV	£20,628	15-25 years

Table 8. The worked example household energy measures.

The funding models

The main purpose of a community revolving fund is to pay the capital costs of measures, such as solar PV panels, and use the profits from the operation of the measures to recover the cost of providing that finance over time. Additional profit may or may not be generated to enable more investment in the future.

The conventional way of financing household energy measures has been to lend the capital costs to the householder and (under the terms of the loan) to have this amount repaid over a certain period of time. In this guide this approach is referred to as a 'simple loan'. There are several decisions to make before taking out a simple loan, and these are covered in Chapter 7.

With the introduction of feed-in tariffs, there is a new way of arranging the financing of household renewable electricity measures. This is by agreeing that in exchange for the loan, the householder will pay the feed-in tariffs to the loan fund. These tariffs then form the loan repayments. The length of time that this 'assignment' of feed-in tariffs lasts would also be agreed. This form of financing is called 'FiT loans'.

A similar arrangement may be allowed by the introduction in 2011 of Renewable Heat Incentives. Chapter 5 discussed the cash flows from a self-funding household's point of view. With the introduction of a community fund there are now two perspectives: those of the householder and the community fund. Table 9 shows where costs and incomes come from and go to under the three different funding options.

Funding model	Capital costs paid by	Maintenance costs paid by	Interest and capital repayments paid by	Feed-in tariffs income paid to	Energy savings income paid to
Self-funded	Householder	Householder	Not applicable	Householder	Householder
Simple loan	Fund	Householder	Householder	Householder	Householder
FiT loan	Fund	Fund	Not applicable	Fund	Householder

Table 9. The cash flows from the household and community fund perspectives under self-funding, simple loans and FiT loans.



Cash flows under the different funding models

Cash flows from the feed-in tariffs would need to be of a sufficient level to pay back the initial investment. Figure 12 shows that for all the worked examples that only generate electricity (without saving energy, FiTs make up around 85% of the income over the lifetime of a technology. The remainder is from avoided energy use.

Obviously, the energy efficiency package does not receive FiTs and so its income is formed of energy savings alone. The mixed PV/energy efficiency package has about 30% of its income from energy efficiency, 10% from avoided electricity import from on-site use of generated electricity, and the remaining 60% from feed-in tariffs.

Under a FiT loan arrangement that lasted for the lifetime of the technologies, the householder would receive the income from avoided energy spend and the community fund would receive the FiTs and pay the capital and maintenance costs. It is because of the high proportion of income that comes from FiTs for household-scale renewable electricity measures that it is possible to use FiTs to repay the capital costs and cover the maintenance costs. However, while the split of income from different sources is similar for both wind and solar PV microgeneration at all scales, the important consideration for return on investment to a community fund, rather than the household, is a comparison of the FiTs with the capital and maintenance costs.

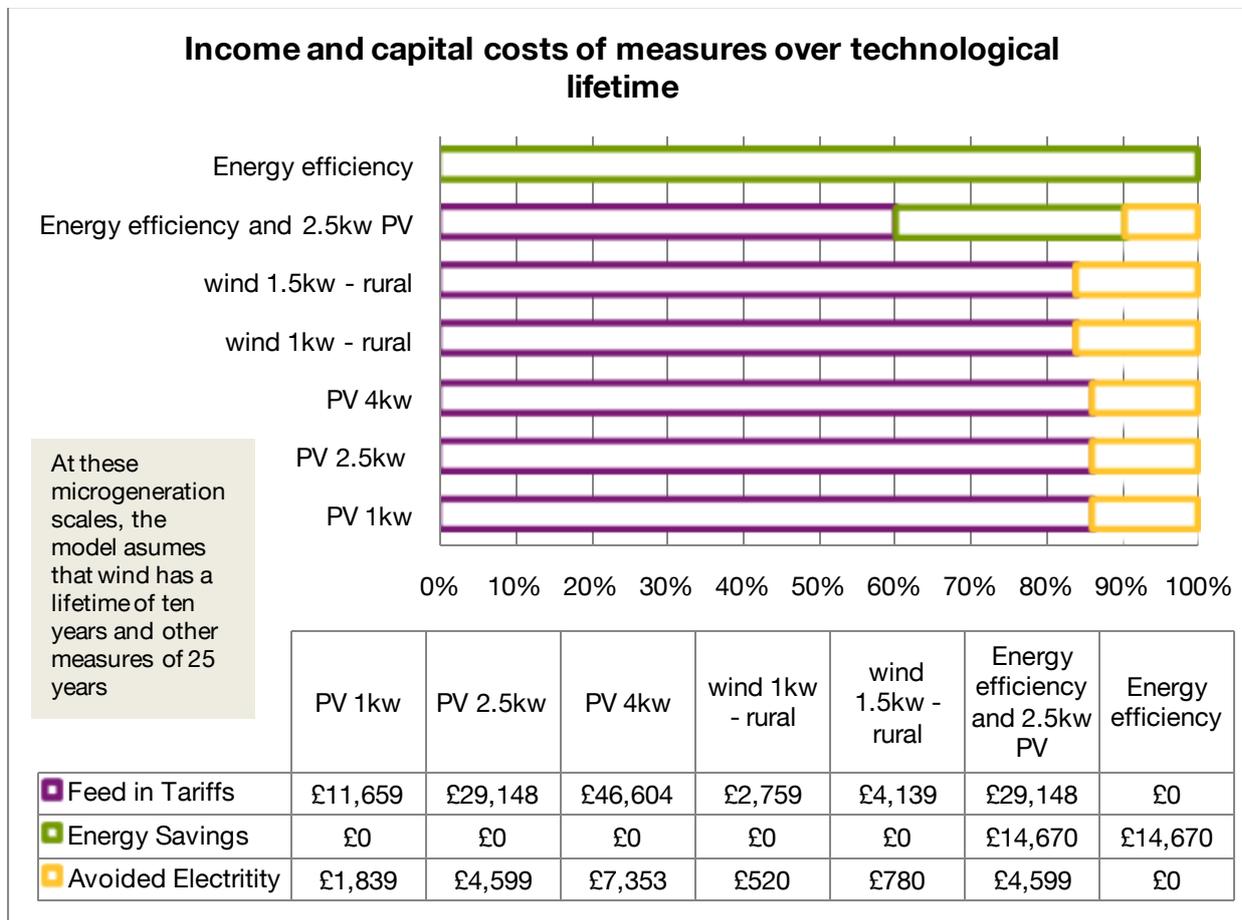


Figure 12. The split in sources of income from energy generation and packages of efficiency improvement measures.

This is shown in Figure 13 for the worked examples. When the blue line is higher than 100%, the FiTs repay more than the total capital and maintenance costs. This means they can cover the costs of the measures within their lifetime. When the line is below 100%, income from FiTs is not enough to cover the costs and the full costs are not repaid from FiTs. This shows that energy efficiency measures cannot be repaid by FiTs but the combined example (2.5kW solar PV installation and energy



efficiency measures) can be repaid by FiTs alone. So when financing this example of a combined package, it is possible for FiTs to cover the costs over time.

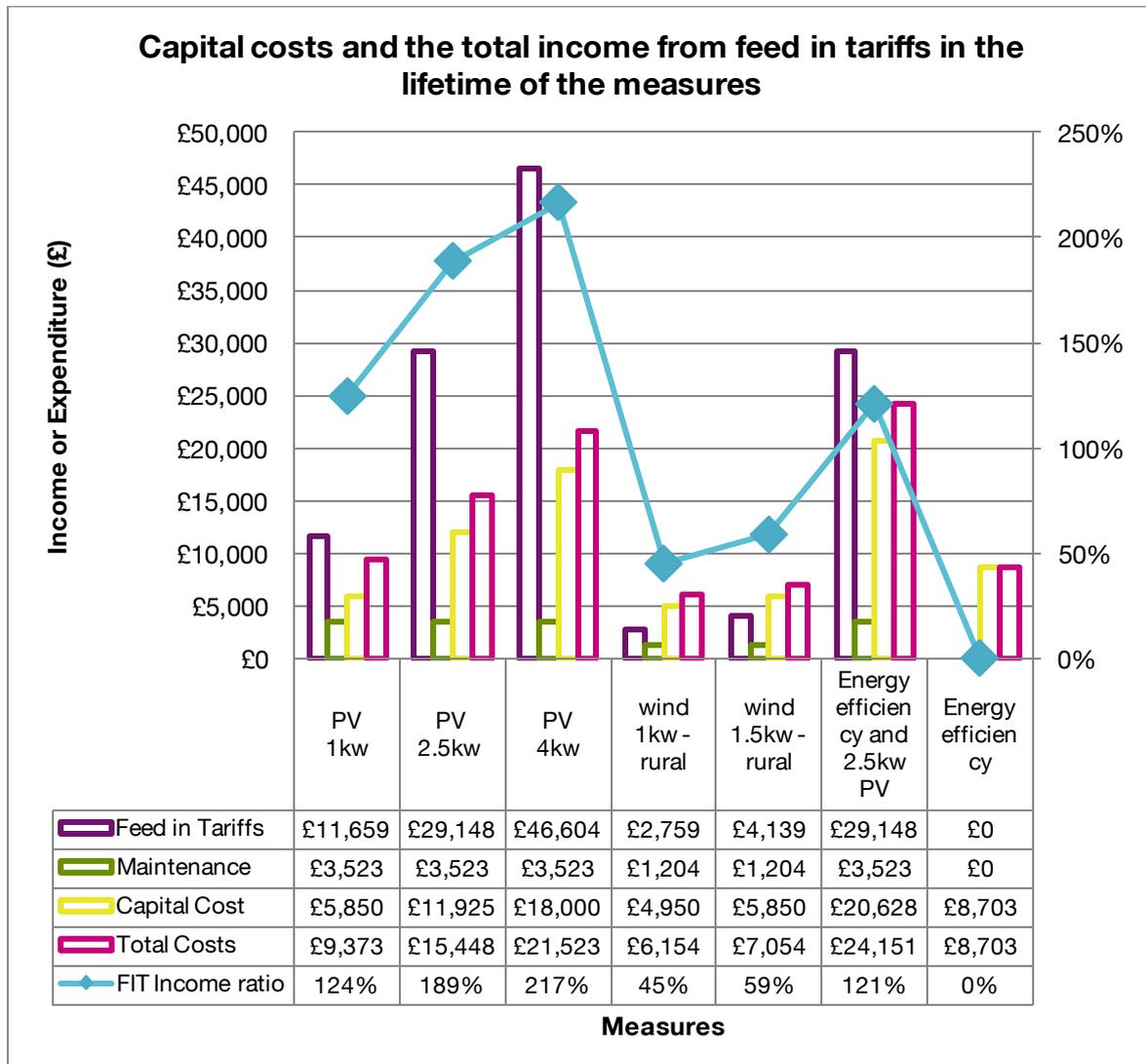


Figure 13. The income from FiTs as a proportion of capital and maintenance costs varies between technologies and scales.

Net present value to a community fund under different funding models

Chapter 5 showed that future cash flows need to be discounted to show their net present value to a self-funding household. The same is true for measures financed by a community fund. The discount rate for future cash flows will vary between communities. Your community group may choose a lower discount rate when funding measures that save large amounts of carbon, or if you are supporting households in poverty to reduce energy bills.

The cost to a community group of raising finance is also significant. If money has been borrowed from a bank and needs to be repaid with interest, then the interest rate will be included in the discount rate to ensure that the interest payments can be covered. Even when there is no cost of capital, e.g. when money is granted to your community group, your community may want to maintain the value of the fund and not just its balance. To do this, the assets of the fund in loans and cash on account would need to increase with inflation. Therefore, the rate of inflation expected can be taken as a minimum discount rate and is the rate used in the net present value results below.



The net present values shown below are based on a fund from which £400,000 is lent to households. The assumption is that every borrowing household chooses the same example measure from Table 8 (p.45). Because the capital costs vary between the measures, the number of loans made will vary. Table 10 below shows the total number of household borrowers for each of the example measures. Because the same sum (£400,000) is invested in each scenario, the NPVs can be compared directly to see which is worth more financially to the fund.

Measures	Number of measures funded with £400,000
Solar PV 1kW	68
Solar PV 2.5kW	34
Solar PV 4kW	22
Wind 1kW – building mounted, rural setting	81
Wind 1.5kW – building mounted, rural setting	68
Energy efficiency and solar 2.5PV	19
Whole-house energy efficiency retrofit	46

Table 10. The number of measures that can be paid for with a £400,000 fund.

FiT loans

Figure 14 (p50) shows the NPV over 5, 10, 15, 20 and 25 years for the community fund using the FiT loan model. This means that if the FiTs were to last for these periods of time then what is shown here would be the net present value of those loans to the community. Once the NPV is positive, it means that the option is worth investing in. However, if choosing between investments, the measures with the highest NPV represent the best financial option. This means that if your community's prioritisation is 'growth first', then you should consider using 25-year FiT loans for 2.5kW and 4kW solar PV installations and not make FiT loans for wind.

Given the high carbon reductions from energy efficiency, a carbon-first group may wish to consider making FiT loans for the combined package. This is because the NPV is only negative by a small amount, and it is possible to maintain the value of the fund with some higher financial value loans. Energy efficiency alone cannot be financed by FiT loans, and so shows that the initial investment is not recovered.

If your fund has a social priority, you should look at the cash flows from the household perspective – to see how much FiT loans would bring to each householder. This is shown in Figure 15 (p50) for individual householders. However, with £400,000 available to lend, your community group would need to consider how many loans it could make. To help you calculate this, Figure 16 (p51) shows the total amount that £400,000 of FiT loans could add to householders. A social-first community group would need to balance these benefits to the cash flows of householders with the cash flows to the fund, to ensure that the fund value could be maintained over time. It appears that for these examples a FiT loan for a combined package has a good blend of NPV for the fund and increased wealth for participating householders. This is because the reduced fuel bills from the energy efficiency measures all go to the householder. There is relatively little difference between the renewable electricity examples.



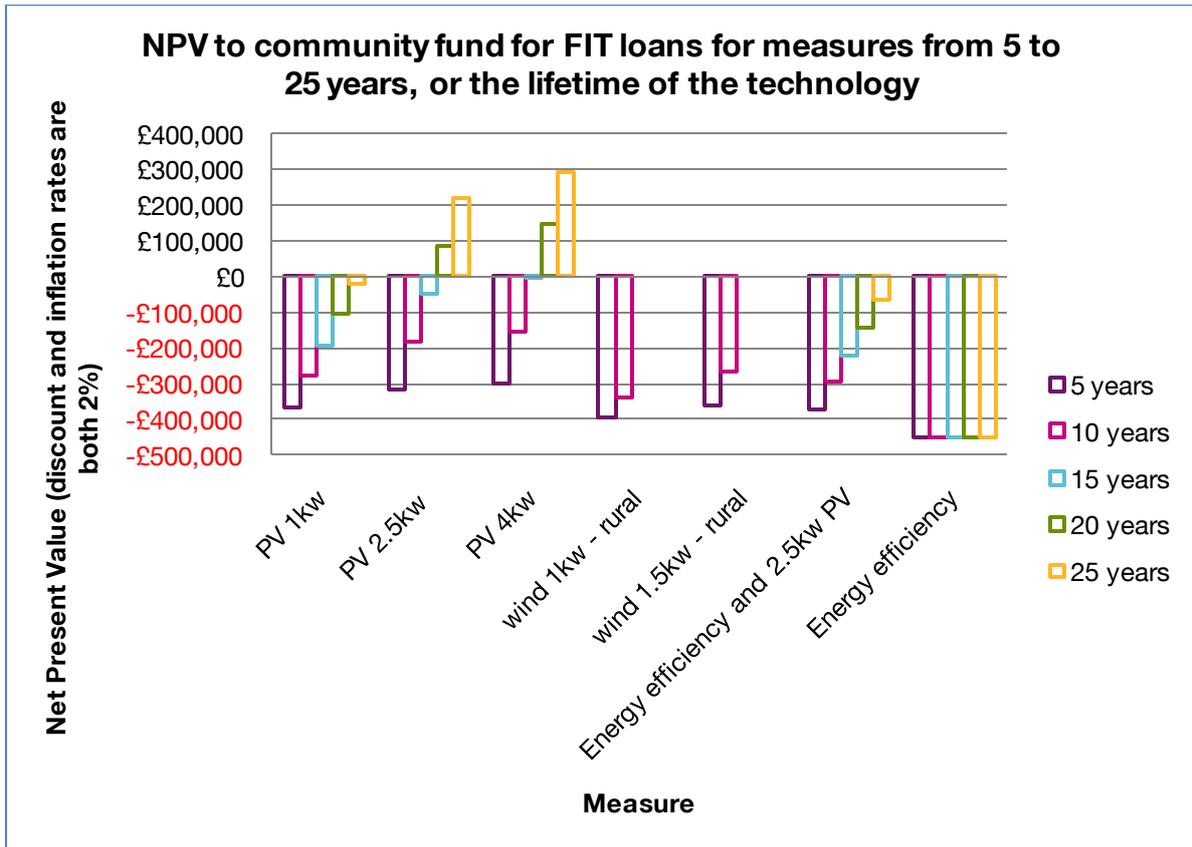


Figure 14. The NPV of different measures to the example £400,000 community fund, making FiT loans for these technologies with term lengths the same as the technology lifetimes.

