

Funding the Future: The case for a pre-development capital fund for revenue-generating community renewables

Tackling climate change and moving towards a low carbon future requires both the take up of low carbon technologies and changes in the way that people currently use energyⁱ, this will require action across all sectors of society. Community-based renewables are beginning to play an important role in enabling this transformation, particularly through the development of revenue-generating renewable energy assets, which provide a locally owned, low carbon supply and a sustainable income stream that enables communities to take wider action. However, such projects are currently poorly supported within current energy policy, making their development difficult, and a number of key barriers need to be overcome. Most crucially there is a need to provide communities, and the organisations that are supporting them, with access to pre-development capital funding to cover the at-risk stages of developing projects, as it is only post-planning, that these projects become bankable in the eyes of commercial investors.

Revenue-generating community renewables

It is only in the last five years that communities have started to develop larger scale renewable assets, most notably within Scotland, where policy, financial and practical support has been provided for many years; although DECC's Low Carbon Community Challenge (LCCC) and NESTA's Big Green Challenge (BGC) have enabled other examples to develop elsewhere in the UK. To date, there are relatively few examples, although there is a big pipeline of projects, particularly within Scotland, where a further 118 are in developmentⁱⁱ. These projects can be characterised in terms of process: who the project is developed and run by, and outcome: who the project is for and who benefits from itⁱⁱⁱ. Notably, the examples of revenue-generating community renewables show high levels of control in terms of community involvement, decision making and influence, as well as the retention of the financial benefit within the community. It is the creation of these self-sustaining funds which enable communities to develop their own resilience and support a much wider range of low carbon, environmental and regeneration activity, creating truly sustainable communities. As well as directly using funds to support local activity, many communities are creating sink funds to replace the renewable assets in the future, without the need for additional funding. There is emerging evidence of how such projects are bringing about sustained cultural and behavioural changes at a community and individual level^{iv}.

Case studies of current projects show that a range of technologies and scales are being used, from a 2.5MW wind turbine to <50kW hydro schemes. The adoption of a range of technologies and scales are important for unlocking resources that commercial developers are not interested in and for enabling the development of projects that are seen as appropriate for the local community. The existing projects are also delivering a wide range of other benefits:

- **Local income and regeneration:** Projects are providing independent, self-sustaining income streams to support further projects within a community.
- **Ethical and/or environmental commitments:** Projects are helping communities to meet their desire to act on a wide range of concerns such as climate change, peak oil and sustainability.

- **Lower energy costs and reliable supply:** Projects are enabling communities to meet their energy requirements at lower cost and with higher reliability. This can help address wider issues such as rural and/or fuel poverty.
- **Autonomy:** As well as meeting energy needs, projects are increasing local energy security and the resilience of communities.
- **Behaviour and social change:** Engagement in a local project is helping to change attitudes and behaviour towards renewables, energy demand and climate change.
- **Local control:** Community approaches are resulting in high levels of participation, control and democracy, increasing acceptability.
- **Wider community development:** Projects are acting as a catalyst for further projects and more sustainable communities.
- **Local approval and planning permission:** The involvement of local people in projects appears to increase acceptability and support, and may help to overcome planning objections.
- **Delivering targets:** Community renewables are playing an important role in meeting national, regional and local targets, across a range of issues from carbon to employment.

Many of these benefits act directly as drivers for communities to develop a revenue-generating project, but a number of other drivers are also apparently linked to a growing awareness and number of influences, these include:

- The declining availability of grants which is resulting in communities starting to think how to secure other sources of income to support their own development plans.
- A response to the introduction of the FiT which has increased awareness of renewables and the potential that they offer to provide a source of income.
- A growing awareness of what some other communities are doing within renewable energy.
- More awareness of issues like peak oil and energy security, in part linked to rising energy costs.
- Parish Planning processes which enable communities to think about the development of their local area and formalise the growing interest and awareness around renewables.
- Activists and proactive individuals within communities driving interest and creating enthusiasm for local renewable projects.
- Initiatives like the LCCC, Transition Towns, Green Communities and the Low Carbon Communities Network are increasing awareness and knowledge.
- A range of other developers and organisations are acting as a catalyst in driving the development of projects within local communities.
- It is also apparent that communities are seeking to secure local renewable resources for the benefit of the community, with a growing feeling that commercial developers are taking local resources for their own benefit and providing little in return.

