

# Local energy, owned by local people

*Community ownership of renewable energy projects, while commonplace in countries such as Germany, Denmark and Sweden, has had limited success so far in the UK. Here, Andrew King, Chairman of community energy pioneer Energy4All, presents the case for community-owned energy projects.*

**E**nergy4All is a not-for-profit social enterprise that has now established seven co-operatives across the UK, each owning either a complete wind farm or a stake in a major commercial project.

The company was created by the Baywind Energy Co-op in Cumbria. Baywind was itself formed by a Swedish company in 1996 to introduce the idea of community ownership of renewables into the UK. Following the withdrawal of the Swedes (due to their failure to secure planning consent for additional projects) Baywind took over the running of the project as sole owner and operator in 2001. Baywind set up Energy4All in 2002 to help other community energy schemes. In line with the social enterprise ethos, Energy4All is owned by the co-operatives it creates and ploughs any surplus back into its schemes.

The decision was taken early on at Energy4All not to rely on grants, due to the distortions created by continually having to chase them. Energy4All is thus entirely funded by the proceeds of its share offers and income from supplying management services to the co-ops. This commercial independence is a source of strength to the company, but it also means that costs must be tightly controlled. The lack of grant reliance is often a cause for surprise in an environment where grant support is often assumed.

## The business case for co-operative ventures

Evaluation of the renewable energy sector led Energy4All to some key conclusions:

### Technologies

Renewable energy is still a relatively young industry. Some sectors are in the research and development stage (eg photovoltaics, wave and tidal power) or at least not widely established in the UK (eg anaerobic digestion). Hence they are unsuitable for a young enterprise with limited resources. This leaves wind as the most mature technology and with the

most appropriate scale for a community enterprise.

The disadvantages of wind as a technology have been widely rehearsed and need not be repeated here; the fact remains that it is a viable and available technology that can make a significant contribution to the UK's energy needs.

### Profitability

Modelling the financial structures demonstrated that, on a community scale, only wind can currently make an attractive return without reliance on grants. Energy4All remains committed to developing other technologies in the community sector but will only do so when the commercial viability of these technologies can be demonstrated.

This conclusion has been confirmed by the experience of the past six years – apart from Energy4All's wind farms, the only community renewables projects in the UK are a few very small grant-aided wind and hydro projects.

### Financing

There is substantial risk in the wind sector in the pre-planning stage. The absence of any legal or structural advantage for community ownership means that community groups have to take their chance with major commercial developers in the planning system. This is probably the single biggest reason for the slow pace of growth in community renewables, as communities cannot afford to put £100k–£200k at risk to the vagaries of the planning system. It is notable that Energy4All's projects have relied on provision of risk finance by a third party, normally the landowner or a commercial partner. If we had access to a revolving risk capital fund, the speed of development would be much faster.

Secondly, there is the capital-intensive nature of energy developments. With total costs of wind now well over £1mn per MW installed, even financially attractive projects are beyond the reach of most communities. This need for capital

means that the projects must be bankable (ie provide the security demanded by lenders). This in turn demands sufficient equity capital to provide the banks with the confidence to lend.

This analysis led us to the conclusion that the business structure which combines the ability to raise significant capital with democratic and ethical structures is the co-operative. Co-ops are well known in the retail sector but in fact exist in many sectors of the economy. The model is versatile and flexible and has lent itself well to the needs of the renewables sector.

The key features are a 'one member, one vote' structure which sets it apart from limited companies, and a £20,000 limit on any member's shareholding. Share capital can be raised by public share offers which are subject to FSA regulation. Energy4All has therefore specialised in launching public share offers for each of its co-ops and has raised over £13mn of equity capital to date, complemented where necessary by bank borrowing. (Note: The costs of a share offer mean that a launch is only justifiable if the project is raising well over £1mn).

It is these features that make the co-operative a very suitable vehicle for community ownership of renewable energy. Energy4All is however always on the lookout for models to handle smaller-scale projects, and technologies other than wind.

## Encouraging engagement

Co-op members need not rely solely on warm feelings as their reward for joining a co-operative. Energy4All projects usually pay an annual return of between 6% and 11%, with several recent returns being at the upper end of this range as energy prices have risen. Given recent falls in interest rates this return has become unexpectedly attractive.

Unfortunately there are few landowners like Adam Twine (see box) and even fewer community groups with the ability to overcome the obstacles put in their way in the UK environment. A rare exception is the Findhorn Community in NE Scotland where Energy4All has helped to finance the installation of three second hand wind turbines. This community has a 'private wire' system and is now self-sufficient in electricity over the average year.