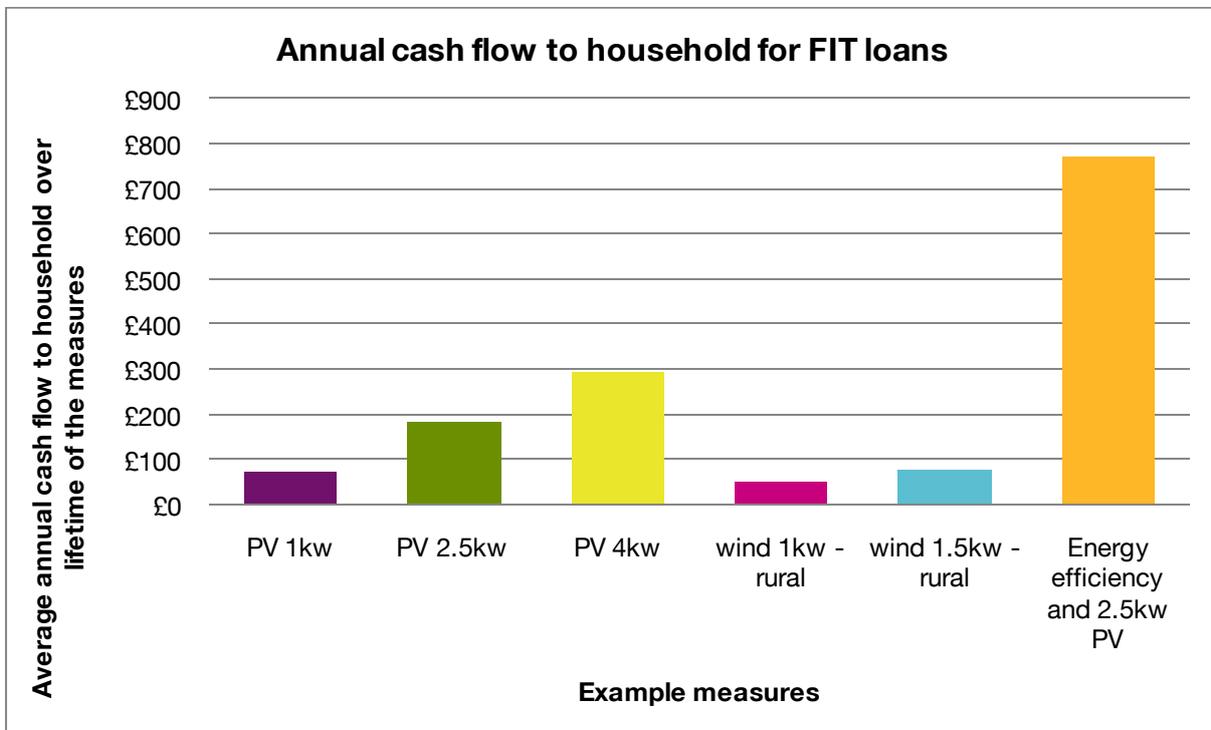


Figure 15. The annual cash flow to the household from FiT loans.



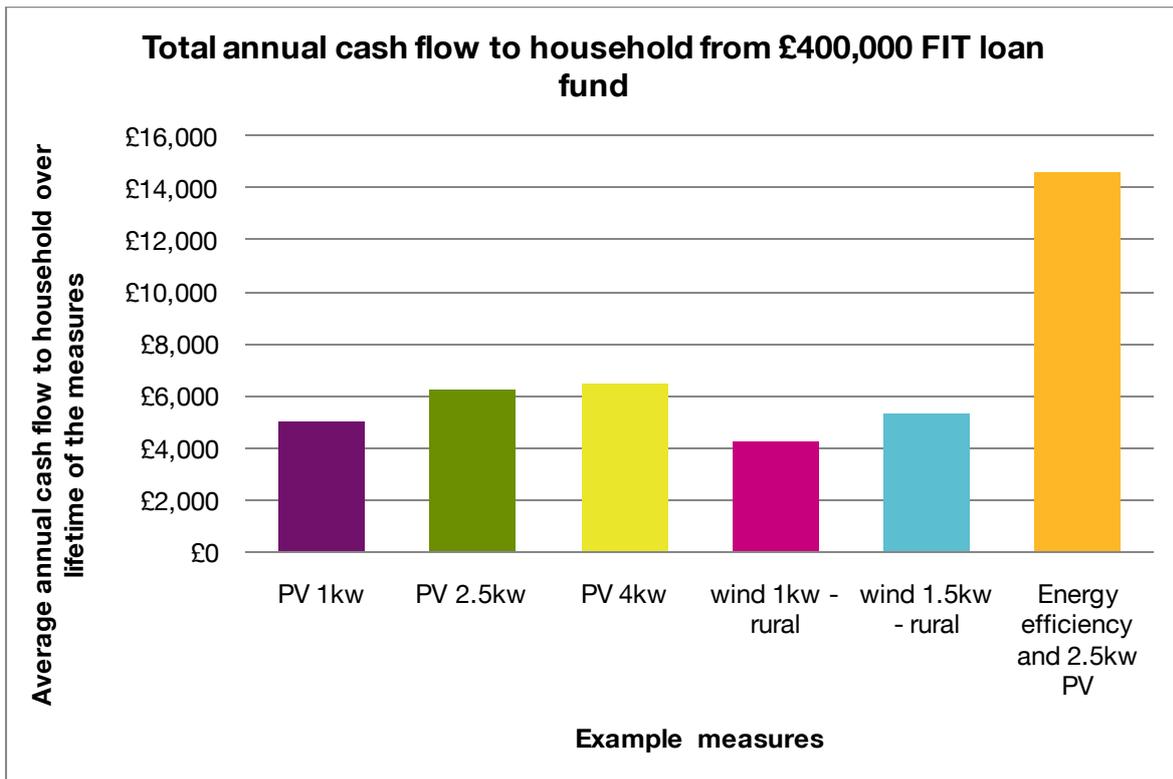


Figure 16. The annual benefit to households from the different example measures that can be generated with £400,000 of FIT loans.

Simple loans

With simple loans your community group will have more control over its cash flows. This is because it can set the interest rate for borrowers. Repayments will then be the same every year for the term of the loan. From the household perspective the interest rate will affect demand for loans: the higher the rate, the smaller the value of taking out loan finance. The interest rate that a householder pays will depend both on the cash flows of the options that the loan could pay for and on whether there are competing providers of loans such as high-street banks.

Setting the interest rate will also depend on the goals of your community group. Social-first groups may reduce the interest rate for households in poverty, even to zero. Carbon-first groups may vary the interest rate to generate demand for measures that have high carbon but lower cash returns, such as some energy efficiency measures. Energy efficiency measures alone cannot be funded by FIT loans.

The following NPV results (Figure 7 and 8) are from the fund and customer perspectives for the example measures, using a 3.6% interest rate. They show that the simple loan model makes the NPV for every option the same to the community group. This is because it is only dependent on the interest rate and the term of the loan: the changes to household cash flows from the household energy measures do not affect cash flows to the fund.



This is demonstrated by Figure 18 (p53), which shows that the NPV varies considerably between the different example measures because the householder makes the same loan repayment regardless of the effect that the measures have on household cash flows. Therefore, all the factors that can affect cash flows will affect the household not the community fund:

- Indexation
- Energy prices
- Technology lifetime
- Theft, damage and breakdown
- Changes to environmental conditions

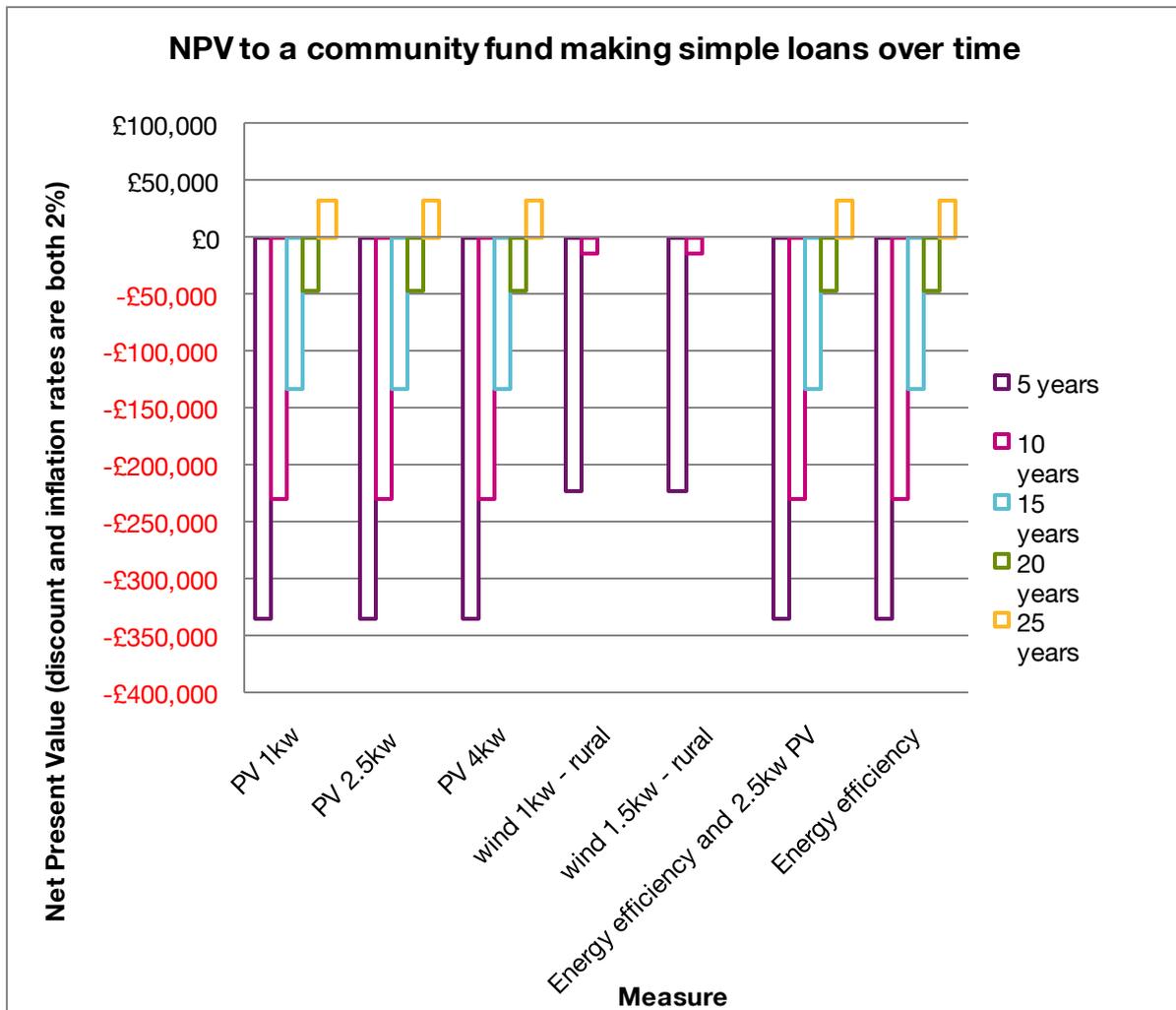


Figure 17. Net present value to the community group for 3.6% simple loans lasting for the lifetime of the example household energy measures.

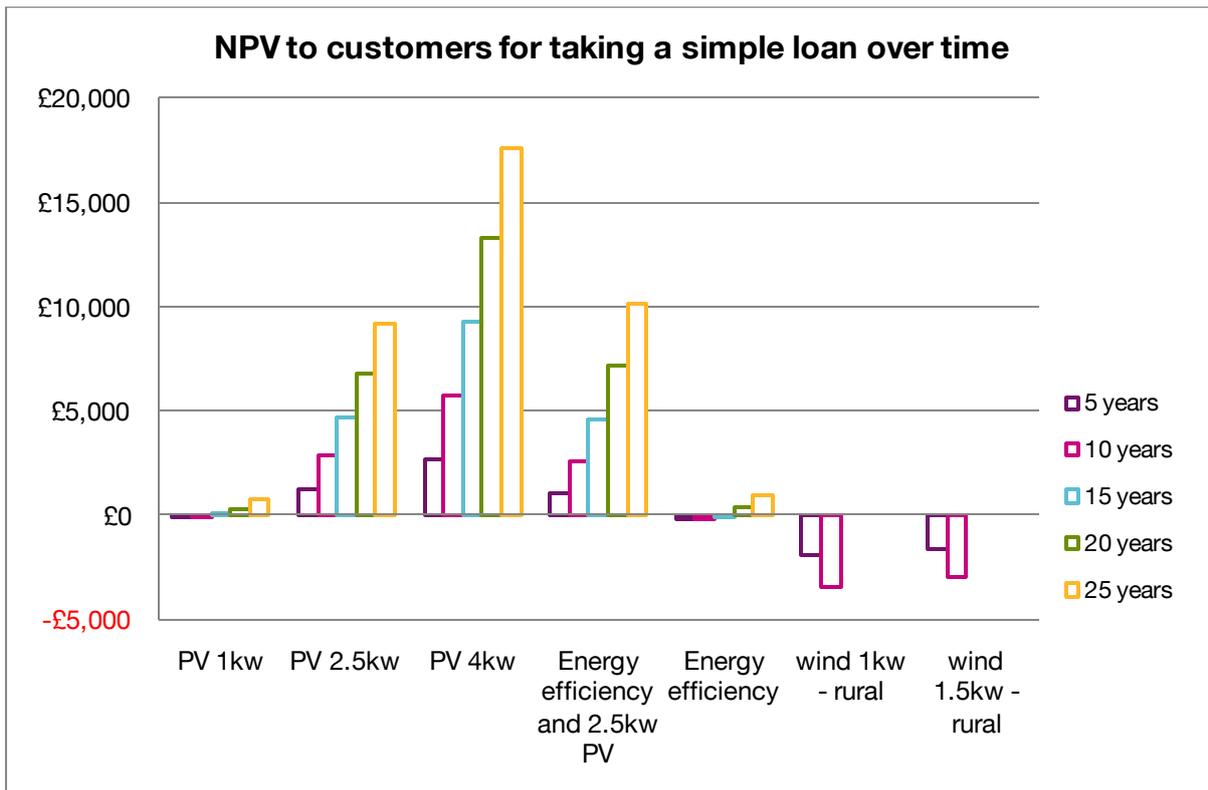


Figure 18. Net present value to customers for taking a 3.6% simple loan for the example measures from five to 25 years.

Table 11 below summarises the effects of the loan model to the householder. This shows the cash flows under different funding models. It shows that for the 2.5kW solar PV installation example, a household would be slightly better off under the simple loan model. As indexation increases the FIT income each year, this difference with a FIT loan will increase.

Household cash flow 2.5kW PV – Year 1				
Cash flows	Funding options			
	Do nothing	Self-fund	FIT loan	Simple loan
<i>Income</i>				
Generation tariff	0	£826	0	£826
Export tariff	0	£30	0	£30
<i>Expenditure</i>				
Imported electricity	£585	£455	£455	£455
Maintenance	0	£110	0	£110
Loan repayments	0	0	0	£724
Net	-£585	£291	-£455	-£433
Profit / loss over doing nothing	0	£876	£130	£152

Table 11. The operating cash flows resulting from the worked example of a 2.5kW PV installation for a householder under the different funding models in this guide.



Choosing the right funding model

The right funding model will depend on three main factors:

- The amount of risk that your community group can carry
- Your community group's priorities
- The borrowers

In the following, we set out what you should consider when deciding upon a funding model for your revolving fund.

Risk to your community fund

There is a risk with all investments that returns may not be as expected. There are various factors that can affect the cash flows from household energy measures. By making FiT loans, your community fund would take on some of this risk, as repayments rely on cash flows from the energy measures. Some of these risks can be managed, as Chapter 5 shows, but it is likely that there will still be variance in income to the fund because of these factors. Your community group will need to ensure that it remains solvent if it borrows money, by having enough income to make the repayments. If so, you may want to consider avoiding FiT loans or keeping a greater amount of cash reserves and reducing lending. If you do this, however, it will reduce the impact of your fund.

Your community group's priorities

As already shown in this chapter, different measures and funding model combinations generate different carbon savings, and different cash flows to borrowers and to the fund. If your community group is concentrating on growing its fund, you may want to consider making simple loans at as high an interest rate as borrowers will pay, and FiT loans on larger domestic solar PV installations for the full 25 years of the FiT period.

Of course these approaches can support each other over a longer period of time, as the returns from high-return investments will generate profits to your fund that can be used to subsidise grants or loans to high-carbon or high-social measures.

Carbon-first groups can use FiT loans to finance combined measures that incorporate larger solar PV installations, energy efficiency measures and simple loans for energy efficiency measures alone. This is due to the higher carbon savings from energy efficiency measures.

Social-first groups can make interest-free loans for energy efficiency measures to tackle poverty and increase comfort and well-being. They can also consider using FiT loans to finance combined renewable electricity and energy efficiency measures. The FiT proceeds could be shared with households in fuel poverty, or you could consider the shared equity model of the London Rebuilding Society⁴⁶. This, though, would reduce cash flows to the fund and its growth rate.

In all instances, encouraging those who have the means to self-fund changes with the support, advice and assistance of your community group can increase the impact of a revolving fund. This is because your group's support can mean that there is more capital to lend to households that cannot self-fund.

⁴⁶ <http://www.londonrebuilding.com/information/89717/housing/> London Rebuilding Society information on shared equity financing of home improvements.



Borrowers

Just as your community group has a need to manage risk, so will homeowners. Some homeowners that do not understand the benefits of household energy measures, may be less likely to take on simple loans in particular. This is because they would be the ones carrying the risk if the technology did not work as well as predicted. This is more likely to apply to disadvantaged borrowers.



7. running a loan fund

This chapter looks at the functions that managers of your community fund need to perform to lead the lending process and develop formal lending procedures. You should look to cover all functions within the flow chart shown in Figure 19. The time from loan enquiry to loan dispersal should be a few weeks to a few months.