There is an apparent demand from communities to develop projects

Whilst it is clear that not all communities would be able or willing to develop a local renewable energy scheme, there is clear evidence that many would like to do so. In looking at historic applications to funding programmes that could support the development of these sorts of projects, it has been reported that all have been oversubscribed^v. More recently the Scottish Government stopped accepting applications to its main funding programme because it was unable to meet the

demand from communities^{vi}. In looking at two of the most recent funding programmes that could support these sorts of projects, both were significantly oversubscribed, this included the BGC, which had over 355 applications for 4 main awards^{vii} and the LCCC which had over 500 applications for 22 awards^{viii}.

These projects differ from other renewable projects

Revenue-generating projects based on communities of locality differ significantly from other forms of community renewables. The approach by Energy4All is based upon communities of interest, in which people invest within co-operative wind projects. Their approach plays an important role in enabling individuals to support renewable energy, but the financial benefit from their model is predominantly focused on the individual investor, rather than the local community; although some of their projects also provide local community benefit funds. The community benefit or planning gain fund approach is also commonly used as part of commercial wind developments and they are starting to be offered as part of the development of large solar parks/farms, although they are not a legal requirement. However, such funds are generally tiny in relation to the amount of income that these large scale projects receive, most of which leaves the local community that hosts the projects.

Revenue-generating community renewables are also clearly different from larger scale commercial projects. Whilst the latter play an important role in moving the UK towards its low carbon future, they, for the most part, sit within and reinforce the current centralised approach to energy production, distribution and use. As such, they do little to move beyond the dominant view of energy being seen as a commodity, with energy users seen as passive consumers^{ix}; failing to challenge or change the relationship people have with energy. By contrast, community approaches are providing a mechanism for both technology uptake and long term social change, moving people towards a more engaged 'energy' or 'green' citizens^x.

A number of models have and are emerging to support the development of revenue-generating community renewables

Several organisations are offering models, funds and support to enable the development of community based revenue-generating projects. To date, there are at least 16 examples being offered by new social enterprises and organisations from across the public, private and third sectors. They display a diversity of different approaches in terms of business models behind them, the scale and technologies supported and the amount of flexibility that they offer to communities. Although it oversimplifies the complexity and sophistication within the individual approaches, they fall roughly into two groups:

- Those that are process and outcome focussed, which support communities through the development process, building their capacity and creating projects that the community owns.
- Those that are more outcome focussed, which place more emphasis on the benefits that the project provides, doing most of the work on behalf of the community.

The full research provides detailed information on 15 of the current models, summarised below.

