


# Energy4All

clean, green energy - let's co-operate





Harnessing the natural power of the wind is essential in tackling global warming. Britain has Europe's greatest wind energy resource and Energy4All is committed to showing local communities how green power is a viable, economical and ethical way forward.



# Our History

The story so far...by Andrew King, Chair of Energy4All

The history of Energy4All really starts in the mid 1990s when an innovative Swedish company came to the UK to establish the sort of community ownership of wind farms that was already common in Sweden. This was the beginning of Baywind, the UK's first community wind farm co-operative. My wife and I became founder members, half expecting never to see our money again. In fact, Baywind flourished and by 2001 owned and operated the whole project. It is now by far the oldest co-operatively owned wind farm in the UK, with over 1,300 members and a proud track record of stability and profit.

With the confidence gained from running Baywind, the management team became concerned at the lack of similar initiatives elsewhere. As a result, the Baywind membership enthusiastically supported the creation of Energy4All in 2002, to help other communities achieve the same as Baywind. For me and a few colleagues this was the point at which a part-time interest started to turn into a full-time job.

We set out to combine the ethics of a not-for-profit social enterprise with best business practice. Energy4All is now in its seventh year and has been fortunate to attract the support of many highly skilled and experienced individuals who have been prepared to give their time and effort as directors and advisors. As a result, the small Energy4All team has been able to make an unexpectedly big impact.

The company has established a strong track record of success. We have created a series of innovative business models to fit local circumstances from the south of England to the Isle of Skye and raised over £13m through a series of public share offers. Our seven co-ops have well over 7,000 members and we have many other schemes in development. Energy4All also enjoys the support of the Co-operative movement and in particular the Co-operative Bank, which is the primary source of £7m that Energy4All has borrowed to complete the financing of its projects.

Members join our co-operatives for a variety of reasons. Some are attracted primarily by the environmental principles that underpin all our work, whereas others are interested in a secure investment in an ethically sound business - our co-ops usually pay annual share interest of about 5% to 10% to their members.

Although wind power has been our main focus to date and there remain many opportunities in that sector, Energy4All is also working on small to medium sized projects in other technologies such as hydro, and anaerobic digestion. We have only just scratched the surface of the potential for community ownership of renewables in the UK and with the unfailing support of the members of our family of co-ops we look forward to playing an increasingly influential role for many years to come.

  
Chairman

# How Do We Work?

Energy4All works primarily with community groups and landowners, to develop renewable energy projects that are wholly or partially owned by a community co-operative.

## Identifying a project

Proposals for projects come to Energy4All from landowners, farmers, community groups and even commercial developers. In the case of most projects Energy4All has found that the best approach is to guide the community group or landowner through a self-assessment process. In this way the enquirer gets a much better understanding of what is involved, what the major hurdles are likely to be, and whether the project is likely to be financially and technically viable. For wind energy projects Energy4All has established the website [www.energysteps.coop](http://www.energysteps.coop) which provides the tools for an initial self-assessment.

## Setting up the co-operative

Once it has been established that a project is viable, and a formal agreement has been reached between the project and Energy4All, the work of setting up a co-operative can begin. Energy4All registers this with the Financial Services Authority using pre-approved Model Rules. The co-operative's founder directors will normally include Energy4All staff as well as those from the local community. The co-operative is the legal entity which will develop and run the project.

## Developing a project

a) Pre-planning - The most difficult and risky stage for most community-owned renewables projects is the application for planning permission. Raising the finance for this stage is a significant problem, though Energy4All can help identify possible sources and apply for funding depending upon the circumstances of the proposed project.

Once risk funding is in place, Energy4All will provide project management services for the whole planning application process, which can be lengthy, complex and expensive.

In parallel with the planning application Energy4All will work closely with the local community on a programme of information and engagement to develop understanding of the issues and to encourage support for the project.

b) Post-planning - Energy4All can guide the group or project owner through the whole process of procurement of turbines and other equipment, the site infrastructure contracts, grid connection and contracts for the sale of power etc.