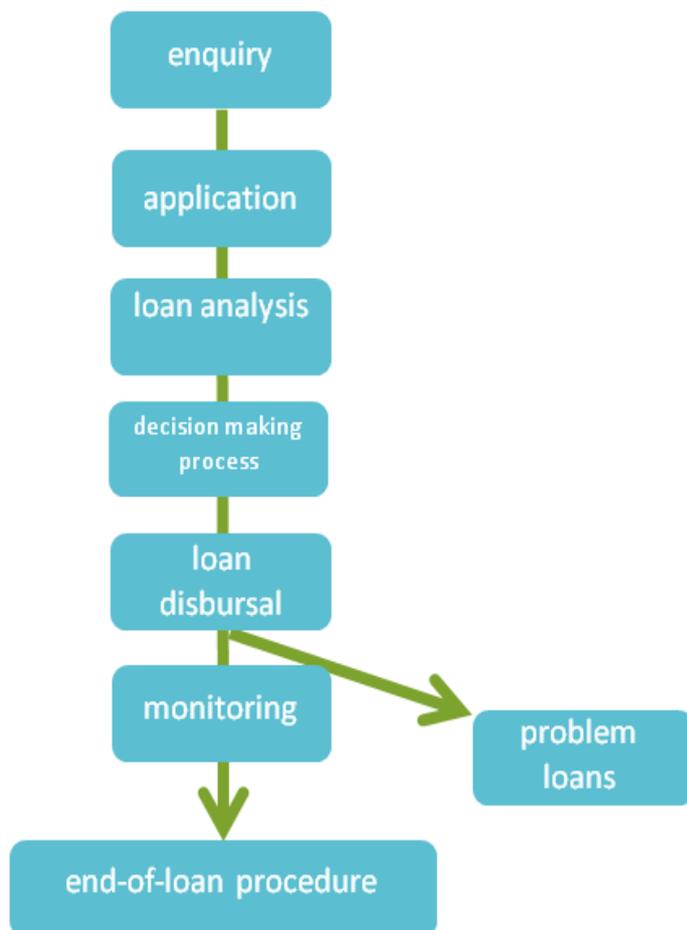


Figure 19. The functions covered by a formal lending procedure, courtesy of the Community Development Finance Association.

Options for partnering to manage the lending process

Your community group should consider its skills base, experience and resources before deciding on how to manage the lending process. There are organisations, such as community development finance institutions (CDFIs) that specialise in making loans. These groups could take on particular functions that need the most specialist skills and knowledge, leaving your group to manage the process overall. If you are an inexperienced group you should consider partnering with an organisation that is capable of taking on the loan disbursal, monitoring, end-of-loan procedures and any legalities of chasing problem loans. We surveyed the members of the Community Development



Finance Association (CDFA). The below-listed CDFIs responded that they already provide loan management services or would be prepared to. These CDFIs operate nationally or over a region, and can provide a full range of lending management services to a community. Not all may administer loans with terms longer than ten years. The CDFFA can help in searching for an appropriate CDFI to partner with.⁴⁷

London Rebuilding Society
Street UK
North Lincolnshire Development
Black Country Reinvestment Society
DSL Business Finance
BBV Ltd Business Finance North West
Charity Bank
Gole Development Trust
NWES
Cumbria Asset Reinvestment Trust
Key Fund Yorkshire
Wessex Home Improvement Loans
South Coast Moneyline

Local authorities are also able to deliver these services. For example, Kirklees Borough Council administers its Re-Charge secured loan fund in-house, including the legal procedures. However, the ease of persuading a local authority that they should manage your loan fund will depend on whether they have operated a loan fund in the past, how much resource they have and the aims of your initiative. If they do take on this role they will be making a major resource commitment to what you are doing. This is a good reason for community groups to forge strong ties with their local authorities.

If your community decides to provide credit directly, it will need to comply with the Consumer Credit Act 1974. This Act requires most organisations that offer goods or services on credit or for hire, or that lend money to consumers, to be licensed by the Office of Fair Trading.⁴⁸ You may need a licence even if you do not charge for services or are a non-profit making organisation.

It is a criminal offence to carry out any activity that requires a consumer credit licence before a licence has been issued, or to carry out any licensable activities that your licence does not cover. In addition if a customer defaults on a payment, an organisation cannot enforce any credit agreement made while unlicensed.

It is therefore very important to make sure you carefully assess whether or not you need a consumer credit licence, and apply for the appropriate licence. This can be a complicated process – seek professional advice if you have any doubts.

⁴⁷ The survey was conducted in February 2010. The results were compiled from reactive responses, so not all members of the CDFFA that offer these services may be listed. See the Community Development Finance Association website for details: <http://www.cdfa.org.uk/index.htm>

⁴⁸ Further information on consumer credit licences is available at http://www.offt.gov.uk/shared_offt/business_leaflets/credit_licences/oft147.pdf



Loan agreements

The loan agreement is the contract between the lender and the borrower. It is also called a credit agreement. If you are lending to individuals (e.g. householders) then your credit agreement must comply with the Consumer Credit Act. Your credit agreement needs to set out the conditions of the loan, including restrictions on what the money can be used for, when and how it is to be repaid and any interest payments or assignment of FiTs. It can also contain details of access and maintenance, and clauses that are triggered in particular situations (such as when a property is sold). If there are other documents, such as the registration of feed-in tariff assignments, the different agreements that your community group and the borrower enter into must be consistent. A sample loan agreement can be found below. The legal requirements for loan agreements can change, and so the law applicable to lending should be actively reviewed. This can form part of a partnership on the lending process, or can be from other sources of professional advice such as law firms.

FiT loans

We have drawn up a model FiT loan agreement⁴⁹. Factors to consider for FiT loan agreements include the following considerations, with clauses to cover the result of eventualities:

The length of the loan period for which the FiT will be assigned to the lender, and what happens if it is changed without the lender's permission

The date by which the installation must be completed

The right to access to renewable electricity measures for maintenance

The need to keep solar panels from becoming shaded by vegetation etc

The requirement to maintain insurance against damage and theft for installed measures

The requirement to maintain the connection to the electricity network of the property

The liabilities if there are fraudulent activities

The cost of ending the loan agreement before the term is reached.

The procedures for the borrower selling their property. Can a purchaser take over the loan?

What happens if the terms of the loan are broken, and the community group suffers loss as a result?

What security is granted, and by what method. You could, for example, levy a legal charge on the property to cover this.

Simple loans

We have drawn up a model simple loan agreement⁵⁰. Factors to consider for FiT loan agreements include the following considerations, with clauses to cover the result of eventualities:

The term of the loan

The rate of interest on the loan

The frequency of repayments and the date of repayment

⁴⁹ You can download this Unsecured FiT Loan Agreement from - <http://www.bwblp.com/Files/Documents/201005131713UnsecuredloanwithFITelement000757357-V1.doc>

⁵⁰ You can download this simple Unsecured FiT Loan Agreement from - <http://www.bwblp.com/Files/Documents/201005131713UnsecuredLoanAgreement000746684-V1.doc>



What security is granted and by what method

The procedures for the borrower selling their property. Can a purchaser take over the loan?

What happens if the terms of the loan are broken, and the community group suffers loss as a result?

Choosing security options

A loan may either be 'secured' against an asset (for example a property), or 'unsecured'. This becomes relevant in the event that the borrower defaults by failing to make the necessary repayments, at which point the lender may want to recover the sums still owed to it.

The decision on whether or not to take security will depend on a number of factors, including:

- The attitude to risk of the lender

- The size of the loan

- The risk of the loan not being repaid

- Whether the organisation making the loan would ever, in practice, want to enforce that security

- The availability of suitable assets to take security against

- The administrative and financial burden involved in securing a loan.

Taking security will involve an administrative and financial burden that will make granting the loan more expensive, potentially slowing down the lending process, and may make the borrower less inclined to borrow.

However, if a loan is secured and the borrower defaults, the lender has clear means to recover the amount of money still owing. Note that a lender will still be able to pursue any sums not paid on an unsecured loan, but will not have a defined asset against which to recover the debt. Where the loan sums are relatively low and are granted within your community, perhaps by a locally owned Community Interest Company, your organisation may consider that the benefit of avoiding the administrative and financial hurdles outweighs the potential risk of default on repayment. A secured loan may be a more appropriate vehicle for a local authority that is granting loans, given that it is dealing with public funds.

A decision about whether or not to require security for a loan is critical to the overall management of your loan fund, which will need to carefully balance the various risks.

The Kirklees Re-Charge scheme overcame a number of legal issues as householders' applications progressed through the scheme⁵¹. Action was taken in a number of areas:

Personal charges over a property – resulting from relationship breakdown, for example – might result in legal costs disproportionate to the amount borrowed. Kirklees introduced a policy to approve applications only from householders where existing charges were not personal.

Land Registry entries are often not up to date. Putting this right requires householders to provide additional evidence, for example where the mortgage has been paid off or a spouse has died. This has involved some 'tidying up' of the Land Registry by the council.

Amendments were made to the legal documents to allow a property held by the owners as 'tenants in common' to be treated as though they were joint tenants.

⁵¹ Kirklees Re-Charge case study, Kirklees Council: <http://www.kirklees.gov.uk/community/environment/green/pdf/2009RE-ChargeCaseStudyx.pdf>



Assignment of feed-in tariffs

Under the FiT arrangements, the generation tariff and export tariff will be paid by a selected energy supplier to the generator. The generator is the owner of the technology (e.g. the householder). The generator has the right to assign the generation and export tariffs to an 'agent'. This assignment forms the basis of the FiT loan model, which uses the FiTs as the method of loan repayment, described in this guide. Under a site leasing or leaseback approach, your community fund would be the generator and so there would not need to be an assignment for the fund to collect the FiTs.

Loan agreements for FiT loans will need to cover this assignment and ensure that it cannot be reversed without the loan being repaid. Feed-in tariff assignments are requested and controlled by the generator (e.g. the borrower) and are held in the feed-in tariff register by Ofgem. The records are amended by the energy supply company that is making the FiT payments.

In the event of the generator later changing the assignee or removing the assignee so that the generator becomes the recipient, the current assignee would not necessarily be notified of the change. This means that if your community is making FiT loans you will need to watch for missed FiT payments carefully – to see if payments are not being made and investigate with the borrower as to why. If there is a breach of the terms of the loan agreement, your community can then choose the appropriate action, including action to recover outstanding debts. Your community would not be able to see the FiT Register held by Ofgem.

Cash flows from running a loan fund

Beyond the cash flows from lending that are discussed in Chapter 5, this section discusses the cash flows that are particular to any community fund. These are management costs and asset write-offs. We outline the possible costs associated with these, and how to manage the uncertainties and risks that they create.

Management costs

This is the proportion of the starting capital of your revolving fund that is spent on costs associated with running it, included in the lending process in Figure 19. There are fixed and unavoidable costs associated with running a revolving fund and the lending process. These include legal fees, land registry fees for registering charges and credit reports. There are also costs associated with the running of a loan fund. These include the costs of processing applications, setting up loans, processing and chasing repayments, issuing statements and managing accounts.

There are several options for conducting these tasks. They can be managed by a local authority; by an existing CDFI, bank or building society; or by a new credit-providing body established by your community.

Forum for the Future conducted a survey of members of the CDFA to gauge the 'supply' of loan management services nationally, and to understand the likely range of management fees that communities might expect to pay. These vary quite substantially between CDFIs. A one-off upfront fee of 8% of the starting capital in the fund was the average in survey responses. The range for a community revolving fund could be around 6-15% of the fund's value. Fees can either be paid up front or as an annual payment – either a fixed amount or a percentage of the fund. Paid in this way, the costs were around 1-2% per annum. It is also possible to operate with a mixture of an upfront fee and annual charge. Therefore, from a £400,000 loan fund, around £30,000 to £40,000 should be budgeted for the management of the lending procedures.



These costs are higher when your fund is making smaller loans, and it is the number of loans rather than their size that creates the costs. There is a fixed cost for running a fund of any size that makes small funds comparatively expensive.

There is likely to be a relationship between fund management fees and write-off rates (see next section). This is because cost cutting on administration can lead to greater write-offs as defaults are not dealt with and administrative errors lead to losses. Equally, high asset write-offs can mean you incur higher administrative costs in attempting to recover potential losses by chasing customers in default.

Asset write-off rate

In either site leasing or loan ownership models, there is the possibility of assets losing value and cash flows falling over time. In the case of a loan fund the assets are the loans, rather than any physical assets. The value of loans will fall if borrowers default on repayments or if FiT payments stop (in the case of FiT loans). For each loan it makes, your community group should account for a proportion as a contingency against future write-offs, for example 5% of the loan value.

Some of the causes of write-offs particular to FiT loans are covered in Chapter 5 (page 39). Similar risks are apparent for site leasing arrangements. It is unclear whether FiT loans will have a higher or lower asset write-off rate than simple loans.

Simple loans are repaid by the customer directly to your loan fund. This means that if customers default on repayments, your fund will lose income. It will be up to your community to decide how to deal with defaults – what steps to take to recover the money, and when.

The borrower appraisal process will also affect bad debts. A credit record check can help to assess a customer's history of making repayments to credit providers, while in-person visits and identity checks can help to gauge their suitability for loans and whether they are *bona fide* borrowers.

The bad debt rate will also depend on the policy of the community fund – what steps should be taken with borrowers in default, whether their circumstances are 'won't pay' or 'can't pay'. Perhaps most importantly of all, you need to get to know your customers: experience from CDFIs shows that getting to know potential borrowers before and during the lending process should lead to lower bad debt rates. However, it can take time to make visits to potential customers, which either have to be assigned to volunteers or handled by staff, increasing the management costs of the loan.

Wessex Home Improvement Loans, which provides loans of £5,000-£15,000 to priority groups of householders for home improvements on a secured basis, has experienced very low default and no write-offs from bad debt⁵². It attributes this to the personal approach it takes to assessing and liaising with prospective borrowers.

It is difficult to say what allowances should be made for asset write-offs, as this depends on the experience, skills and resources of the community group as well as the borrowers in the community. However, asset write-offs on a £400,000 household energy measures loan fund could reduce the ending balance considerably. Write-offs of 25% would cause a £100,000 reduction in value, and consequential reduction in the number of loans made.

⁵² Wessex Home Improvement Loan Scheme

http://www.cieh.org/uploadedFiles/Core/Membership/Regional_network/South_West_region/Wessex_Home_Improvement_Loan_Scheme.pdf



Early repayments

Householders may decide to repay their loans early, if their loan agreements allow for this, for several reasons. It is likely that the most common reason will be property sales. It is currently not possible to transfer the obligation of a loan agreement to the buyer of a property. However, the Government has proposed to legislate in the next parliament to make it easier to transfer between owners and allow a loan to stay with a property rather than an individual⁵³. It is already possible for an existing loan to be repaid and a new loan made with the buyer for the remaining balance, if that buyer wishes to do so.

To predict how many customers will move each year, see Figure 20, below. This shows data from the Department of Communities and Local Government Housing Survey⁵⁴, as well as scenarios that Forum for the Future developed for predicting cash flows in its Refit West retrofit CIC. It also shows the predictions by Kirklees Council for its Re-Charge microgeneration loan scheme. All projections are positively skewed from the actual profile to reflect that people taking on loans for energy efficiency and renewable electricity measures are likely to stay longer than average. The Refit West base case predicts that people will move less in the first ten years and then will start to move at a rate similar to the average.

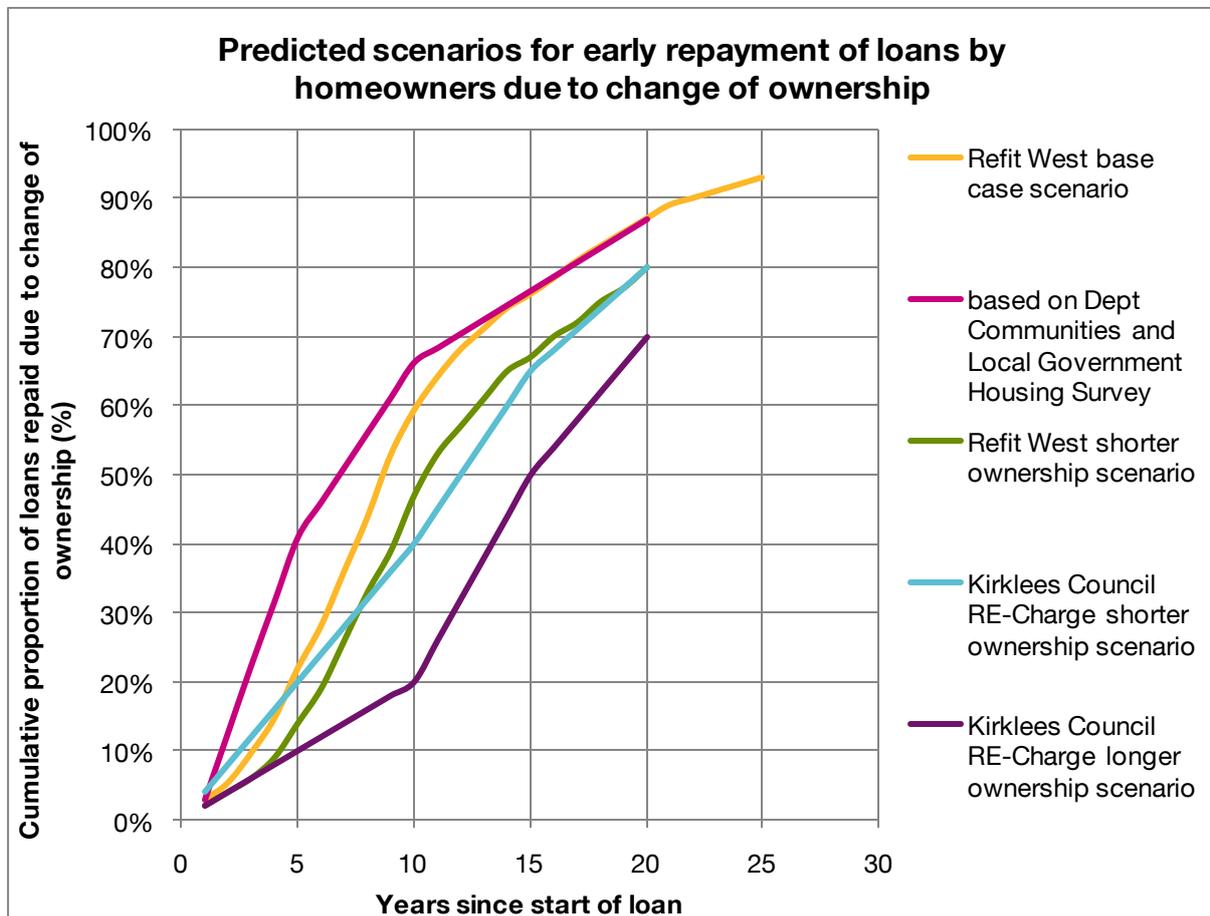


Figure 20. Possible profiles for the repayment of energy efficiency or renewable electricity loans in the UK.