Organisation	Summary	Approach*
Carbon Free Developments Ltd	Joint Venture Model. If planning is secured the community can invest up to 49.9%, repaying a pro-rata share of development costs and raising their share of the equity to build the project, which CFDL also help to source. From that point both parties share the operational risks and rewards.	Type: Single Model Technology: Wind Status: Delivering
Centre for Sustainable Energy	Advice, support and finance to enable the development of community-owned wind, based on a revolving fund model and a portfolio approach. Successful projects repay the development costs back to the fund to enable the next round of communities to be supported.	Type: Support and Funding Technology: Wind Status: Proposed
Community Energy Scotland	CES have a network of Development Officers and administer two funding streams: CARES provides early stage technical assistance and capital grants, supporting projects up to 1MW across Scotland; CRES supports projects over 1MW in the Highlands and Islands.	Type: Support and Funding Technology: Any Status: Established
Community Power Cornwall	IPS co-operative that increases skills, knowledge and capacity of communities to install wind. It uses a revolving fund to carry out at-risk work with the community and takes an equity stake within projects, with additional equity coming from community share offers. Income is split between CPC, shareholders, the revolving fund and the community where the project is based.	Type: Single Model Technology: Wind (initially) Status: Delivering
CoRE	Joint Venture Model. CoRE assesses commercial viability, and seeks an agreement to undertake the at-risk work. An ESCo is used to manage the scheme, including energy supply, billing and maintenance for the projects, enabling CoRE to recoup its costs, with a margin, and this money is used to support further projects.	Type: Single Model Technology: Any Status: Delivering
CO2Sense Ltd	Fund supporting grid connected renewables, providing grants/loans/commercial investments up to £750k. Grants are made for community approaches, often through no/low interest loans to enable the fund to support further projects.	Type: Fund Technology: Any Status: Established
Empower Community Fund	Social enterprise model providing access to capital from institutional, public sector and community sourced finance to underwrite, finance and implement projects. Initially focussing on PV with social and public sector landlords. Income from FITs is split between the investors, whilst providing a profit share back to a local community vehicle to support further local activity.	Type: Single Model Technology: PV (initially) Status: In Development
Energy Saving Trust Wales	Funding and support for the development of community renewables within Wales. Funding covers both the at-risk development stages of projects and can provide capital grants of up to £300k to construct the project. The fund was launched in early 2010.	Type: Fund and Support Technology: Any Status: Delivering
GreenTrust Wind	CIC aiming to build large scale community wind. GTW takes on the at-risk work, including financing and managing construction and operation. Profits go to a local community trust fund and the community has the option to invest within the scheme, through a co-operative share offer and to buy the power produced.	Type: Single Model Technology: Wind Status: In Development
National Energy Foundation	The Communities Fund seeks to overcome the early stage barriers to project development by supporting communities to become investment ready. Based on a revolving fund that provides low interest loans that are recovered at the point of capital being secured. They may also take an equity stake within projects.	Type: Fund & Support Technology: Any Status: Delivering
Origin Energy	CIC that assists communities to develop wind projects by providing access to finance, markets and knowledge. They carry out at-risk development work and support communities to establish a participatory structure that can oversee investments in local sustainability from the profits the wind project provides.	Type: Model Technology: Wind Status: Delivering
Regen Southwest	Establishing Communities for Renewables, a broker model using wind. Provides info & support to enable communities to identify local opportunities, along with guidance on the funding/business models available to support their development. It will also work with the wind industry to identify a range of business models to help meet the needs of developers and of communities.	Type: Broker Model and Support Technology: Wind Status: In Development
SEEDA	Model based on supported framework of project development using managed web2 resource - Community Central - to enable networking, information exchanges, etc, through the development process. An investment fund has also been developed to bring together public sector funding, with debt and equity providers to develop projects. Business support will also be provided.	Type: Fund and support Technology: Any Status: In Development
Water Power Enterprises	Model provides complete package of support from feasibility through to construction and maintenance. They carry out the at-risk work and help communities secure the debt and equity (via local share issues/grants) to build a scheme. Communities pay back their costs and a fee once the project is operational.	Type: Single Model Technology: Hydro Status: Established
*Established – communities been supported and projects been delivered; Delivering – communities been supported, but projects not yet built; In Development - models that are yet to support communities in the development of a project.		

There are a range of known barriers to the development of community renewables

Many of the above models are helping to increase the deployment of renewables at a community level by helping to overcome a range of barriers. These are well understood by those working within the sector and are widely picked up within the literature, with community renewables emerging despite the current policy framework, rather than as a result of it. Part of the problem is that although policy supports both large scale renewables and micro-generation, community-scale projects tend to sit between these two^{xi} and have struggled as a result. The introduction of FiTs has helped to increase awareness and certainty for communities, but they are only one part of a complex range of issues that impact the development of more projects.