Where necessary Energy4All oversees the whole construction process, using an expert project manager to ensure efficient delivery of the project. This stage of the project only ends when commissioning of the machinery is complete and the site is handed over to the owners.

To avoid the risks and costs involved in the early stages of a scheme, while ensuring a community stake in larger projects, Energy4All has secured unique agreements with selected developers to offer communities a share in major commercial wind farms. In these cases, the co-operative purchases a stake in the proposed wind farm without having to get directly involved in the detailed development process. The co-op, either owns one or more turbines or a share of the income. In such cases the wind farm is operated and maintained by the main project developer, whilst Energy4All manages the day-to-day business of the co-operative.

## Financing a project

Energy projects are capital intensive and renewables are no exception. Once planning permission has been secured, the community group or owner has to secure the necessary equity and loan finance. This is where Energy4All's expertise in running public share offers for community renewables comes in. A prospectus is written under FSA regulations and a comprehensive publicity campaign is organised with the local community taking the lead. The aim is always to secure the maximum possible community engagement while successfully raising the required capital.

Where necessary, Energy4All will also negotiate a bank loan to complete the financing for the project.

## Operating a project

The project now enters the Operational phase. Energy4All will normally have a separate long-term contract with the co-operative to support its operations throughout the life of the project. This can involve two distinct aspects:

i) Energy4All manages the day-to-day affairs of the co-operative, supporting the board, answering members' queries and undertaking all necessary administrative and accountancy functions.

Many Co-ops in the Energy4All family spend a proportion of their income on environmental work in their local communities. Energy4All encourages and supports such initiatives, which the co-ops fund themselves.

ii) In addition, on projects where the community owns the project, Energy4All can manage the long-term relationship with the equipment manufacturers to maintain the turbines. It also manages the sale of power and all other technical support functions requested by the board.

## How is Energy4All financed?

Energy4All was created by Baywind Energy Co-op which supported it financially in its early years. The company is now financially self-sufficient but all the co-operatives it creates are shareholders in the business and any surplus finance is ploughed back into long term development. All the Energy4All family is committed to the principle that existing co-ops support new co-ops to get established, and the financing of Energy4All reflects this philosophy.

The decision was taken early on at Energy4All not to rely on capital grants to finance the business, though it has been grateful for some support for specific initiatives from both the Co-operative Fund and charities such as Greenpeace.

### Hence Energy4All is funded primarily from three sources:

- i) by a share of the proceeds of its share offers.
- ii) the income from supplying management services contracts to the operational co-operatives.
- iii) small amounts of relevant consultancy work.

This commercial independence is a source of strength to the company, but it also means that costs have to be tightly controlled.



## Some key facts about Energy4All co-operatives

The co-ops are open to anyone over the age of 18, though children can become members through an adult nominee.

The minimum number of shares is kept low to encourage a wide membership. The minimum investment is generally £250; the maximum legal limit is £20,000, though this is currently under review.

Public share offers for co-operatives run by Energy4All are regulated by the Financial Services Authority; the co-op boards have to prepare a detailed prospectus for potential investors.

Preference for joining a community co-op is usually given to people who live in the area around each project, to maximise the economic benefits to the local community.

All members of a co-op can have a say in how the project is run. Each member has one vote regardless of how much he/she has invested.

The members of the co-op elect a board to run the co-operative supported by Energy4All. Particularly in the early stages of a project this will typically include one or two Energy4All staff as well as perhaps 5 local directors.

Each year one third of each co-operative's board has to stand down, though they are eligible for re-election.

Each co-operative pays share interest to its members out of its surplus income each year.

Some of the income from the project is set aside each year so that investors can receive their capital back at the end of the project lifetime, usually 20-25 years.

Most Energy4All co-ops choose to support local environmental initiatives.

**All Energy4All co-operatives, whilst trading as commercial organisations, seek to promote Co-operative Values and Principles which include:**

- ▼ Democracy and Equality
- ▼ Honesty and Openness
- ▼ Concern for Community
- ▼ Co-operation among co-operatives



# Taking the First Steps...

Having the land and the vision to set up a wind project is one thing; taking the steps to achieving this is quite another as many potential projects have found out the hard way.