⁵³ Household Energy Management Strategy http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/saving_energy/hem/hem.aspx

⁵⁴ DCLG Housing Survey



Allowing loans to transfer to a new property owner will increase demand, as it is likely that some potential customers will be put off if they are required to repay their loans when selling the property. Such a requirement introduces an unwelcome element of uncertainty, as it will be unclear to a homeowner whether property prices will rise by the cost of these measures.

Repayment on sale has a much larger impact on income to the community fund under the FiT loan model, as the returns are weighted to the later years due to indexation. Simple loan funds are impacted much less. Under both models, the early repayments allow the fund to 'revolve' faster, as more capital becomes available to make new loans. These extra loans increase the energy generation and carbon savings created by the fund, and allow it to reach more customers, so early repayment favours community groups with a carbon-first motive and hampers those with a growth-first motive. From a social point of view, repayment allows more loans to be made and gives flexibility to borrowers.

The customer journey



Figure 21 – The customer journey for Refit West.

An example customer journey from application to works completed is shown in Figure 21, from the experience of Refit West. It is a similar process to the one outlined in Kirklees Council's Re-Charge scheme⁵⁵ but shows a greater level of detail on how securing the loan to the property with a second charge affects the process. The role of Refit West as the social enterprise is to manage this process and act as the liaison point for the householder, surveyor, lender and contractor.

⁵⁵ Kirklees Council Re-Charge. <http://www.kirklees.gov.uk/community/environment/green/pdf/2009RE-ChargeCaseStudyx.pdf>



8. governance

Cash flows, financial models and ways of running a revolving loan fund are explained in the earlier chapters. This chapter looks at the governance structures that can be used to control a revolving fund, enabling your community group to operate effectively.

Most governance structures are created to deal with issues of power sharing, accountability and consultation with stakeholders. Few are created to ensure that the organisation operates as productively as possible. Our considered view is that the most effective organisations are those that have a clear vision and purpose and ensure a subtle balance between management's ability to manage and its accountability for how it does so.

Accountability in many organisations is dealt with by allowing the shareholders or members to elect and dismiss the directors – a power usually exercised at the annual general meeting. The composition of community group membership tends to vary widely between groups, with some encouraging a wide and open membership and others more limited. In the early stages of getting your community group underway, it might be sensible to restrict membership but also to have regular public meetings to engage with your community (while not handing sovereignty to that community).

You could consider having a system where the membership – which could be made up of individuals and organisations – elects a minority of the Board. The majority could then be appointed by your chairperson – who is elected by the members. This is based on the John Lewis model and it has served that company very well – although there are a number of subtle features of its governance structure that are too detailed for this guidance.

Stakeholder involvement is not an 'all or nothing' process, and there are several ways in which people can be involved. These range from simply being consulted to having control of and responsibilities for the organisation. No method is necessarily 'better' or 'worse' – different levels of involvement will be appropriate for different groups.

Stakeholder involvement can be a great strength for an organisation. Stakeholders with a sense of ownership can be encouraged to support your organisation. They may also be useful sources of finance and skills, and their direct involvement may increase the quality of the community-based input and/or feedback you receive.

That said, the basis of most legal forms is a two-tier power structure in which a small group of individuals is responsible for the day-to-day running of the organisation (a board of directors, board of management, management committee or board of trustees), but these people are accountable to a wider group of individuals (often called members or shareholders). This basic structure may be developed in a number of ways, but three types are most common:

1. Oligarchy: where the individuals who make up the board are the same as the members, and new appointments to the board are made by the board – i.e. no wider stakeholder involvement.
2. Representative oligarchy: where organisations wish to have members that are organisations rather than individuals. Each member then appoints an individual to serve on the board. This can be a recipe for institutionalising tension if the various directors regard themselves as 'delegates' of their organisations.

In all cases the board can be given the power to co-opt additional directors to widen the mix of skills, experience and qualifications.

3. Elected by the membership: where the members elect the board from among their fellow members.



9. risk, finance and tax considerations

These are factors that should be considered when deciding what legal form(s) you are going to use (more on this in the following section) and how your organisation as a whole is going to be structured.

Managing risk

In all business activities and particularly when working in emerging sectors, there is an element of risk. The important point is to understand, manage and minimise the risks that you face.

Incorporating your organisation is one way to do this. Incorporation makes the organisation itself a legal entity, liable for its own obligations, thereby limiting the personal liability of individual management committee members, shareholders or members. Incorporation is an important consideration if there is an intention to employ staff, take on significant property interests or undertake major contractual obligations or operational risks. Therefore, a revolving fund should be or sit within an incorporated body. See section 9 for details of the various options for this.

Accessing finance

Choosing the right form of legal vehicle is important not least because it will have implications for the ways in which an organisation can raise finance. While some types of funding can be obtained by any legal form, other types are only available to certain legal forms. The considerations are as follows:

Grants – These may come from charitable foundations, government or European funds. Any legal entity may accept a grant, although funders may be more inclined to give to a charity or not-for-profit organisation. See section 11 for issues related to accepting grants from public bodies.

Debt – Usually provided as loans, this may be obtained from banks, specialist finance providers or supporters. While this source of finance is available to all, an incorporated form is preferable as the obligation to repay a loan is a substantial liability. Debt may be secured (where the borrower grants security over assets, such as property) or unsecured. See section 10 for issues related to accepting loans from public bodies.

Equity – Equity investment means a company ceding part-ownership by selling shares in itself to a third party in exchange for financial capital. Only CLSs or IPSs can issue shares.

Tax

An obvious source of finance for any business is retention of profits. A wide variety of tax liabilities can be avoided by adopting charitable status, and it is possible that your community group could utilise this.

For some social enterprises the mutuality principle is extremely important. This provides that where profits are derived from mutual trading between members of an organisation, those profits are not subject to tax.



10. legal form

Choosing the right legal form is a vital part of establishing an organisation which will help you to achieve your aims. The legal form provides the framework for your organisation, and it is important to be sure that the rules are established to make it as easy as possible to be successful. A free online resource that can help guide you through this decision-making process, with links to further guidance, is www.getlegal.org.uk.

Social enterprises

Social enterprises are businesses that trade with a social purpose. A social enterprise is a recognised type of organisation but it is not a legal form. A social enterprise is not defined by its legal status but by its nature: its social aims and outcomes; the basis on which its social mission is embedded in its structure and governance; and the way it uses the profits it generates through trading activities.

The UK Government defines social enterprises as “businesses with primarily social objectives whose surpluses are principally reinvested for that purpose in the business or in the community, rather than being driven by the need to maximise profit for shareholders and owners”. Consequently social enterprises include charities, Community Interest Companies (CICs), and Industrial and Provident Societies (IPSSs), Companies Limited by Guarantee (CLG) and Companies Limited by Shares (CLS) can also be established as social enterprises.

Benefits of incorporation

Your community group must have an incorporated legal form with limited liability. The reasons for this include:

1. An incorporated business is a legal entity in its own right, meaning it can enter into contracts, employ staff and have its own obligations and liabilities;
2. The personal liability of the management committee for the debts of the organisation is removed (although not completely). This makes sense if any major contractual obligations are to be entered into, property interests taken on, or staff employed;
3. The governance structures of the organisation will be formalised, making the decision making processes clear both for those within and outside;
4. There is an established formal structure for stakeholder involvement through membership;
5. The regulation that accompanies limited liability can increase public confidence in the organisation, based on the disclosure that comes with it. The price for limited liability is public disclosure of the accounts and the directors;
6. Many banks and financial institutions will insist on incorporation before providing loan finance; and
7. Equity finance is only available to certain types of incorporated institutions – and incorporation is essential if you seek to raise equity investment (see Table 12, p.70).

Types of legal form

There are three categories of corporate vehicle: a company, an industrial and provident society and a limited-liability partnership. Below are some key features of the forms of these vehicles that are likely to be appropriate to communities establishing revolving funds⁵⁶.

⁵⁶ The details given below are for initial information only. Appropriate advice should be sought before deciding on the legal form for your community revolving fund. A useful, free source of guidance online is: www.getlegal.org.uk.



Limited liability company

There are two types of company – a company limited by shares (CLS) and a company limited by guarantee (CLG).

The majority of CLSs are private companies, although there are also public limited companies (plcs), which can offer their shares to the public and are subject to tighter regulation and supervision than private companies. Some of these are quoted on the Stock Exchange.

CLGs are typically associated with charities, trade associations and not-for-profit companies.

The main distinction between a CLS and a CLG is that a CLS has a share capital, while a CLG does not. A CLS can issue shares to shareholders, who become the owners of the company. The share capital is the nominal figure used to represent the total net assets of the company. A small CLS typically has a share capital of £100.

In a CLG there are no shareholders, but there are members. The members guarantee to cover the company's liabilities up to the sum of £1. The members become the CLG's owners and have broadly the same powers as shareholders in a CLS.

The distinction between CLSs and CLGs becomes particularly relevant when considering how to finance a company. A CLS can be financed by grants, loans and by equity (by issuing shares). A CLG may receive grants and take out loans, but cannot access equity finance. Both CLGs and CLSs can provide security to lenders by providing a fixed and/or floating charge over the company's assets (which is like a mortgage).

A company's constitution is contained in its Articles of Association (or for companies incorporated before 1 October 2009, the Memorandum and Articles of Association).

All companies have an 'objects' clause in their constitution, which sets out the company's aims or purposes. This can state that the object of the company is to carry on business as a 'general commercial company', in which case it may enter into any trade or business accordingly. Alternatively it is also possible to give a more particular definition of the objects, for example focusing on reducing carbon emissions within a given community.

A particular objects clause such as this may then be backed up by a requirement that limits how the profits of the company may be paid out, to ensure that they are applied to pursuing the company's objects.

A board of directors forms the upper tier of the power structure in all companies, and these directors are typically appointed by the shareholders/members. The directors have a duty to act in the interests of the company.

For further information and precedent documents, please visit the Companies House website⁵⁷

Pros:

- Widely recognised structure – easily understood
- Flexible structure that can be adapted to various situations
- Constitution can be adapted to reflect social/environmental objects and limits.

⁵⁷ <http://www.companieshouse.gov.uk/> For company model articles see <http://www.companieshouse.gov.uk/about/modelArticles/modelArticles.shtml>



Cons:

- Constitution can be changed if enough shareholders/members vote in favour – very difficult to guarantee preservation of social and environmental objects
- Social/environmental aims and community involvement are not evident from the legal form
- Fundraising for shares or secured loans from the public is subject to tight controls operated by the Financial Services Authority.

Community Interest Company (CIC)

CICs were developed to address the lack of a legal vehicle for non-charitable social enterprises. CICs are types of company, and are broadly similar to normal companies. They may be a CLS or a CLG.

A CIC's constitution must contain certain provisions, including a lock on its assets to prevent profits being distributed to members or shareholders except in certain circumstances. A CIC must pursue the community interest, and must report annually on how it does this to the CIC Regulator.

A CIC limited by shares or guarantee is able to accept grants and take out loans in the same way as a normal company. It can also give security for those loans by providing a charge over its assets. Interest rates on CIC borrowing must be at normal commercial rates, and performance-related interest is restricted.

CICs limited by shares are also able to obtain equity finance. However, there are limits on the returns that may be paid to investors. There is a maximum dividend per share which limits the amount of dividend that can be paid on any given share. For shares in issue between 1 July 2005 and 5 April 2010 this was 5% above the Bank of England base lending rate of the paid-up value of a share. For shares issued on or after 6 April 2010 the limit is now 20% of the paid-up value of a share. Only 35% of a CIC's profit can be distributed to its shareholders.

For further information and precedent documents, please see the official CIC website⁵⁸.

Pros:

- Preservation of pursuit of community interest is guaranteed
- Asset lock prevents payment of profits except when allowed.

Cons:

- More restrictive than a 'normal' company – community interest must continue to be pursued
- Restriction on returns that can be made to investors may restrict the numbers of those who will invest
- Restrictions apply to the distribution of assets if the CIC is wound up.

⁵⁸ For information about CICs see www.cic.gov.uk. For CIC Articles of Association see <http://www.cicregulator.gov.uk/memArt.shtml>



Industrial and Provident Societies (IPSs)

IPSs are societies, not companies. However, as with companies, IPSs take two forms: community benefit societies and co-operative societies. The difference between the two is in the stakeholder groups that the society is set up to benefit. A co-operative is set up to benefit its members. A community benefit society is set up to benefit the community more widely.

An organisation may be registered as a cooperative society if its rules reflect the values and principles given in the International Co-operative Alliance's Statement on the Co-operative Identity.

A community benefit society must have some special reason for seeking registration as a society and not as a company. In practice this means including a constitutional provision requiring that benefit will not be returned to its own members, demonstrating that business will be conducted for the benefit of the community.

Currently, no individual is permitted to own more than £20,000 of capital in any society. However, the Government is currently considering changes to the legislation framing the operation of IPSs. The Legislative Reform (Industrial and Provident Societies and Credit Unions) Order 2010, if passed, would make a number of changes to the rules governing IPSs, including abolition of the minimum membership age and a reduction in the minimum age for becoming an officer. The new legislation also promises to remove the restriction on a maximum holding of £20,000 of non-withdrawable shares. In community benefit societies, the members commonly only hold a nominal amount of share capital.

In cooperative societies it is mandatory for voting to be on a one member, one vote basis. In community benefit societies it is standard (though not mandatory) for voting to be on the same lines, irrespective of financial contribution.

Like a limited company, a society can mortgage its assets to a lender by granting charges over its assets. The power of a society to borrow depends on its rules. The rules must state whether or not the society has power to borrow or take money on deposit, and if so on what conditions, with what security and up to what maximum level. There is no maximum stipulated by law.

Pros:

- Clear statement of having a community focus
- Ability to raise equity
- 'One member, one vote' structure allows equal representation, irrespective of financial contribution
- Fundraising for shares in a community benefit society is not subject to FSA controls.

Cons:

- Limit to size of financial investment
- Financial returns not returned to members, which may discourage investment.



Limited Liability Partnership (LLP)

A LLP is a relatively new form of legal entity. It retains the organisational flexibility of a partnership and is taxed as a partnership, but members have the benefit of limited liability. A LLP can borrow in its own right, and is liable for its debts – although lenders may require personal guarantees from members. An LLP is able to issue debentures and give fixed and floating charges over its assets in the same way as a company. A LLP owns the assets of its business. Members are only liable to the extent of their capital contributions. LLPs have no share capital, and are not required to maintain a minimum capital. An LLP is governed by a partnership agreement. There is no requirement to file this at Companies House. A LLP has no Articles of Association, but can be governed by a partnership tailored to suit a given social purpose.

Choosing the right legal form

There are two main factors that should guide your community group in choosing the most appropriate legal form. These are the ability to issue shares and the protection of social purpose. The summary of the effect of legal form on these factors is given in Table 12 (p.70). Protection of social purpose is both at the current time and into the future. A company limited by guarantee or by shares can take charitable status or be a Community Interest Company to protect social purpose. Charitable status is still the form for protecting social purpose that is most widely recognised. Charitable status, and to some extent IPS and CIC status, can allow access to sources of grant funding such as trust funds.

The ability to raise finance from share issues is also affected by legal form. Companies limited by shares, whether CICs or not, can issue shares. An IPS can also do this, but only cooperatives can return benefits to members. Lastly, the stakeholder control of the group is important. If your community would like to have a 'one member, one vote' constitution, then the IPS cooperative model fulfils that role.

Legal Form	Objects	Equity financing available?	Protection of social purpose?
CLS	Any	Yes	None unless charitable, but some safeguards can be built in
CLG	Any	No	
IPS - Community Benefit Society	Must be for benefit of community	Not conventional equity ⁵⁹	FSA has to approve rule changes, and will protect purpose
IPS - Cooperative Society	Must follow co-operative principles	Yes ⁶⁰	
CLS CIC	Community interest	Yes	Community Interest is preserved in the objects
CLG CIC	Community interest	No	Community Interest is preserved in the objects
LLP	Any	By extending partnership	None though provisions can be built into the partnership agreement

Table 12. A summary of the characteristics and types of financing available to different legal forms.

⁵⁹ Investing members cannot make any financial gain from their investments.

⁶⁰ No individual can hold more than £20,000 of shares.



Group/integrated structures

In some cases it is desirable to set up more than one legal entity to carry out the various activities of a community group, including a revolving fund, that may be planned to reduce carbon emissions. The reasons for this are usually tax efficiency, ring-fencing risk, or the need to establish a clear separation of management between different operations.