Despite successes like these, Energy4All has become very conscious of the difficulties facing community groups trying to develop projects and has therefore turned to two innovative solutions to the problem of encouraging community engagement.

### Developer projects

Energy4All has also developed a successful model for communities to buy a stake in commercial developers' wind farms. The

Co-op name/location	Total site turbines	Turbine size/ make	Total site size	Total co-op ownership	Total members
Baywind Energy Co-op (HHL) Cumbria	5	500 kW Wind World	2.5 MW	100%	1300
Baywind Energy Co-op (Hav) Cumbria	4	600 kW Wind World	2.4 MW	100%	
Westmill Wind Farm Co-op South Oxfordshire	5	1.3 MW Siemens	6.5 MW	100%	2374
Fenland Green Power Co-op Lincolnshire	8	2 MW RePower	16 MW	25%	1078
Boyndie Wind Farm Co-op Banffshire	7	2 MW Enercon	14 MW	Royalty stake	716
Isle of Skye Renewables Co-op Isle of Skye	10	2.3 MW Enercon	23 MW	Royalty stake	569
Great Glen Energy Co-op Highlands	16	2.5 MW Nordex	40 MW	Royalty stake	677
Kilbraur Wind Energy Co-op Highlands	19	2.5 MW Nordex	47.5 MW	Royalty stake	517

Table 1: Summary statistics for existing Energy4All projects

advantage of this model is that the developer builds the project and takes the risk. The community simply buys a stake. The developer gains in improved community relations and the community gains a direct stake in a project in their locality. Four community co-ops are now up and running in Scotland using this model. Each has around 600 members and has raised up to £1.3mn to invest in their local project.

Energy4All actively encourages the local co-ops to engage in educational and environmental initiatives, with many

school groups visiting the sites to learn at first hand about renewable energy.

The reward to Falck Renewables (Energy4All's partner in the Scottish projects) was to be held up as an example of Best Practice in Community Relations at a Highland Council planning seminar. This reputation will no doubt stand the developer in good stead with future planning applications.

#### RDAs in England

An alternative response to the difficulties facing community schemes in the UK is

being pioneered by Energy4All with some of the Regional Development Agencies who have ambitions to develop community renewable energy. For example, Advantage West Midlands and the East Midlands Development Agency are both working with Energy4All to encourage community renewable energy in their regions.

The aim of these initiatives is to create a self-sustaining structure so that the region develops not only some successful projects but also a self-supporting infrastructure to extend the process in future years.

Other regions are also talking to Energy4All about even more ambitious programmes with detailed attention to both the supply and demand sides of renewable energy, using a range of technologies.

#### Efficiency and ethics

Energy4All has shown what can be achieved by a determined and professional approach to community ownership of renewables. The company's aim is to combine business efficiency with co-operative ethics to deliver something unique in the renewables sector. To date, around 7,500 individuals have joined Energy4All co-ops and invested over £13mn of their cash to secure a small stake in their own energy supplies and the country's 'renewables revolution'.

Energy4All is actively looking for landowners and communities with potential projects and a wish to have all or part of the project owned by the community.

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## Installing a Siemens 1.3 MW turbine at Westmill

Energy4All's biggest project to date provides a good example of how the process of establishing a community ownership scheme works.

Westmill Wind Farm in Oxfordshire is on land owned by local farmer, Adam Twine. He had pursued his dream of a community-owned wind farm on his land for well over a decade, investing a considerable amount of his own cash and time. The project was enthusiastically supported in the area but also faced persistent opposition from some locals. The location was relatively marginal for commercial developers. Energy4All joined forces with Adam to pursue the development, and following a successful share offer which raised £4.6mn, secured Co-operative Bank finance to enable the project to proceed.

Following a series of setbacks and crises, the project was constructed in early 2008. The process was managed by

a combination of Energy4All's own specialists, professionally qualified board members from the Westmill co-op and appointed contractors. The actual construction went extremely smoothly and the site has now been in full production for a year.

The electricity generated is sold under contract and delivered into the grid. The ideal of being able to supply co-operative members with power generated by 'their' turbines is currently being investigated but will not prove easy with the industry's present structure.

Westmill co-op has 2,400 members who each invested from £250 up to £20,000. Some members have worked out the amount they need to invest to own sufficient of the wind farm to generate their own power needs (very roughly £2,500 per household on average – less for more productive Scottish projects).



Westmill wind farm  
Photo: Martin Phelps