As a result, in recent years, Energy4All has received an ever-increasing flow of enquiries requesting guidance on the development of community wind projects. To meet this need without overwhelming Energy4All's limited resources, the company has developed a self-help website for community groups and landowners ([www.energysteps.coop](http://www.energysteps.coop)). This website, which was part-funded by Greenpeace and the Co-op Fund, makes it possible for community groups and landowners to assess the viability of their projects.

Once the assessment process is complete and assuming the project appears to be viable, the group is encouraged to contact Energy4All to help take the project forward.

The Energy Steps website is built around 9 stages that every project needs to go through before knowing if it is likely to be feasible.

Steps 1-3 are particularly important in the early stages, but any one or more steps can easily derail a project.

## The 9 Steps can be summarised as:

- 1. Wind Speed** – How windy is your site?
- 2. Land Ownership** – Do you have the necessary rights over your proposed site?
- 3. Neighbours** – How close is your nearest neighbour?
- 4. Grid Connection** – How easy will it be to connect your site to the grid?
- 5. Site Designations** – Is your site of interest to other people, for other reasons? (e.g. landscape or wildlife interests).
- 6. Access** – Can you actually get your turbines to the site?
- 7. Planning** – What problems are you likely to have with planning and how severe are they likely to be?
- 8. Constraints** – Are there any issues with aircraft or other constraints?
- 9. Finance** – How will you finance your project and is it capable of making money?



## Five Alternative Ownership Models developed by Energy4All:

- 1. Community Co-operative Model:**  
Enabling 100% ownership of an entire project.
- 2. Shared Ownership Model:**  
Especially in relation to a wind project, where a co-operative owns one or more of the turbines on a wind farm, with the remainder being owned by a landowner, private developer or a community trust.
- 3. Royalty Instrument Model:**  
Where a developer is building a wind farm in the region and the community purchases a stake in the future revenue of the project, through a co-operative.
- 4. Regional Co-operative Model:**  
In this model, finance is raised through a national or regional energy co-operative covering a wide geographic area and a range of different projects.
- 5. Loan Model:**  
A community project may approach an existing energy co-operative and arrange a simple loan to get a new project off the ground.



# Our Co-operative Ventures

## Baywind Energy Co-operative Harlock Hill & Haverigg II

The Energy4All story begins with Baywind. The co-operative was formed in 1996 and is sited in two locations in Cumbria, at Harlock Hill, near Ulverston and Haverigg II, near Millom. This co-operative was the first to enable members of the community to wholly own a renewable energy project, having raised equity of £1.9m through two share offers. The electricity generated by the project is sold, with profits distributed to members whilst retaining some funds for allocation to community outreach projects.

**Harlock Hill Wind Farm** is a 2.5 MW wind farm and consists of five Wind World turbines, each rated at 500kW. The site is situated on an open stretch of windswept farmland overlooking Morecambe Bay. These turbines will produce enough clean electricity each year to meet the average needs of 1,100 homes.

Construction started in September 1996 with the turbines being fully operational by the end of January 1997. The landowner continues to use the land for grazing and silage.

Baywind's main aim has always been to promote the generation of renewable energy and energy conservation. With this in mind, 0.5% of income from Harlock Hill goes into an Energy Conservation Trust which distributes grants to local organisations, to encourage the use of sustainable, renewable technology.

**Haverigg II Wind Farm** is a 2.4 MW wind farm and consists of four Wind World turbines, each rated at 600kW. Baywind owns one of the four turbines with the remaining three owned by The Renewable Energy Fund.

The site is located on a disused airfield on low lying coastal land, near Millom in Cumbria. These machines started production in July 1998 and produce enough clean electricity each year to meet the average needs of over 1,300 homes.