This means that it may be appropriate to establish a particular legal entity (sometimes referred to as a special purpose vehicle or SPV), with one particular piece of work in mind. This could be where two or more organisations are collaborating on a piece of work, or where one organisation is undertaking an initiative with several elements.

Possible structures include:

- i. A social enterprise or business with an associated charity to run the parts of its operation that can receive charitable status.
- ii. A social enterprise or business with one or more subsidiary companies.

Changing an existing structure

In some cases, where an organisation has a need for a new legal structure to carry out new elements of work, the best approach is to expand the legal structure, as set out above. On other occasions, for example where there is an overall shift in the direction of your organisation, it may make sense to convert the existing legal entity into a new form which better enables new projects to be delivered.

For example, having established and worked with a standard CLS structure for some time, an enterprise may want to develop more community-focused work, using a CIC structure instead.

In many cases, it will be possible to make this change. For example, CLSs, CLGs, IPSs and charities may all convert to a CIC, provided that consent is given (if required) and the correct procedure is followed. It is important to note, however, that such a conversion is only possible if it is provided for by regulation (which is not always the case). For example, a CIC may not transfer to become a CLS or CLG, as this would undermine the underlying purpose of protecting the community interest and ensuring an asset lock.

In addition, in converting to a new structure, new regulations will become relevant to an organisation, which in turn may well bring new constraints and obligations. Before proceeding in this area, it is recommended that you seek appropriate advice.



11. raising funds

This chapter discusses the sources of finance that your community group might access for its revolving fund, and explores the legal implication of raising funds.

Legal considerations

This section is designed to take you through some of the financial services issues that your community group should consider when establishing or running a revolving fund. There is a range of sources of finance available to community organisations, aside from the generation of surpluses through trading, although some types of funding (such as equity) can only be obtained by CLSs, IPSs and LLPs with a certain kind of legal form.

Grants and state aid

The types of finance that community organisations can raise include grants, debt and equity. A grant is a form of gift and is not considered to be an investment. The legal considerations in the remainder of this section do not therefore apply to grant funding; you may approach funders for grants without any financial services implications for your activity. However, there can be considerable implications from state aid rules when accepting public grants and using this money for investments in measures that would qualify for the feed-in tariffs. The same issues may also affect your ability to claim the RHI when that is introduced.

Ofgem, the body responsible for implementing and regulating feed-in tariffs, has issued a statement on the issue of grants and state aid. This says:

This guidance sets out our procedures for the implementation of the grants provisions under the feed-in tariff scheme (FITs). It is intended to be working guidance and may be updated from time to time. This is guidance only. At all times, the onus is on the operator of an installation to ensure that it is aware of the requirements of the feed-in tariffs. This guidance is not intended to provide comprehensive legal advice on how the Order should be interpreted. Whilst this note is intended to provide general advice on how the entitlement to FITs payments could be affected by the receipt of public grants, developers are advised to seek their own legal advice before approaching Ofgem.

Background

As a government-implemented financial incentive scheme, the feed-in tariff scheme (FITs) has been subject to consideration by the European Commission in relation to state aid. The Commission has now published the final text of its decision on its website⁶¹.

This document outlines the exemptions that may apply when assessing whether the making of FITs payments to an installation in receipt of a grant from public funds is in accordance with the law relating to state aid.

Policy

The FITs scheme is intended to replace public grant schemes as the principal means of incentivising small-scale, low-carbon electricity generation. Because of this, and to ensure value for money for

⁶¹ See: European Commission (decision N94/2010): http://ec.europa.eu/competition/state_aid/register/ii/by_case_nr_n2010_0090.html#94



consumers and compliance with EU law on state aid, it will generally not be possible for a generator who has received a grant from a public body in support of the purchase and/or installation of generating equipment to also benefit from FiTs payments.

Exemptions (instances where an installation can benefit from both FiTs and a grant from a public body)

There are certain specific circumstances where an installation owner may be entitled to receive FiTs, notwithstanding the receipt of a grant from a public body. These circumstances are set out in the Order and should be read alongside the European Commission's notice on the FiTs scheme in relation to state aid (see link above). Under the Order, final decisions on eligibility for FiTs are the responsibility of Ofgem.

The exemptions are as follows:

1. Permitted grants

A grant from public funds is a 'permitted grant' (defined in Article 8 of the Order) where it was:

- a grant made before 1 April 2010 in respect of costs of an eligible installation which was commissioned before 15 July 2009; or
- a grant made before 1 April 2010 in respect of costs of an eligible installation on a residential property which was commissioned between 15 July 2009 and 31 March 2010.

Where a grant meets the 'permitted grant' definition, the installation owner will be eligible to receive FiTs payments and retain the grant.

2. Non-standardised costs exemption

Additionally, where a grant is not a 'permitted grant' and does not comply with EC rules on de minimis state aid (see exemption 3 below), the installation owner may still be entitled to receive FiTs payments and retain the grant where the owner of the installation can demonstrate to Ofgem that they have incurred justifiable non-standardised costs and that the combination of grants and FiTs for the installation will not result in over-compensation.

Non-standardised costs are those additional costs incurred as a result of measures directly related to delivering additional environmental benefit or mitigating environmental harm. This may include, for example, measures to protect fish and other wildlife in small hydro schemes. Additional costs associated with land acquisition or inefficient or poorly located installations would not be justified non-standardised expenditure.

The costs and returns associated with photovoltaics, wind and micro CHP under FiTs are relatively standardised as installations are based on manufactured components installed in standardised ways. In the majority of cases we do not, therefore, expect that installations in these technology classes will have justifiable additional costs.

3. Compliance with the EC's rules on de minimis aid

Where a grant is not a "permitted grant", the recipient may still be entitled to FiTs payments without having to repay the grant if the circumstances meet the EC de minimis rules on state aid.



If the overall support to be received from public funds (grant support plus FiTs payments) does not exceed thresholds specified in the de minimis regulations⁶², the installation may be eligible to receive FiTs payments and retain the grant, provided all other eligibility criteria are met⁶³.

Before being entitled to receive FiTs payments, the installation owner will be required to sign a declaration confirming that:

- *the total value of public financial assistance they have received in relation to any economic activities – this relates to any grants received from a public body and is not limited to grants received for the installation – has not exceeded the de minimis aid levels of support, and that the combination of the grants they have received and the maximum expected FiTs payments (export and generation tariffs) will similarly not exceed the de minimis levels of support.*
- *they will notify Ofgem or their FiTs licensee immediately if the de minimis levels of support are exceeded or if they think they are likely to be exceeded.*

The declaration and covering note and a table showing the indicative income from FiTs payments is available from the Ofgem website. The covering note provides more details about the de minimis exemption and how to self-assess against the requirements.

Option to repay a grant

Where a grant does not meet any of the above exemptions, the grant would need to be repaid in order for the installation to be eligible for the FiTs scheme. Where repayment is required, the full grant level will need to be repaid before the installation is eligible for the FiTs scheme.

In the first instance, the grant issuer should be contacted to discuss repayment options.

Off-grid installations

If a generator is off-grid and cannot export its electricity, and generates only for its own use, then it is unlikely that it will be generating electricity as an economic activity.

Where an off-grid installation is in receipt of a grant from public funds and wishes to claim FiTs payments, the owner will be required to declare that the installation:

- (a) is not an undertaking by virtue of carrying on any other economic activity; and*
- (b) does not sell any of the electricity it generates.*

The future for FiTs and grants

The Department for Energy and Climate Change (DECC) are intending to update the Order so that it is consistent with the Commission's decision and to ensure that the FiTs scheme continues to provide value for money for consumers. Further information will be provided in due course.

⁶² In most cases this threshold is €200,000 over a period of three years. For undertakings active in the road transport sector, the de minimis threshold is €100,000 over three years. The de minimis threshold is €7,500 over three years for undertakings active in the primary production of agricultural products, and €30,000 over three years for undertakings active in the fisheries sector. See DEFRA's website for more information: <http://www.defra.gov.uk/foodfarm/policy/farm/state-aid/types/deminimis.htm> Undertakings active in the coal or aquaculture sectors cannot receive de minimis aid. [Further guidance on compliance with de minimis requirements is available on the BERR website:](#) <http://www.berr.gov.uk/policies/business-law/state-aid/state-aid-de-minimis-notification-procedures>

⁶³ Further information on de minimis regulations is available on the State Aid pages of the Business, Innovation and Skills (BIS) website. <http://www.bis.gov.uk/policies/business-law/state-aid>



Commentary on Ofgem's guidance

While the whole of this guidance note from Ofgem should be carefully considered if you have received public financial assistance in the form of a grant or loan, the following is additional commentary to help in your revolving funds activities. If in any doubt, organisations are strongly advised to seek professional advice.

- The overall impact of this guidance is that where an organisation is in receipt of grants from public funds, or where its projected income from FITs exceeds the *de minimis* level, careful attention must be given to whether that organisation is eligible to register for FITs.
- Note that 'economic activity', as stated in the first bulleted point of Section 3, can be carried out by voluntary and non profit-making public or private bodies such as charities when they engage in activities that have commercial competitors.
- The final section points to the possibility that the rules of what counts as *de minimis* levels may change in the future. This highlights the political risk that public financial assistance may inhibit your organisation's registration for subsidies (e.g. FITs and RHIs) because of the potential for a change in policy between the time of accepting the grant and submitting an application for FITs or RHIs.
- This Ofgem guidance does not explicitly discuss loans, although it does state 'public financial assistance'. It is important to note that loans from public bodies can also be considered to be state aid if the rate of interest charged is below a commercial rate. The difference in interest charges between the amount that would have been incurred had the loan been made on purely commercial terms, and the interest that actually is charged, is the amount that could be considered to be state aid. It is this difference – the 'benefit' of the soft loan, which could be considered to count towards the *de minimis* limit.

Raising debt or equity finance

Community groups seeking to raise debt or equity finance will need to invite investment. The Financial Services and Markets Act 2000 (FSMA 2000) regulates financial services and markets in the UK generally. FSMA 2000 therefore regulates the activities of organisations, including community organisations, that are seeking to attract financial investment in order to protect potential investors who do not have expert financial knowledge.

Prospectus regime

Where securities (typically shares or bonds) are offered to the public and the total consideration for the offer is in excess of the sterling equivalent of €2,500,000, a Financial Services Authority-approved form of prospectus must generally be made available to the public to accompany the issue.

It is unlikely that many community groups will make offers to the public at this level, and so the requirement to issue a prospectus is unlikely to apply. However, if your community group does wish to invite in excess of €2,500,000 of investment, it is possible that you may be able to rely on other exemptions from the requirement to issue a prospectus. You could ensure, for example, that no more than 100 persons are presented with the offer – or that the minimum investment that may be made by any one investor is the sterling equivalent of €50,000 or more.

If your community organisation is inviting investment of less than €2,500,000, or is otherwise exempted from the requirement to issue a prospectus, it will instead need to comply with the domestic financial promotions regime in respect of any 'financial promotions' issued by it.



Types of finance

This section discusses the sources of finance that are available to raise money for your community revolving fund.

Sale and lease back

If your community group owns property assets but lacks the finance to develop energy projects on them, you could consider a sale-and-leaseback deal. This would sell your group's assets to a third-party investor but under terms of sale that ensure those assets are leased back to your community group for an annual rent. The sale proceeds could then be used to fund the development and capital costs of an energy installation that would generate a positive cash flow to pay the rent and make a surplus for the community. This could work well for community-owned land on a site suitable for community-scale wind, for instance.

Debt finance

The cost of taking out a loan to raise funds for a revolving fund is that loans need to be repaid over a certain period of time, with or without interest. Our consultation with potential lenders showed that around 50% gearing would be the maximum debt in the community fund. A condition of the loan would be that in the event of losses from the loan fund, the bank should still be paid back. This is the reason why lenders require a 40-60% 'buffer' in the form of other sources of funding. This makes the loan more 'senior' than the other sources of funds.

Local authorities can borrow at low interest rates. This is because they have a very high 'credit worthiness'. This is one benefit from having a local authority heavily involved in an initiative. They may also be able to lend money from their own funds at zero or low interest. However this may undermine the borrower's ability to register to receive FITs due to the interpretation of state aid regulation (see p72-75) potential state aid support because of the implications for state aid of accepting loans from public bodies. One source of borrowing open only to public-sector organisations is the Public Loans Works Board (PLWB), which offers interest rates that are generally at a lower rate than those charged by the banks. However, the PLWB will not lend for all purposes. Therefore, some local authorities (e.g. Woking Borough Council) have borrowed money from banks for capital works and projects that cannot be funded from the PLWB.

If your community is considering debt finance, you should pay careful attention to the liabilities that it places on cash flows. Using debt finance will increase your risk of insolvency if your revenue is insufficient to pay your creditors (see cash flow section below for more information).

Equity finance

Share issues can be used by organisations with particular legal forms to raise money. Shareholders may have the right to dividend payouts and to redeem shares with the fund as a way of 'exiting' their investment. Share issues have been used by a number of community groups around the country. They typically use an IPS cooperative model to do this. Local authorities cannot issue shares.

Shareholders are likely to hold shares for a long time and sell them to others rather than back to the community fund. However, a community group with shareholders would need to keep contingencies so that those shareholders can exercise their right to redeem shares if they have that right.

Setting dividend levels for equity finance is a decision for the governance of your community group, based on what level is felt to be best for your community. This could be zero to maintain the maximum amount of profits for reinvestment into the community, or high commercial returns on investment to maximise share sales and the amount of capital in the fund. In the event of losses, shareholders are almost certain to be paid back after any creditors. This is an added risk for shareholders to consider.

A share issue gives local people, community organisations and businesses an opportunity to have a vested (financial) interest in the initiative. This can also bring voting and membership rights and build community ownership and support. To make the most of this opportunity and ensure diversity of



membership, your group may wish to have a relatively small minimum shareholding. There are administrative tasks involved in issuing shares, so each issue is at least a time cost to the community group. However, setting the minimum holding low can encourage people of modest means to hold a share in the group and become a member (in the case of an IPS cooperative share issue).

Bonds

A bond is a certificate of debt that is issued (sold) by a government organisation with the powers to do so or a corporation in exchange for money. The debt lasts until the term date of the particular bond, when the bond can be cashed in for its face value. The payment will be from the issuer to the current holder of the bond. Bonds may be traded if this is permitted under the terms of the bond. This may be at a higher or lower price than the face value that the bond can be redeemed for on the term date.

The bond may also require the issuer to pay the holder an annual sum (e.g. 3% of the face value) until the term date. The terms of a bond can be extended in a number of ways, such as incorporating a right to get money back more quickly or providing for annual payments linked to inflation. Typically a community group or local authority issuing bonds will sell them for face value and may offer an annual payment as well.

Bonds may be a good way to raise finance for your revolving fund because your community group will be certain of the date on which the bond needs to be repaid and so can plan investments around this. Local authorities can issue bonds following changes in local authority funding rules in 2005. This is on the basis of prudential borrowing powers.

There are no recent examples of local authorities having exercised their power to issue bonds. This is partly because bonds are novel and more complex than other sources of finance. Historically, it was commonplace for city corporations to raise finance with bond issues.

Local bond issues can attract investment from local people, companies and foundations. If the funds raised are earmarked for activities that have a high carbon or social return, people and institutions may be willing to buy bonds with limited, or potentially even zero, potential return on investment. This means there is some potential for raising low-cost finance.

Like share issues, bond issues can give holders a vested interest in your community group, although they do not automatically grant holders voting rights in the same way that shares do.

As there have not been local authority bond issues of late, there are risks in stepping into new territory. Local authorities should conduct further investigations before going ahead. However, there is also considerable reputational benefit with UK public sector and more local stakeholders from being innovative and pioneering a new successful model. This is the approach being taken by Forum for the Future's Climate Finance initiative⁶⁴.

Grants

Grants are effectively a free source of capital for your revolving fund if you can tap into them. They can be used to start the fund, adding other sources of finance as you grow and progress. Your aim should be to at least maintain the starting value of your revolving fund so that future grants are not required. The Energy Saving Trust has a searchable database of grants available⁶⁵. There is also funding available from the European Regional Development Fund⁶⁶. There are significant implications for accepting grants from public bodies (eg EU funding and grants from central government

⁶⁴ For further information see <http://www.forumforthefuture.org/projects/climate-finance>

⁶⁵ <http://www.energysavingtrust.org.uk/cafe/Green-Communities/Funding-Advice/Green-Communities-Funding-Database>

⁶⁶ See <http://www.communities.gov.uk/citiesandregions/european/europeanregionaldevelopment/> - or contact your local regional development agency for more information



departments and local authorities). Receiving such funding may mean that you cannot receive FIT or RHI payments – because of restrictions stemming from state aid regulations, for example (see pages 72-75).

Potential investors

A community revolving fund could attract the following investors:

- Private individuals
- Community groups
- Charitable trusts and endowment funds
- Institutional investors

Attracting a large number of **private individual investors** will help to secure a feeling of public ownership and generate word-of-mouth advertising, but individuals are likely to invest relatively small amounts each while raising your transaction costs. They will have a range of motivations for investing. Many will want to see the social and environmental benefits of their investments, while others will want a competitive financial return. The early focus should be on the social and environmental returns on investment, while securing people's money from loss. This is the approach of the Sheffield Green Bond, which offers no interest to investors and instead uses the interest it earns to make grants to environmental projects in Sheffield.

Community groups could potentially reduce your transaction costs, and would most likely have a clear environmental or social focus. However, you are likely to find relatively few such groups that are willing to invest, with relatively low investment capital at their disposal.

Charitable trusts and endowment funds have a benevolent remit and could be engaged in buying bonds for activities that benefit their areas of particular interest. They would be likely to require low returns on this investment because of the social and environmental value that the investment is supporting.