Skills, capacity & support

Developing community renewables is time consuming, resource intensive and complex, requiring long term drive and commitment from the community^{xii}. A wide range of skills and capacity are needed to take a project from feasibility through to commissioning that includes technical aspects, as well as legal, business and financial planning. These act as a significant barrier to development, with access to support and expertise from trusted organisations^{xiii} being a central requirement.

Planning

Gaining planning permission is an issue for all renewable projects, given the time, costs and uncertainty of gaining consent. This can be more significant for communities which tend to have an all or nothing approach based on a single application^{xiv}, compared to commercial developers who operate with a portfolio approach that spreads planning risk. It is assumed that community led schemes will help to reduce local objections and should, therefore, reduce the risk of gaining consent, although there is currently limited evidence to support this view.

Regulations

There are also barriers to market entry, partly reflecting the trading arrangements and transaction costs which favour large scale, predictable, generation^{xv}. There are also issues in relation to the cost and technical detail needed for grid connections, and grid capacity issues in some areas, with communities having to compete with large scale developers. These and other regulatory issues reflect the wider system lock-in that exists, including institutions, rules and regulations that all favour a centralised approach^{xvi}.

The nature of community renewables

There are also specific aspects of community approaches that can make it hard for them to attract the support they need. This in part comes back to the one-off nature of many of these projects and their small scale which provides lower returns, compared to commercial developments; combined, this increases planning and financial risk in the eyes of investors. Commercial financiers also seek to support developers with a track record, something many communities lack. This lack of credibility can also be reinforced by the way communities work which are generally based around democratic consensus based approaches, whereas financiers are seeking legal structures that enable effective and timely decision-making.

Finance

In looking at the current and emerging examples of revenue-generating community renewables, it is clear that public sector and other grants have played a key role in the development of projects to date. This money has been crucial in supporting the pre-development work to get a project to the

point where planning permission is gained. Depending on scale and technology this could be up to 15% of the total cost of developing a project^{xvii}, but all this money is at-risk, as planning may not be secured. As such, without public funds, communities will struggle to secure finance through commercial routes, which generally are only interested in providing finance post-planning consent, the point at which projects become bankable (something FiTs helps increase). Given the national policy focus to cut the deficit, it is widely recognised that raising this sort of money will become increasingly difficult, making it harder still for community approaches to come forward.

Policy support can help to reduce the barriers and risks associated with these projects

Better policy that takes specific account of community approaches could considerably de-risk activity within this sector. All of the above factors hinder the development of community renewables and interact with one another to create an overall risk profile for a project; which in turn impacts the ability of communities and organisations to attract commercial support for the development of projects.

One of the main elements of risk relates to gaining planning consent. Whilst it is assumed that community based projects should have a lower planning risk profile, it is also influenced by technology and scale to some degree, although the choice of these should be driven by the site and the opportunities and constraints that it has. These issues can be determined through good initial scoping and feasibility, which are a fraction of the cost of working up a full planning application. The view from practitioners is the process of planning is like a lottery, increasing risk and therefore cost. Planning policy should be more coherent and predictable and for good quality community applications, more supportive.

There is also a recognised issue with the skills and capacity of communities to take on the development of these projects. The provision of support helps to reduce risk by enabling communities to identify the most appropriate and realistic local options for renewables and to help them understand how to take these to completion. Frameworks and project plans can ensure that this is done in a way that aids the development process, by providing the right information in the right way for planners, developers, funders, etc. It can also help to ensure that communities understand how finance works and what is needed to make a project more bankable. Support needs to include both resources and on the ground help, to effectively enable communities to develop projects, including access to financial, technical and other expertise. Policy currently focuses too strongly on just the provision of information.