### Return on investment

Year	Gross	EIS Investor
2008	6.6%	8.3%
2007	8.1%	10.1%
2006	6.7%	8.3%
2005	7.2%	9.0%
2004	6.3%	7.8%
2003	3.8%	4.8%
2002	6.1%	7.6%
2001	5.6%	7.1%
2000	6.4%	7.9%
1999	6.6%	8.2%
1998	6.2%	7.8%

*Note: the 2003 return is lower as Baywind decided to devote funds to setting up Energy4All in that year.*

*Members who qualified under the government's Enterprise Investment Scheme, received a 20% tax refund on their initial investment.*



# Westmill Wind Farm Co-operative

Westmill was originally the dream of an Oxfordshire organic farmer, Adam Twine, who worked on the idea for more than a decade before Energy4All became involved. The co-operative was formed in August 2004, with Energy4All organising a share offer in 2005/6.

Following serious delays and price rises, the commitment and enthusiasm of Westmill members for the project was clearly demonstrated when an appeal for additional share capital raised an extra £1.3m in 3 weeks. This brought the total raised to £4.6m, with EIS tax relief available to members. The wind farm, near Swindon, was finally commissioned in February 2008 and is now the largest community owned project operating in the UK.

There are five 1.3MW turbines at Westmill generating enough energy to supply 2,500 homes. There are 2,374 members in the co-operative.

Westmill provides an opportunity for all who are concerned with the effects of climate change, to own a stake in a community project. With that spirit in mind and to celebrate the generation of green power at Westmill, a grand open day was held in April 2008 with over 600 co-operative members attending.

Jonathon Porritt, Chair of the Sustainable Development Commission, gave the opening speech – a fitting community day, celebrating the culmination of many years of planning and persistence.

Westmill has set up a sustainable energy trust, which supports and encourages the development of low carbon communities, education and the arts within the locality of the wind farm.

Westmill is the first project of its kind in southern England and its importance was recognised by the award of a capital grant from the South East England Development Agency, to help form the co-operative.



• Expected Annual Output: 21,100 MWh

[www.westmill.coop](http://www.westmill.coop)

# Fenland Green Power Co-operative

The Deeping St Nicholas site consists of eight wind turbines on land at Vine House Farm and Worth's Farm. The installed capacity of the site's eight 2MW turbines totals 16MW, and on average supplies the domestic electricity requirements of 8,400 homes.

The site is owned and operated by a subsidiary of EDF Energies Nouvelles. They inherited a commitment to provide for community ownership on their Fenland sites when they bought them from the original developer. As a result the Fenland Green Power Co-operative was formed in September 2004 and launched its share offer in 2007, by which time the site was fully operational. The share offer raised £2.7m from 1,078 members. This was supplemented by bank borrowing to make a total community investment of £4.4m. The co-operative board, supported by Energy4All, succeeded in purchasing two of the turbines on the site in December 2008.

Social Enterprise East Midlands awarded Fenland Green Power Co-operative a development grant and it has also been supported by the Lincolnshire Co-operative Development Agency and Lincolnshire Co-operative.

Like other wind farm projects, the co-operative's members are committed to establishing a Trust, to promote energy conservation measures and sustainable energy educational activities throughout the Fens, providing a focus for environmental improvements.

# Boyndie Wind Farm Co-operative

The seven turbine project at Boyndie Airfield was the first scheme in the Energy4All Scotland portfolio with Falck Renewables. Under the agreement, Energy4All creates a co-operative for each Falck project and the local community gets the chance to invest in the wind farm being built in their area. Rather than owning a turbine, the co-operative buys a Royalty Instrument Agreement from Falck Renewables which effectively provides a direct stake in the income generated by the project. Work on Boyndie Wind Farm started in June 2005 with the site becoming fully operational in April 2006. The seven 2MW Enercon turbines generate enough clean, green energy to supply around 8,500 homes and stand at a total height of 100m.

Boyndie Wind Farm Co-operative was established in 2005 to purchase a share of the site. Five local residents joined the board, which then successfully completed the share launch, raising the target of £730,000. Profits from the sale of green electricity produced at Boyndie are distributed to the 716 co-operative members, through an annual payment.

The Boyndie project made a share interest payment of 10.3% for 2008 and members of the co-operative are currently looking forward to seeing an additional turbine built on the site towards the end of 2009.