Institutional investors, such as pension funds, will invest larger sums, and will be motivated predominantly by financial returns on investment. To attract their interest the terms of shares or bonds will need to be comparable to those of the rest of the market. Local authority-issued bonds could appeal as a low-risk element in a mixed portfolio.

Effects on cash flows

To maintain the value of your community revolving fund, the cash flow from borrowers or community-owned sites must be greater than the cost of the capital. You also need to cover any added administrative costs and asset write-offs. This means that a fund relying on relatively expensive capital, such as bank loans, will need to make investments that have a relatively high return to prevent losses occurring.

If your fund is able to raise capital through loans, bonds or share issues and can invest that capital in ways that will earn more than the costs incurred, then this is an option worth considering. You could find that you are able in this way to increase the amount that your community can invest in carbon reductions and social purposes. These sources of funding can also lead to increased profits, and therefore support more activities in the future. The key consideration is that the cost of capital should not exceed the interest rate of loans (or the level of FITs in the case of FIT loans) plus any contingencies for administration and write-offs.

If cash flow projections look promising and there is the demand for more customers, then it may be worth gearing. To reduce or remove the risk to your community, the local authority may be able to guarantee or underwrite the loan so that in this eventuality it will pay off the debt.



Decisions about taking on risk and ambitions to grow your revolving fund over time will govern the sources and scales of finance you take on. Due to the risks of insolvency, professional assistance should always be sought before raising finance.



12. communication, marketing and public relations

The benefits of communication

For your revolving fund to be well received and achieve a successful outcome, you will need to positively engage local people by communicating the benefits of taking out a loan. Effective, strategic and carefully planned communications are the key to informing your local community about what you are doing, reassuring people and encouraging them to take positive action. This chapter suggests practical ways of marketing your revolving fund to consumers, household borrowers and potential site owners. When actively marketing your fund, it is important to:

- Raise awareness of the fund, so that community members know what is available to them
- Outline the mission of your fund by highlighting the benefits to individuals, households, organisations, businesses and the wider community
- Address and allay any fears customers may have about entering into a financial agreement
- Build and maintain trust in the credibility and efficacy of the fund
- Enable and empower people and organisations to play their part in reducing carbon
- Invest in the community's future and build community spirit.

One example of a community that is achieving a successful outcome for a low-carbon campaign through effective communication is Ashton Hayes. Its Going Carbon Neutral campaign aroused regional, national and even international media interest, creating widespread buzz about its ambition to be the UK's first carbon-neutral village. The resulting media interest helped drive enthusiasm and engagement within the local community, as well as attracting financial and pro bono professional support from local businesses and even the Government. Ashton Hayes experienced a high level of participation from residents, who chose to play their part in reducing their carbon footprint and making carbon savings.

Asking members of your local community to commit to a legally binding loan to invest in carbon reduction is one step further than asking consumers simply to change their behaviour by using less water or electricity. This means that communicating clearly, accurately and persuasively is crucial if you want to influence local people, potential investors, borrowers and site owners.

Community members will need to be convinced of the benefits of participating before they tie themselves into a financial commitment. They will also need to be made aware of the legal implications as well as the potential benefits. As strong communication is such a vital ingredient in ensuring that the roll-out of your community funds is a success, it is important to get the right people to do it. If you have access to experienced marketing, public relations (PR) or communications practitioners, working hand in hand with professionals is strongly recommended.

Alternatively, if your resources are more limited, there is an informative 'communications toolkit' on the Department for Energy and Climate Change website⁶⁷. This offers practical advice on areas such as how to communicate through community outreach, how to write for the web, how to engage the

⁶⁷ Low Carbon Communities Challenge communications toolkit – see http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/lc_communities/comms_tool/comms_tool.aspx



local press and working with stakeholders. Another useful source of free information is the Media Trust, which provides services⁶⁸ for social enterprises. This resource offers excellent guidance on communicating your community's activities and engaging with stakeholders.

Marketing and PR

Marketing your fund to households and businesses can be done in many ways. From developing a marketing plan, researching and understanding your market and trialling your fund, to launching it and building demand, there are a number of stages to consider. You can find tips and advice on these stages in the following sections.

Understanding your market

The first step in understanding your market is to do research to assess current behaviour and perceptions in your local community. This can be done by hosting focus groups, arranging face-to-face or telephone interviews or conducting a survey. The purpose of this exercise is to help you gain a deeper understanding of your stakeholders, define who your target audiences are and understand if there are any reservations that people may have about the idea of committing to a loan. It is important to establish what motivates people in your community before setting about communicating with them. It is worth allocating time to this at the outset, as knowing your audience will increase the chances of your community fund succeeding.

The value drivers of low-carbon energy measures

Financial reward: The measures will earn money and reduce costs, so there is a direct financial benefit

Being seen to be green: Displaying installations such as solar panels has a 'status' value. People motivated by status will respond to neighbours or friends who have done something similar by following suit. Communities can be motivated by the recognition they receive for generating or saving energy locally. Energy generation projects can receive more recognition than energy efficiency measures as they are usually more visible.

Being first: Some people are driven by a need to be different, so doing something innovative will hold a value for them. Communities can also be driven to be the first in the country or region to do something new. Conversely, some people will be cautious about being different. They will see adopting something new as 'risky' and will wait to see other people they trust installing measures and recommending that others do the same.

Self-sufficiency: Generating energy to use on site is a driver for some people that like the feeling that they are providing for their own needs rather than relying on the actions of others. Here the amount of energy generated or saved, and the amount that needs to be imported from the grid, will influence people's decisions about whether and in what to invest. A similar driver can also motivate communities to become self-sufficient.

Doing the right thing: Some people are motivated to be green, and saving carbon is a growing part of that.

Chapter 5 highlighted some of the principle reasons or 'value drivers' that might inspire householders – and to some extent business leaders – to install carbon savings equipment. The box above summarises the common 'value drivers' that are most likely to be relevant to your community, and so should complement your research.

⁶⁸ The Media Trust. <http://www.mediatrust.org/>



Focus group trials

As you are launching a new concept into the community, it is worth testing it with a focus group before launching it to the wider public. This can be a valuable learning exercise, as it will help gauge people's reactions to the terms of the loan, iron out any potential teething or logistical problems and give you the opportunity to listen to people's opinions before your community fund goes live. Focus groups are most effective if a diverse selection of people are chosen – consumers and business people alike – who are prepared to provide an unbiased, objective viewpoint to best reflect the different interests of the community.

Launching the fund and creating demand

Once you are confident with your communications strategy and loan offering and you have a good understanding of your target market, there are several ways in which you can launch the fund to your community.

The benefits of hosting a launch event

An event is often the best way to engage people, as it has the benefit of facilitating direct, face-to-face contact with consumers. It provides an open platform where the people you are targeting – potential borrowers and site owners – can ask the loan fund provider direct questions and air any concerns they may have. You will have the chance to answer questions and address any reservations that come to light.

Hosting an event is a particularly good way to engage with smaller communities as it can create further publicity through word-of-mouth 'buzz' if successful, so that it has the potential to reach the wider community. Scheduling a launch in the form of an event is also attractive to the regional press, as it serves as a newsworthy 'news hook' which can provide material for the 'diary pages' and could lead to an article that raises the profile of your fund. Here are some considerations when planning your event:

- Make sure that you choose a date that does not clash with other local events and choose a time when people can come, i.e. weekday evenings may attract more working people than daytime events
- Actively invite people to the event: place advertisements in local shops/Post Offices/hairdressers/newsagents and inform the local press; send a link to your event information via social media networks or through your website
- Ask a well-known and respected local businessperson or celebrity to attend the event to attract people to come along – someone who is prepared to say a few warm words about your loan fund
- Inform local press and show regional journalists a preview of your guide. Invite them to cover your event in advance, to drive attendance. Providing the press with information may also result in coverage after the event, which will raise awareness of your fund among a wider audience.

Generating press coverage

The reason that good PR is so influential is because people tend to trust editorial coverage above advertising: the journalists who write in local papers are often perceived to have an objective opinion and not to be trying to 'sell' their readers anything. If a well-respected business journalist thinks your fund is a good investment, legitimate and trustworthy, people are more likely to engage and take action. Gaining press coverage is therefore a good way to create demand for your fund.

The challenge you face is that journalists are approached daily by people with a plethora of good news stories. They do not have space to cover everything, so your story has to really stand out. It needs to be interesting and relevant to the local readership and audience. To make your loan fund initiative an appetising prospect for the press, it is important to find a good 'news angle' or 'news hook' to catch journalists' attention.



How to engage the media

First, it's important to select the appropriate individuals to approach with your 'loan fund' story. Before contacting the media, take time to create a list of carefully targeted media outlets and journalists/broadcasters. Make sure that your news story is relevant to their column or show, and will be of interest to their audience or readership. For example, if you decide to communicate your loan fund initiative as a 'cost-cutting' story, search out business or financial editors; if you choose to focus on the environmental side of the story, find environment correspondents or editors (if the media outlets you are targeting have them). For more general issue-led topics, target features editors. For specific time-sensitive stories, such as events or launches, target news editors.

How to engage the different media channels

Regional press – you need a unique local story that is of specific interest to people who live in the newspaper's catchment area. Highlighting a well-known local person who is championing the initiative can be very persuasive.

Regional radio – a good route in could be to offer a live interview with your chosen loan fund spokesperson, to discuss and take questions about the fund. This would raise awareness and build trust among consumers. Make sure that your spokesperson is an excellent natural communicator and is media trained ideally; using high-brow technical jargon or speaking in a monotone is a no-no when addressing a consumer audience.

Regional TV – television will reach the biggest audience, as its viewing figures tend to be large. For a story to be interesting to a local TV producer, it needs to have broad appeal and to be extremely topical. Low-carbon energy as a topic is interesting, but communicating your initiative as a way for people to save money on their energy bills is likely to have a more mainstream appeal. If budget allows, provide some professional attention-grabbing video footage of a local case study or success story that you are working with on the initiative. Providing video content that tells the story is known as a television news release and is the visual equivalent of a press release.

How to make your story stand out

Make it personal – highlighting tangible 'case study' examples of local people or businesses who are taking out a loan from the fund would be an effective way of persuading other local people to engage. People can identify with each other and are more likely to build trust in the initiative.

Find a champion – everyone enjoys reading about 'celebrities' and local figures are no exception. Whether there is a widely respected business leader in your community or a reality TV star who can endorse your fund (or even better, has decided to take a loan out themselves), the press are highly likely to feature a story if a well-known person is involved.

Make it topical – if your story reflects a current trend, such as cost-cutting in the recession, or 'ways to become greener', the journalist is more likely to feature it.

Make it authoritative – if you have access to a respected spokesperson – ie an independent financial adviser or a renewable energy expert – offer interviews to the media or include a pithy quote in your press release. This will enhance the credibility of your initiative, and the media are more likely to show an interest.

Make it punctual – when communicating with the media, meeting their tight deadlines is crucial. Make sure that you find out their deadlines and give them enough time to research and produce your story.

Make it visual – use a photographer to capture your launch event, choosing eye-catching images of your local 'celebrity' to include in your press release or creating video footage for a television news release. Remember that images can often speak more powerfully than words, and can propel a story into the news. Targeting the picture desk with a strong image can also achieve results.



How to communicate with journalists

Once you have planned your media strategy and compiled a target media list, you are ready to communicate with the media directly. Here is widely used ways for you to do so.

- *Write a press release* – regardless of whether you meet a journalist face to face or contact them by phone, a written press release (or ‘news release’) is an effective way of communicating your story and relaying information. Consider the tips above to convey your story in a newsworthy way. Free tips on how to write a press release can be found at www.mediatrust.org.
- *Meet one to one* – there is no more effective way of persuading a journalist or broadcast producer to engage with your story than meeting and briefing them in person. Forking out on an expensive lunch is not necessary but do offer to pay for a cup of coffee!
- *Pick up the phone* – journalists are used to receiving news stories by telephone and speaking directly is an effective way of communicating your story if done well. As journalists tend to be very busy, communicate your key messages quickly and in no more than three points. Avoid making small talk unless you already have an established relationship.
- *Follow up* – following up the journalist a couple of days after a meeting, phone call or email serves as an effective reminder about your story and helps you gauge whether it is going to be covered. It also gives you the opportunity to offer any further information. If the journalist decides to feature your story, find out what news angle has been taken and find out when it will appear.

Create your own website

A website is an important tool within your communications mix. Here people can learn about the fund in their own time and will not feel ‘pressurised’ into taking out a loan. Consumers browsing your website can do research and read the ‘small print’ at their leisure. Here are some top tips for creating a successful website or dedicated web pages to provide a strong communications channel:

- *Q & A* – include a ‘frequently asked questions’ section, providing answers to people’s potential reservations and ‘barriers’
- *Forum* – include a space for dialogue, where questions can be asked. Manage it by responding to questions and interacting with issues regularly
- *Downloadable information* – include a downloadable pdf version of your information pack to explain about the fund
- *Case studies* – include examples of your own pilots or of other local communities and individuals who have benefited from developing a similar fund
- *Blog* – include a blog, and update it with regular news and views

Create a leaflet or information pack

Leaflets or information packs can be distributed by hand at events or made available in public places. The benefit of providing printed information is that the public can read the content at their leisure without feeling the pressure of being ‘sold to’. Printed information is also a good way of engaging with an older or more traditional audience and those who may not have internet access. It is recommended that you include case studies and contact telephone numbers in case people have further questions.

Engaging social media networks

Popular social media tools, such as Facebook and Twitter, are free to use and can help you reach a wide audience. They offer a particularly effective way of engaging younger members of the community. Facebook and Twitter offer a good platform for sharing news or real-time updates about your project, as well as a quick and easy way of inviting the public to your events. They allow a space for the public to ask questions and air their views, and for your community group to respond to these



publicly, thus saving time. Facebook and Twitter can also be used to highlight your website or drive traffic to your latest blog post. It is recommended that a person with communications and some social media experience manages this area of your marketing/communications carefully.

The benefits of a telephone helpline

Offering a telephone helpline allows consumers with questions or reservations to speak to someone who can explain more about the loan funds. If resources are tight, you can set up an answer phone and call people back at a later time.

Endorsement

As mentioned in the media section, associating with a local 'celebrity' or well known businessman is one of the most effective ways to raise awareness of your initiative. If you choose someone well known and liked or respected among your target audience, people will be drawn to your story. As many people are influenced by celebrities, celebrity involvement is likely to mean that more people will read about your initiative and/or attend your launch event. They are also more likely to take action, as endorsement builds trust. Working with the right celebrity can add credibility – if you work with a respected local business leader, for example, people will be encouraged that this is a trustworthy initiative and will be more likely to get involved.

As well as individuals, endorsement by trusted organisations or businesses can also be valuable. These include the local authority or community organisations.

Direct marketing

Going door to door and speaking to local people is another way of ensuring that you reach a large proportion of your community and are able to talk to them directly. This is a lengthy process, however. Leaflet drops are a faster way of reaching every address, but less personal, and run the risk of your community fund being considered alongside junk mail⁶⁹.

⁶⁹ For information on the networks available to support this kind of direct marketing, see <http://www.energyshare.com> and <http://www.communitycentral.co.uk/>



13. checklist of key decisions

The following questions summarise the key questions and decisions that you should consider before establishing a community revolving fund. There are great benefits available to communities through investing money prudently in local carbon reductions. A revolving fund can be a central part of these activities. It can allow a community to save carbon and money, and create a stronger, closer community to the benefit of households, businesses and organisations. The group directing the activities, be it the local authority, parish council or a group of citizens, should consider the following key questions that have been explained in detail in this guide.

Are there communities that have already done what you are aiming to do? Look for other communities to exchange information with. Learning what did and did not work for them can be invaluable in saving time. Where did they get good advice from? Several communities now actively provide support to other communities.

Do you need a revolving fund? You should identify projects that would benefit from a revolving fund before setting one up. Wait until you know what you are going to fund, and then you can design it for that purpose.

Does your group have the stability and longevity to run a revolving fund? A commitment to make loans or leases can last for decades. Stakeholders such as potential investors, members, borrowers or site owners will want to see that you will be well-managed for that period, with immediate access to the right skills. This will be hard to do if you are newly established. The backing of your local authority can help to demonstrate your long-term intentions and gain stakeholders' trust. The local authority can also give time and resources to the group.

Do you have the skills, experience and support for a revolving fund? You need to have accountancy, financial, legal, communications and management expertise either within your group or from other sources to successfully establish and run a revolving fund. You will also need considerable time, potentially on a voluntary basis, at evenings and weekends.

Do you have projects that will deliver results quickly? The key to maintaining motivation is to keep making progress and take action early, so that people can see progress. Examples of projects that are functioning well, even if not at the scale of your vision, can raise your profile and show stakeholders that you can make a difference. With many groups relying on voluntary time, such regular successes are really important.

Do you have a clear shared vision? A vision is really important in order to maintain momentum. If it is created and shared by the community, a shared vision of what you want to create in 15 or 20 years' time can bind a community into taking action now. It can also equip you to deal with setbacks along the way. Your vision will also help to set priorities and plan a revolving fund appropriately.

What are your community's priorities? It's not normally possible to maximise carbon savings while helping people in fuel poverty and growing a fund quickly. Different projects will achieve different goals. Be clear about what your priorities are, and how they will help fulfil your vision.

Do you have a project pipeline? There will be more opportunities than you are able to take on with your resources. Stay focused on the opportunities that meet your aims. You may only be able to develop one or two projects at once. You can plan to put other opportunities in the pipeline so that, once you have the resources, you can start to develop them.

What ownership model will you use? You can use the same revolving fund to lease sites for larger community energy generation installations and to lend to householders and organisations. The form of agreements and how benefits are shared will vary according to the ownership model.

Do you know the likely cash and carbon flows that your planned projects could create? Each project will generate carbon and cash returns to the community and site owner or borrower.