There is an urgent and growing need for a risk capital fund

Despite the emerging support models, access to finance for the early development stages of the project remains a key issue. The at-risk nature of pre-development work means that commercial finance is difficult if not impossible to secure. Those projects that have come forward have only been possible with public and other grant support, the availability of which is becoming increasingly problematic. It has been suggested that in order to overcome this problem communities need to make themselves more investment ready. However, community approaches in many respects increase risk, making it hard for them to secure money. This in part reflects the nature of communities themselves, the type and scale of projects they are seeking to develop and the risk involved in securing planning. Combined, these create a real challenge for commercial financiers, so whilst communities can and should work towards becoming more commercially minded, by

developing appropriate and robust projects, this alone may not be sufficient to overcome the hurdle of securing at-risk finance. The introduction of FiTs and the forthcoming RHI do not, and will not, address this problem.

Of the models examined, only two are based on purely commercial approaches that are not using any public support. The rest are currently seeking or using public funds to help their programmes either to help them become established, or to bring in grants to help cover pre-development work and to provide equity to secure debt finance. Access to finance then, is an issue for both communities and those that are attempting to support them.

A mechanism needs to be put in place to provide communities, and those that support them, with access to a risk capital fund. This fund does not need to take a grant based approach, no or low interest loans, or project underwriting would de-risk the whole process and open up access to commercial finance, on much better terms. This could be based on a self-sustaining, revolving fund model that spreads risk across a portfolio of projects, ensuring those that are supported repay the capital they are provided with. This would make projects much more bankable and help to overcome the at-risk stages. It would also help communities with their equity share within a project, either directly, or by enabling them to develop local share issues, further increasing their bankability.

Such a fund could be part of the function of the Green Investment Bank, although this seems increasingly unlikely given the proposed level of initial investment suggested by the Government and its clear focus on large scale infrastructure. Scotland have already identified the need for a pre-development fund and developed a business case for creating one^{xviii}, something also highlighted as part of their recent economic strategy^{xix}. A similar approach is needed for the rest of the UK, as without some sort of financial support the Government is effectively leaving it to the market to deliver. It is also clear that many commercial companies are starting to offer communities with packages based on providing 'free' power whilst taking all of the financial benefit provided by FiTs away from communities. Such approaches will do little to engage and support communities to develop their own infrastructure, despite the opportunities that this can provide^{xx} and they will miss the wider benefits that these approaches can clearly bring. There is also a risk that such approaches will result in a rebound effect^{xxi}, potentially increasing carbon emissions.

Conclusions

Revenue-generating community renewables deliver a wide range of benefits to communities. Whilst they are only one part of the jigsaw in the transition to a low carbon economy, they are an important one; providing a way to install renewables and bring about sustained cultural and behaviour change by enabling communities to take control over their own future, democratically. They deliver carbon savings, increase energy security and build the resilience and capacity of the community to improve its own infrastructure. Meeting the UK's challenging climate and EU renewable targets will need both large scale renewables deployment as well as bottom up, community-led schemes; the latter is currently poorly supported by UK energy policy.

A number of examples of revenue-generating projects have already emerged, showing how the creation of a self-sustaining fund is playing an important role in enabling environmental, social and economic benefits to be delivered for their communities, without the on-going need for public funding. There is a clear demand from other communities to do the same and policy should support

this process by removing barriers and by providing access to an easily accessible at-risk capital fund. This fund could be based on a sustainable revolving fund model that would not require on-going public support after initial capitalisation. By making use of the expertise that already exists within those working in the sector, risk would decrease and the number of projects reaching completion would be sufficient to enable the investment to be repaid post-construction, allowing further communities to be supported. Without public support in this emerging market, progress is likely to stall.

Further Information

This summary is based on a large evidence-based piece of research with some of the leading players working within community renewables. The full report discusses in detail what community renewables are, how they have developed and the opportunities and barriers facing future projects. It provides case studies on the existing revenue-generating community renewables, summarises the existing and emerging models and support mechanisms to enable their development; and provides a range of policy recommendations relating to financing, planning, support, resources and better regulations.

A full copy of the research is available on the Energy Policy pages at the University of Exeter: <http://tinyurl.com/fundingthefuture>. Further information is also available from the author.

Richard Hoggett. November 2010
richardhoggett@gmail.com 07767 277009

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