As with all Energy4All co-operatives, Boyndie benefits from management services (accountancy, administration etc.) provided by Energy4All's Cumbria office.





## Isle of Skye Renewables Co-operative

Isle of Skye Renewables Co-operative was the second Energy4All co-operative in Scotland. It also has a contract with Falck, taking an income from its share in the Ben Aketil site, near Dunvegan. There are ten Enercon turbines, each capable of generating 2.3MW at full output. The forecast output of 79,100 MWh is enough power for 14,000 average homes. The co-operative successfully raised £0.8m by offering local people the opportunity to invest in the scheme.

The Skye Co-op made its first full year annual interest payment of 9.2% to its 569 members in May 2009.

The Skye Co-operative has an active outreach programme which funds, for example, an environmental bursary for local High Schools and support for local charities and community organisations to reduce their energy use.

## Great Glen Energy Co-operative

Not only is the Millennium Wind Farm the highest wind farm in the UK, situated in the Highlands at Invergarry, but it is generating enough green energy to power 22,400 homes. There are currently sixteen 2.5MW turbines on site generating an output of 135,700MWh.

Great Glen Co-operative is expected to pay an average of 10% return to its members over the life of the project.

As with all of Energy4All's co-operatives on Falck Renewables projects, a Royalty Instrument exists between the co-operative and Falck. Under this, Falck pays a percentage of the wind farm's income to the co-operative as a return on their £1.2m investment. The 677 co-operative members are able to decide how those profits will be distributed to the members and how much will be spent on community outreach work in the future. Energy4All arranged the RIA, launched the share offer and administers the co-operative on a day-to-day basis.

• Expected Annual Output: 78,800 MWh

[www.skye.coop](http://www.skye.coop)

• Expected Annual Output: 133,800 MWh

[www.greatglen.coop](http://www.greatglen.coop)



• Expected Annual Output: 144,700 MWh

[www.kilbraur.coop](http://www.kilbraur.coop)

• Expected Annual Output: 1,300 MWh

[www.findhorn.org](http://www.findhorn.org)

## Kilbraur Wind Energy Co-operative

This wind farm is located in the Kilbraur area of Strath Brora, Sutherland, approximately 10km northwest of Golspie. Planning permission for the Kilbraur Wind Farm was granted in 2006 and the site became fully operational in December 2007. The wind farm has nineteen 2.5MW turbines, each standing at 115m high from base to blade tip. When the wind farm is operating fully it generates enough clean, green electricity to supply approximately 27,000 homes.

The original aim of the Kilbraur Wind Farm Co-operative was to raise a minimum of £250,000, but keen interest from local and other investors resulted in over £1m being invested. The co-operative has 517 members. The stake in the project was purchased in November 2008 and members are looking forward to their first annual share interest payment in 2010, when the project will have been operating for a full year. Falck Renewables plans to erect further turbines on the Kilbraur site and if these go ahead, the members of the Kilbraur co-op will be offered the opportunity to buy a stake in the enlarged project.



## Findhorn Wind Farm

Findhorn is an internationally well known 'spiritual community' near Inverness, with over 200 permanent residents and hundreds of visitors at any one time, working on the site or participating in the community-run courses. The community seeks to minimise its environmental impact in all ways, such as its eco-houses and projects like The Living Machine, which handles all their sewerage needs.

Findhorn approached Energy4All for assistance with their plans to make their community self-sufficient in electricity. The proposed project was too small to justify a separate share issue but with the support of the Baywind Co-op, Energy4All was able to arrange a loan for Findhorn secured against Baywind's turbines. As a result Findhorn bought three second hand 225KW machines for the site, to add to the old 50MW machine that had been at work for many years. Apart from the loan secured by Baywind, the project is funded by the community's own co-operative and other funds from within the community. Findhorn is now 100% self sufficient in electricity over the year as a whole.

Although this is not a separate co-operative created by Energy4All, it is a fine example of one co-operative helping another to achieve its aims and develop its own renewable energy supply.