Understanding what these are likely to be will ensure that you communicate effectively to your stakeholders and that benefits and risks are shared fairly. It will also help you choose projects that meet your priorities. Remember to include the Clean Energy Cashback Scheme and Renewable Heat Incentives in your cash flow projections.

Have you considered energy efficiency and generation projects? Energy efficiency measures can be harder to finance as they have no easily measurable or assignable cash flows. However, they can save more carbon than energy generation measures, improve the quality of housing and cut household energy bills. Pay-as-you-save forms of financing home energy measures are currently being trialled, and are likely to expand significantly.

Have you considered how returns to the community could change over time? Several factors, such as energy prices, the feed-in tariff rates and the rate of inflation, can affect the returns from energy generation projects. You should take account of these factors in order to manage the uncertainty they create.

Have you considered how you will share risks and benefits from projects? Each project will generate value for your community. How this is shared under the terms of any agreements is an important consideration if you want to ensure that the fund's value is maintained over time, as well as ensuring that householders and organisations want to participate. These values are not just financial, as householders and organisations will also be motivated by carbon savings, the reputation or status a project brings, the sense of taking action and being self-reliant. Those that are not motivated by money may be able to self-fund projects, which will then make your fund go further.

Have you considered the non-financial support you will provide to your community? Other communities have found that providing people with trustworthy advice and support can be more important than providing financial assistance.

Have you considered the management costs and the possible write-offs of your fund? There will be costs to bear in running a fund. To make predictions and actively manage the fund's finances, you should include the costs of setting up and running your fund. Some investments or loans that you make may not make enough money to repay the investment. You will need to write off this money, and you should therefore include a contingency in your budget for this. The amount will depend on your ownership and funding model.

What kind of governance structure should you form? This will be particular to your community and its aims. You should include a form of accountability and community engagement to enable you to operate effectively and with the support of your community.

What is the right legal form for you? There are several legal forms that you can choose in order to become a legally recognised body. The one you choose will be dependent on where you want to raise finance from, what you want to fund, how you plan to create ownership and control and how you want to protect your objectives.

Where will you raise funds from? You may be able to secure grants for your revolving fund that do not need to be repaid. You can also gain investment by selling shares or bonds to private individuals, community organisations, charitable trusts and possibly institutional investors. It may also be possible to borrow money from banks or sell and lease back land that you own in order to develop it. The amounts and times of repayments will affect your cash flow and the types of investments or loans that your fund can make.

Have you considered the risks associated with different sources of funding? Grants are an attractive source as they do not need to be repaid but they can carry implications of limiting your ability to claim feed-in tariffs or other public subsidies. Loans carry the potential risk of becoming insolvent if you are unable to make payments when they are due. You can manage these risks through planning, financial forecasting and seeking appropriate guidance.



Have you considered the potential for unexpected policy changes to impact your plans? The bringing forward of the Government's review of feed-in tariffs shows that elements of your plans that rely on policy can be altered unexpectedly. This is a particular problem if the timetable for alterations is sooner than you can be certain of registering your project, as demonstrated by the potential impacts of the fast-track review of solar PV feed-in tariffs on potential installations larger than 50kW.

Have you planned how to communicate, market and promote your community fund? Effective, strategic and carefully planned communications are the key to informing your local community about what you are doing, thus reassuring people and encouraging them to take positive action and invest in what you are doing.

The following questions relate only to communities running a loan fund.

Have you considered partnering with a financial institution or your local authority to help you to provide loans? Providing credit is a highly regulated activity, and can carry a stressful and high administrative burden. If you do not have specific accounting, legal and financial knowledge, you may benefit from partnering with a body that already provides credit.

Have you considered using the feed-in tariff and Renewable Heat Incentives as the way to repay energy generation project costs? Feed-in tariffs, and possibly future renewable heat incentives, can be assigned by the generator to another person or organisation. We have shown that this can be used to create a feed-in tariff loan that uses the feed-in tariff to directly pay the community fund back, without the borrower having to pay anything. The borrower will also benefit from free electricity.

Have you considered what security you should have over a borrower's assets? A loan may either be 'secured' against an asset (for example, a property), or 'unsecured'. This becomes relevant in the event that the borrower defaults by failing to make the necessary repayments, at which point the lender may want to recover the sums still owed to it. Taking security may mean that the community can raise funds at a lower cost, as there is less risk of making losses. It may put off some borrowers and make the administration more expensive.

Will you allow borrowers to repay their loans early? You will need to allow households to repay a loan early in the event that they move. You should consider when and how often this might happen, so that you understand your likely cash flows.



14. acronyms and glossary

Acronyms

BWB	Bates Wells and Braithwaite
CDFA	Community Development Finance Association
CDFI	Community Development Finance Institution
CIC	Community Interest Company
CLG	Company Limited by Guarantee
CLS	Company Limited by Shares
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DCLG	Department of Communities and Local Government
DECC	Department of Energy and Climate Change
FSMA	Financial Services and Markets Act
HNLC	Hook Norton Low Carbon
kW	Kilowatt
LCCC	Low Carbon Communities Challenge
LCWO	Low Carbon West Oxford
LLP	Limited Liability Partnership
MW	Megawatt
NPV	Net present value
Ofgem	Office of the Gas and Electricity Markets
PDF	Portable Document Format
PV	Photo-voltaic
PWLB	Public Works Loan Board
RHI	Renewable Heat Incentive
RPI	Retail Price Index
SPV	Special Purpose Vehicle
WOCR	West Oxford Community Renewables



Glossary

100% exporters	owners of renewable electricity installations that sell all of the electricity produced, with none used on site
anaerobic digester	a device that uses microorganisms to turn biodegradable organic material into energy
asset write-offs	declaring an asset, such as a loan, lease or renewable energy installation, to be worthless
at-scale cost	the capital cost of delivering energy efficiency or generation measures to a large scale of properties or sites, such as 30 homes in a neighbourhood at the same time
capital costs	all the costs incurred to install carbon-saving measures; this includes the purchase of equipment, installation and any changes needed to the installation site
carbon first	a community that has a first priority to reduce carbon emissions
carbon flows	the creation of carbon emissions from a specific activity
cash flow	the pattern of income and expenditure for a household or organisation
Clean Energy Cashback Scheme	The UK Government's scheme under which owners of renewable energy sites can receive payments for generating and selling renewable electricity
community scale	projects that involve making changes that are larger than could be carried out to a domestic building
community-interest company	a social enterprise that is registered under the Community Interest Act 2004. A CIC is a registered company with special features that ensure that it is working for the benefit of the community
Companies Limited by Guarantee	an alternative type of corporation used primarily for non-profit organisations. Members act as guarantors for a nominal sum in the event of the winding up of the company
Comprehensive Review	government review of feed-in tariffs announced in 2011
credit agreement	a legally binding contract in which a financial institution agrees to lend money and the borrower promises to repay the loan. It sets out both the customer's and the lender's rights and responsibilities with respect to the loan
debt finance	an agreement to pay money to a borrower in exchange for an obligation to repay a fixed amount of money in the future (a debt). This can be in the form of loans or bonds
degression	the annual change in the feed-in tariffs for installations made in future years
direct marketing	marketing via a promotional communication delivered directly to the individual prospective customer
discount rate	the annual percentage rate at which the present value of a future pound, or other unit of account, is assumed to fall away through time
endorsement	a written or spoken statement, sometimes from a well-known or



	respected person, extolling the virtue of a product or service
energy cooperative	a cooperative that owns energy-generating or energy-saving measures with collective membership benefiting from the energy savings or generation
energy service company	a company that provides the services that an energy user, such as a householder, wants from energy rather than selling energy. This kind of company will typically make charges that enable it to deliver services at the lowest cost
equity	a share of a company, entitling the shareholder to a share of the assets and any profits
equity finance	the raising of money by a company through the sale of shares in the company
export tariff	the payment that energy suppliers make to generators for each unit of renewable electricity sent to the National Grid
fast-track review	government review of feed-in tariffs for large-scale solar PV announced in 2011
FiT loan	a loan for the installation of renewable energy generation measures that is repaid by assigning the feed-in tariffs to the lender
FiT period	the number of years over which a renewable energy installation will receive feed-in tariffs
focus groups	a form of research in which a group of people are asked together about their opinions of and attitudes to a product, service, concept or idea
generation tariff	the payment that energy suppliers make to generators for each unit of renewable electricity they produce
governance structures	the rules or informal agreements that control how a body is run and makes decisions
Green Deal	government framework to enable private firms to offer efficiency improvements for homes, community spaces and businesses at no upfront cost, announced as part of the Energy Bill in December 2010
growth first	a community that has a first priority to increase the size of a revolving fund by making investments that generate the most profit to the fund
household scale	a project that makes changes to individual homes
imported electricity	electricity supplied to a property by the National Grid
incorporation	the act of forming a legally recognised company
indexation	the linking of a level of a tariff to changes in the Retail Price Index
Industrial and Provident Society	A legal entity for a trading company that either trades for the mutual benefit of its members or for the wider community
leverage	the use of debt to supplement other forms of finance
limited liability company	a company that is owned by shareholders
Limited Liability Partnership	a company of individuals that agree to share the risk, costs, responsibilities and profits of the business. Their liability is limited to the amount of money each individual has invested
load factor	the amount of electricity that a renewable energy installation will



	generate in a year, compared to the amount that it can generate when operating at its peak
loan	an amount of money given to an individual or organisation on the condition that it will be paid back later, usually with interest
Local Land Charge	a restriction on a particular parcel of land, whether to secure the payment of a sum of money, or limiting the use to which the land may be put, and is binding on successive owners or occupiers of that parcel of land.
management costs	the costs incurred in running a fund, including administration, promotional activities, premises, professional services, utilities
micro CHP	a device that provides heat and electricity at the scale of a single dwelling, used in place of a domestic central heating boiler
microgeneration	the generation of zero or low-carbon heat and power by individuals, small businesses and communities to meet their own needs
net present value	the present value of a project or an investment decision determined by adding together the discounted incoming and outgoing future cash flows resulting from the decision
pay as you save	a concept for the funding of the retrofitting of energy measures to domestic properties that enables the householder to repay the costs of the measures at a rate that is lower than the resultant reductions in utility bills
payback	the repayments of the capital costs of a project over time
payback period	the time that it takes to repay the capital costs of a project from revenues
personal liability	the possible losses that a member of a company could bear if it makes losses or is wound up
project pipeline	an organisation's identified projects planned over a period of time
rate of return	the amount of the capital costs that revenues will recover in a given year
Renewable Heat Incentive	the UK Government's scheme under which owners of renewable heat installations can receive payments for generating renewable heat
Retail Price Index	the average change from month to month in the prices of goods and services purchased in the UK
sale and lease back	the sale of an asset, equipment or real estate, and agreement to lease it back from the purchaser on a long-term basis
simple loans	a loan that is repaid over time together with a fixed rate of interest, in the same way as a standard fixed-rate mortgage is paid back
social enterprise	a business or service with primarily social objectives whose surpluses are principally reinvested for that purpose in the community, rather than being driven by the need to maximise profit for shareholders and owners
social first	a community that has a first priority to improve the well-being of residents, particularly disadvantaged households
social media tools	using services such as Facebook and Twitter that enable people to



	socialise and communicate with others using the internet
solar thermal	a technology that uses the sun's energy to heat hot water for use in a building
undertaking	broadly means a body corporate or partnership, or an unincorporated association carrying on a trade or business, with or without a view to making a profit
vision	what you want the community to be like in 15-20 years time: your dream
write off	to declare an asset to have no value



appendix I: financial modelling data and assumptions

Technology	At-scale capital costs (£)	2010 generation tariff (p/kWh)	Load factor (kWh / kWp.yr)	On-site use	Net income in year 1 ⁷⁰ (£)	Maintenance costs (£/year)	Year 1 return on investment (£)	FIT period (yrs)	Technology lifetime (yrs)
Solar PV 1kW – retrofitted	£5,850	41.3	850	50%	£421	£110	7.2%	25	25
Solar PV 2.5kW – retrofitted	£11,925	41.3	850	50%	£1,054	£110	8.8%	25	25
Solar PV 4kW – retrofitted	£18,000	41.3	850	50%	£1,685	£110	9.4%	25	25
Wind 1kW – building mounted, rural setting	£4,950	34.5	700	50%	£299	£110	6%	20	10
Wind 1.5kW – building mounted, rural setting	£5,850	34.5	700	50%	£458	£110	7.8%	20	10
'Whole-house' energy efficiency retrofit	£8,703	n/a	n/a	n/a	£760	£0	8.7%	n/a	15-25 years
Energy efficiency and solar 2.5PV	£20,628	41.3	850	50%	£1,814	£110	8.8%	25	15-25 years

Table 2. The inputs into the example measures taken from the Element Energy Design study and the Government response to the feed-in tariffs consultation.

⁷⁰ This assumes 50% export and 50% on site use for all scales for installations of electricity-generating technologies. The figures are calculated in the same way as the worked examples in Section 5, p26.



appendix II: raising finance – legal issues to consider

1. Introduction

This appendix gives detailed information on the legal issues for your community in raising finance by promoting your community fund to potential investors.

- 1.1 There are a range of sources of finance available to community organisations, aside from revenues from trading. Some types of funding, such as equity, can only be obtained by organisations with a certain kind of legal form.
- 1.2 The types of finance that community organisations can raise include grants, debt and equity. A grant is a form of gift and is not considered to be an investment. This guidance does not therefore apply to grant funding, and you may approach funders for grants without any financial services implications for your activity.
- 1.3 However, if your community organisation is seeking to raise debt or equity finance, this will involve inviting investment. If this is the case, this guide will be relevant to you.

2. Why is financial services regulation relevant?

- 2.1 The Financial Services and Markets Act 2000 (FSMA 2000) regulates financial services and markets in the UK generally.
- 2.2 Among other matters, FSMA 2000 regulates the activities of organisations, including community organisations, that are seeking to attract financial investment, in order to protect potential investors who do not have expert financial knowledge.
- 2.3 The main areas of regulation under FSMA 2000 that are of interest to community organisations raising finance are described below.

3. How are the largest public investment offers regulated?

- 3.1 Where securities are offered to the public and the total consideration for the offer, or a series of connected offers over a 12-month period, is in excess of the sterling equivalent of €2,500,000, a Financial Services Authority approved form of prospectus must generally be made available to the public to accompany the issue.
- 3.2 It is unlikely that many community organisations will make offers to the public at this level, and so the requirement to issue a prospectus is unlikely to apply.
- 3.3 However, if your community organisation does wish to invite in excess of €2,500,000 of investment, it is possible that you may be able to rely on other exemptions from the requirement to issue a prospectus. You could ensure, for example, that your securities are not transferable or that no more than 100 persons are presented with the offer. You could also ensure that the minimum investment that may be made by any one investor is the sterling equivalent of €50,000 or more.

4. What about the regulation of smaller public investment offers?

- 4.1 If your community organisation is inviting investment of less than €2,500,000, or is otherwise exempted from the requirement to issue a prospectus, you will instead need to comply with the domestic financial promotions regime in respect of any financial promotions issued.



- 4.2 A financial promotion is an invitation or inducement to engage in investment activity. A person must not communicate a financial promotion in the UK, in the course of business, unless:
- it is communicated by an FSA-authorized person (such as a bank or financial institution);
 - its contents are approved by an FSA authorised person; or
 - the communication is otherwise subject to an exemption.

5. What does 'in the course of business' mean?

- 5.1 If something is being done for financial gain, then this is almost always likely to qualify as 'in the course of business'. However, where a not-for-profit organisation is concerned, you will tend to satisfy the 'course of business' requirement for financial promotions if your financial promotions activity is planned and structured in an organised way.

6. Do the financial promotion rules only apply to written invitations to invest?

- 6.1 It is important to understand that financial promotions include spoken communications, as well as written communications, and include communications in response to questions or approaches by other persons. The regulation of 'solicited' communications and 'unsolicited' communications differs.
- 6.2 A communication need not even expressly invite investment to be considered a financial promotion; if it has a promotional element to it, but does not go so far as to directly invite somebody to engage in investment, it will still be regulated. Assuming a communication is made in the course of business, even informal discussions may therefore involve financial promotions, as well as more formal presentations.
- 6.3 In short, *all* communications about an investment offer should be considered carefully and planned properly in the context of the financial promotions rules.

7. What happens if the financial promotions rules are not followed?

- 7.1 It is a criminal offence for an unauthorised person to communicate a financial promotion in breach of the financial promotions rules. A person in breach will be liable to a fine and/or up to two years' imprisonment. In addition, agreements entered into as a result of an unlawful financial promotion are potentially unenforceable.
- 7.2 As well as criminal penalties and the unenforceability of agreements, where an investor feels that they have been given a misleading picture of an investment, there may be grounds for a legal claim of misrepresentation.

8. How is a financial promotion approved?

- 8.1 If your community organisation wishes to obtain investment from the general public or from a wide variety of investors (and not only from investors who are exempt from the financial promotions regulations), then an approved person, such as a firm of solicitors authorised by the FSA, will need to approve the relevant offer document.
- 8.2 This kind of approval process is relatively heavy and thorough. The authorised person approving the promotion will need to be satisfied under the regulations governing approved financial promotions that the information communicated is clear, fair and not misleading. This involves, among many other specific requirements, the authorised person verifying statements of fact that are made by the community organisation, checking that statements of opinion are honestly held and ensuring that there are no material omissions



in the offer document. Approving a financial promotion takes time, and will invariably involve legal and administrative costs.

- 8.3 Going through the approval process will often be appropriate where significant investment is sought, or where it is important that members of the public generally are given the opportunity to invest. The process should also result in an offer document that is sound and well presented, and sets out the offer clearly.

9. Are there any useful exemptions to the financial promotions rules?

- 9.1 Raising finance is a much simpler process for a community organisation if it is possible to rely on one or more of the exemptions to the financial promotions rules.
- 9.2 There are exemptions that may be useful to you if your community organisation is raising finance as part of the Low Carbon Communities project. Potentially useful exemptions include exemptions allowing investment by the following types of person:
- High-net-worth institutions
 - High-net-worth individuals
 - Sophisticated investors
 - Investment professionals
 - Associations of high-net-worth or sophisticated investors.
- 9.3 Another useful exemption that may be available to community organisations in certain limited circumstances includes an exemption for '*one-off communications*'.

10. What is a 'high-net-worth institution'?

- 10.1 A high-net worth institution includes the following:
- 10.1.1 any body corporate which has, or which is a member of the same group as an undertaking that has, a called-up share capital or net assets of not less than:
- (a) £500,000 (if the body corporate has more than 20 members or is a subsidiary undertaking of an undertaking that has more than 20 members);
 - (b) £5 million (in all other cases).
- 10.1.2 any unincorporated association or partnership that has net assets of not less than £5 million;
- 10.1.3 the trustee of a trust where the aggregate value of the cash and investments that form part of the trust's assets (before deducting the amount of its liabilities):
- a) is £10 million or more; or
 - b) has been £10 million or more at any time during the year immediately preceding the date on which the communication in question was first made or directed; or
 - c) any person ('A') acting in the capacity of director, officer or employee of a person ('B') falling within any of categories above – where A's responsibilities, when acting in that capacity, involve him in B's engaging in investment activity.
- 1.2 A community organisation may issue a financial promotion to organisations which it reasonably believes are high-net-worth institutions. However, any such financial



promotion should be accompanied by a prescribed form of statement, warning the recipient that the promotion has not been approved.

11. What is a 'self-certified high-net worth individual' or a 'sophisticated investor'?

- 11.1 A person is considered to be a high-net-worth individual if he/she has an annual income to the value of £100,000 or more, or net assets to the value of £250,000, which does not include the property that is their primary residence or any loan secured on that residence.
- 11.2 A person is a sophisticated investor if he/she has been a business angel for at least the past six months; or has made more than one investment in an unlisted company in the past two years; or is working or has worked for the past two years in a professional capacity in the private equity sector or in the provision of finance for small and medium-sized enterprises; or is or has been in the past two years a director of a company with an annual turnover of at least £1 million.
- 11.3 A community organisation may issue a financial promotion to a person whom it reasonably believes to be a self-certified high-net-worth or sophisticated investor. However, self-certification forms must be completed by sophisticated investors and high-net-worth individuals before a financial promotion is issued to these categories of person.
- 11.4 A financial promotion sent by a community organisation to self-certified high-net-worth or sophisticated investors must also be accompanied by a prescribed form of statement warning the recipient that the promotion has not been approved.

12. What is an 'investment professional'?

- 12.1 An organisation authorised by the FSA or an organisation whose ordinary activities involve it in carrying on investment activity for business purposes is considered to be an investment professional for the purposes of the exemption. The directors, officers and employees of such organisations are also considered to be investment professionals.
- 12.2 The financial promotion restriction does not apply to communications made to investment professionals. Banks and social lenders will be investment professionals. If a community organisation wishes to provide an offer document to banks, social lenders or other investment professionals, it should be accompanied by a prescribed form of statement that makes it clear that persons who do not have professional experience in matters relating to investments should not rely on the promotion.

13. What is an 'association of high-net-worth or sophisticated investors'?

- 13.1 An association of this kind includes associations of the relevant category of individual, also known as an investment syndicate or a business angels network.

14. What is a 'one-off communication'?

- 14.1 This is an exemption which applies to communications made:
- to one recipient or a group of recipients in expectation that they will engage in any investment activity jointly;
 - whose subject matter has been determined by reference to the identity of the recipients; and
 - which is not part of an organised marketing campaign.
- 14.2 This exemption is primarily intended to allow smaller-scale enterprises to raise funds without the expense of an authorised person approving the communications, where there is bespoke investment activity by a small number of people. As a very general rule of



thumb, one-off communications to fewer than 20 people should usually qualify. Communications to larger groups of people may fall outside the exemption.

15. Are there any other important exemptions?

- 15.1 The different exemptions outlined above are complementary, and may be used in parallel in relation to different categories of potential investors.
- 15.2 In the event that a community organisation wishes to approach other categories of investors who do not belong to any of the exempted categories outlined above, it is possible that other exemptions may be available under the FSMA (Financial Promotions) Order 2005 ('FPO').

16. Are there any legal requirements for investment offers which are exempt from and fall outside the financial promotions rules?

- 16.1 Even if a communication is exempt from the financial promotions rules, it will still need to be clear, fair and not misleading under the general law.
- 16.2 To ensure that an offer document produced by a community organisation satisfies this requirement, the community organisation would need to review the offer document and seek to verify statements of fact, check statements of opinion are honestly held and ensure there are no material omissions. Particular care should be given to any statement of forecasted future performance or comparative statements in relation to other types of investments, which must be capable of comprehensive justification.
- 16.3 A legal claim could be made against the community organisation offering the investment if the offer document is unclear, unfair or misleading. It is advisable to ask a firm of solicitors to review an exempt offer document before issuing it.

17. What should an offer document include?

- 17.1 There are highly specific and heavily prescribed rules about the content of a prospectus requiring FSA approval.
- 17.2 In the context of investment offers falling below the prospectus threshold, an offer document - whether an approved financial promotion or an exempt financial promotion - should generally include the following items, as a minimum:
- a summary of the offer (including details of the community organisation and its purpose, projects, investment risks, business overview, financial projections, capital resources, project timetable);
 - and more comprehensive statements including:
 - the risks of the offer (as with investments generally, in the sector and with the community organisation specifically);
 - the persons responsible for the offer document;
 - the factual background to the community organisation and its inception, including information about its backers and promoters;
 - an overview of the business (its activities, operation, principal markets, assets);
 - an operating and financial review, including financial projections and assumptions;
 - a summary of the community organisation's administrative and management structures, including biographies of directors;



- information regarding current and intended members of the community organisation;
 - a summary of the constitutional documents and any key contracts, conditions and restrictions; and
 - the rights attaching to the shares and terms and conditions of the offer.
- 17.3 As a general point, the phraseology in the offer document should where appropriate be qualified, conditional and aspirational, particularly where statements of future prospects are concerned, using language such as “*we aim/plan/expect/estimate*”.
- 17.4 Categorical language, such as “*we shall/will*” may create the impression of a promise to potential investors which may provide grounds for a claim of misrepresentation in the event of a failure to honour the promise.

18. How should an offer document be distributed?

- 18.1 A community organisation issuing an exempt financial promotion that is not intended for the public should have in place proper systems and procedures to prevent recipients other than exempt categories of person from receiving the offer document.
- 18.2 Practically, this will mean ensuring that only exempt categories of person are given copies of the offer document, ensuring that the offer document is clear on its front cover that it is meant only for exempt persons. It will also mean ensuring that persons who receive the offer document do so on a confidential basis and understand that the document is not to be forwarded onwards or circulated more widely. A community organisation might wish to consider, for example, only distributing paper copies of the offer document, to limit the risk of wide electronic circulation.
- 18.3 If an offer document is an approved financial promotion, then it may be made available to and distributed freely among potential investors and the general public.

19. Do the rules differ for co-operatives and community benefit societies?

- 19.1 The constitutions of co-operatives and community benefit societies sometimes specify that shares are non-transferable, ie they cannot be freely sold or assigned by shareholders to other persons. Instead of being transferable, shares in co-operatives or community benefit societies are often described as ‘*withdrawable*’, meaning that shareholders are able to request the society to redeem shares at par value.
- 19.2 Technically, both the rules that require the issue of a prospectus and the rules that require the approval of a financial promotion only apply to issues of *transferable securities*. Issues of non-transferable shares on the part of a co-operative or community benefit society, whether withdrawable or not, are exempt from the legal requirement to issue a prospectus and/or to approve a financial promotion. (The shares of community benefit societies are exempt from the prospectus rules, even if they are transferable; bonds or loan notes issued by co-operatives and community benefit societies are also exempt from the financial promotions rules).
- 19.3 However, issues of non-transferable shares are nevertheless subject to the general law on misstatement and misrepresentation. Associated offer documentation should therefore, in any event, be factually accurate. It should also include statements of opinion that are honestly held and should be sufficiently comprehensive to contain all the relevant information for an investor to be able to make an informed investment decision.
- 19.4 There is a question mark surrounding the suitability of the regulatory environment for co-operatives and community benefit societies to attract significant investment. Questions are also being asked by the FSA about the quality of public offerings in some sections of



the co-operative and community benefit sector, which at times appear to fail to satisfy the requirements for being clear, fair and not misleading. A concern has been voiced by the Charity Commission and others that those community benefit societies that promise or provide significant investment return to their members are acting in the interests of their members, instead of providing the public benefit which underpins the tax concessions that community-benefit organisations enjoy.

- 19.5 In short, an offer of non-transferable shares still needs to be clear, fair and not misleading. To the extent that an offer document for non-transferable shares is not approved by the FSA or an authorised person in the usual way, there is a clear risk that it may lack the precision and rigour of an approved promotion, and could potentially as a result be more vulnerable to challenge by a disgruntled investor.
- 19.6 Even if the prospectus or financial promotions rules are technically inapplicable, it is therefore still good practice for co-operatives and community-benefit societies to obtain a professional review of a prospective offer document, which is either equivalent to formal approval of an offer document from an FSA authorised person or at least a professional review from an objective regulatory perspective. This will ensure the integrity of the document and will protect both the society and investors in the society from the risk of misunderstanding and associated loss and/or reputational damage. It is also likely to assist in the success of the offer, as a document which has been produced with a focus on the regulatory intention – a clear, fair and not misleading presentation – is more likely to exhibit a seriousness and professionalism that will be recognised as such by potential investors.

20. Are there any other relevant areas of financial services regulation?

- 20.1 FSMA 2000 also contains a prohibition on the carrying out of ‘regulated activities’ in the UK on the part of any person who is not an authorised person or an exempt person. This prohibition is known as the ‘general prohibition’.
- 20.2 The following activities are forms of regulated activity:
- Accepting deposits of money;
 - Dealing in investments as principal
 - Dealing in investments as agent
 - Arranging deals in investments
 - Safeguarding and administering investments
 - Managing investments
 - Advising on investments
 - Establishing collective investment schemes.
- 20.3 Most community organisations will not need to be concerned about regulated activity under FSMA 2000. The issuance of shares or bonds by a community organisation to investors will not amount to a regulated form of activity unless it is accompanied by some other form of financial activity, such as onward investment by the community organisation in other types of organisations.
- 20.4 An activity is only regulated under the Act if it is carried on “by way of business”. To pass the ‘by way of business’ test, there must generally be some sort of payment or remuneration in connection with the activity and it must generally be shown that the activity in question represents the carrying on of a business, in its own right.



- 20.5 The treatment of a particular type of regulated activity may depend on whether potential investors are invited to invest by way of loan or equity, and whether loans will be secured. Each area of regulated activity has a number of listed exclusions.
- 20.6 If your community organisation may be involved in any of these forms of regulated activity, you should familiarise yourself with the requirements of the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001 (the 'RAO') and, if necessary, seek and obtain legal advice.

21. Conclusion

- 21.1 Most community organisations seeking to raise finance will need to consider the application of the financial promotions rules to their finance-raising communications. It is possible that exemptions from the formal financial promotions rules may be available but raising finance is a complex exercise requiring considerable precision. As the general law of contract, misstatement and misrepresentation will apply to any investment offer you make, there will usually be merit in discussing your plans with a legal expert and seeking approval of any investment offer you propose to issue.
- 21.2 If you are in any doubt about whether or not an activity you are proposing to undertake is a regulated form of activity, you should refer to the RAO. If you want confirmation that an activity is not regulated, you may wish to seek guidance or clearance from the FSA directly in the first instance.
- 21.3 More generally, you should try to find out as much as you can from the information sources and key contact organisations listed in the appendix before embarking on any finance-raising activity. Financial regulation is a highly detailed and complex area of law and its interpretation and application are inevitably very fact-specific. This note is necessarily of a general nature and does not therefore constitute legal advice.



sources of further information

Relevant sources of specific further information are footnoted in the main body of the guide. This is a summary of the key sources of information.

Choosing a legal form

Get Legal is a useful online resource to guide you through the process of choosing the best legal form for your project. It also provides model constitution documents, which you may wish to use:

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

Model documents

Model unsecured simple loan agreement:

<http://www.bwbllp.com/Files/Documents/201005131713UnsecuredLoanAgreement000746684-V1.doc>

Model unsecured feed in tariff (FiT) loan agreement:

<http://www.bwbllp.com/Files/Documents/201005131713UnsecuredloanwithFiTelement000757357-V1.doc>

Model fundraising documents: <http://www.institute-of-fundraising.org.uk/bestpractice/modelcontractandstandardformsofagreement>

Community Interest Company model articles of association:

<http://www.cicregulator.gov.uk/memArt.shtm>

Company model articles:

<http://www.companieshouse.gov.uk/about/modelArticles/modelArticles.shtm>

Organisations

EnergyShare – online renewable energy hub for communities - www.energyshare.com

Community Central – a free online hub for UK communities focused on environmental change - <http://www.communitycentral.co.uk>

LCCN – the Low Carbon Communities Network encourages the adoption of low-carbon and zero-carbon technologies and lifestyles at community level, helping groups to become as effective and efficient as possible - <http://lowcarboncommunities.net/>

Solar Coop – helping communities generate energy from solar panels - <http://www.thesolar.coop/>

2 Degrees Network – Sustainability networking site for businesses and organisations - <http://www.2degreesnetwork.com/>

Ashton Hayes Going Carbon Neutral – a community in rural Cheshire that has developed leading ways of promoting carbon saving communities, including a toolkit for other communities - <http://www.goingcarbonneutral.co.uk/>



Bates Wells and Braithwaite – lawyers that specialise in charity, public sector and social enterprise with guides and information - <http://www.bateswells.co.uk/>

Blake Laphorn – law firm that have developed a lease for communities to use with site owners for solar installations in West Oxford - http://www.blaw.co.uk/contact_us.aspx

Business Link – general business advice – www.businesslink.gov.uk

C40 Cities - C40 is a group of large cities committed to tackling climate change - <http://www.c40cities.org/>

Charity Commission – register and regulator of charities – www.charity-commission.gov.uk

Community Development Finance Association – trade body of community development finance institutions - <http://www.cdfa.org.uk/>

Community Interest Company Regulator – regulates and provides guidance on CICs - www.cic.gov.uk

Community shares – advice for communities raising finance – www.communityshares.org.uk

Companies House – for company information – www.companieshouse.gov.uk

Co-operatives UK – information and support on co-operatives - www.cooperatives-uk.coop

Defra – Department for Environment Food and Rural Affairs - <http://www.defra.gov.uk/>

Department for Communities and Local Government - <http://www.communities.gov.uk/>

Department of Energy and Climate Change - www.decc.gov.uk

Development Trusts Association – network of community enterprise practitioners - www.dta.org.uk

Energy Saving Trust – information and advice for households and communities - <http://www.energysavingtrust.org.uk/>

Energy4all – A cooperative that helps communities to develop wind farms - http://www.energy4all.co.uk/energy_home.asp

Farming Futures - Providing business advice to farmers including energy crops and renewables - <http://www.farmingfutures.org.uk/>

Financial Services Authority – financial services industry regulator - www.fsa.gov.uk

Forum for the Future – leadership, innovation and futures thinking for sustainable development – <http://www.forumforthefuture.org/>

Green Futures –the latest sustainability news, views and analysis - <http://www.forumforthefuture.org/greenfutures>

Green Valleys – a network of communities in South Wales developing hydro schemes - <http://www.thegreenvalleys.org/>

H2oPE are a community enterprise that has developed a community owned hydro scheme and is now helping other communities to do the same with funding, support, training and advice - <http://www.h2ope.org.uk/>

Institute of Fundraising – organisation to support fundraisers - <http://www.institute-of-fundraising.org.uk/>



Low Carbon Communities Challenge -

http://www.decc.gov.uk/en/content/cms/what_we_do/consumers/lc_communities/lc_communities.aspx

Low Carbon West Oxford – a community group that has developed a community scale renewables and energy advice model - <http://www.lowcarbonwestoxford.org.uk/index.php>

National Council of Voluntary Organisations (NCVO) – civil society support organisation - <http://www.ncvo-vol.org.uk/>

National Energy Foundation – advice, services and training on renewable energy and energy efficiency - <http://www.nef.org.uk/>

new economics foundation - a “think-and-do tank” that promotes real economic well being - <http://www.neweconomics.org/>

Office of Fair Trading – regulator of consumer credit licenses - <http://www.offt.gov.uk/>

Office of the Third Sector - <http://www.cabinetoffice.gov.uk/about-cabinet-office.aspx>

Share Energy – developing community renewable energy projects in the Rural Regeneration Zone of the West Midlands - <http://www.shareenergy.coop/>

Social Enterprise Coalition (UK) - www.socialenterprise.org.uk

Sustainable Development Commission – advocacy, advice and appraisal of the UK Government on sustainable development - <http://www.sd-commission.org.uk/>

The Media Trust – training and support on communication for media organisations and charities - <http://www.mediatrust.org/>

T-Zero - an interactive web-based tool to analysis energy and environmental options for housing - <http://www.tzero.org.uk/>

UK Green Building Council – information, events and training on sustainability in the built environment - <http://www.ukgbc.org/site/home>

Wessex Community Assets - offers support and advice to organisations wishing to obtain community investment - <http://www.wessexca.co.uk/>