## The Future

Climate change and the security of energy supply are widely accepted to be two of the greatest challenges the world faces today. The increasingly clear evidence of the likely impact of global warming must now be added to the huge problems being posed by increasing world-wide demand for dwindling stocks of fossil fuels. We have reached the point where the development of sustainable energy sources is no longer just a nice idea but a real and urgent need.

Under EU efforts to combat global warming, Britain is committed to generating 30% of its electricity from renewable sources by 2020. The Government has provided appropriate signals, not least in the Renewable Energy Strategy (July 2009), in which Westmill and Energy4All appear as a Case Study in community ownership. Industry is responding, but everybody needs to play a part in tackling these challenges.

All major renewable energy sources will be needed to meet the challenges. However many of the emerging technologies are not yet at a point where they can be widely exploited. For example wave and tidal power both hold enormous potential, especially for the UK, but deployment of these sources is still largely at the research and development stage.

Fortunately wind-generated power (one of the oldest power sources exploited by man) is now a viable and trusted alternative to traditional methods of electricity production. The government has encouraged the growth of the sector by establishing a market structure which provides a basis for long-term planning (extended to 2037 in the recent Renewable Energy Strategy). It is for these reasons that Energy4All has worked primarily with wind projects to date. Investment in wind can deliver useful amounts of 'green' power, plus the potential for healthy financial returns for co-operative members. This fits perfectly with Energy4All's basic philosophy of combining business efficiency with co-operative ethics. The enthusiasm with which ordinary people have signed up to Energy4All's co-ops demonstrates a widespread desire to get directly involved in renewable energy generation. Some members have even been known to calculate the investment they need to make in an Energy4All co-op to 'own' sufficient generating capacity to supply their own home on a full year basis (roughly £2,500, depending on the site and the home).

The Energy4All team is actively exploring numerous potential projects across the UK. Many of these are in wind, with some especially interesting opportunities for more 100% community owned sites. However, as other technologies develop, Energy4All is also increasingly interested in opportunities in power from hydro, solar and anaerobic digestion. All are substantially more developed in many other European countries and may well provide a second generation of projects for Energy4All.

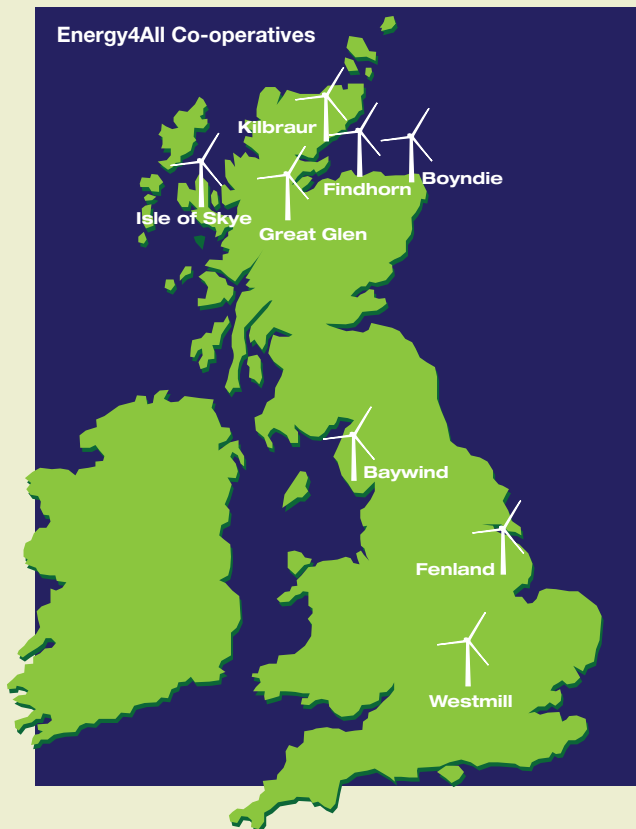
Over the last seven years Energy4All has built up a unique and successful business showing what can be achieved by a determined and professional approach to community ownership of renewables. The management team has a wealth of experience of the renewables sector and to this can now be added Energy4All's experience of delivering seven thriving enterprises by balancing community requirements and the needs of a robust business.

Backed by the existing co-op membership of over 7,000 and with endless opportunities for further growth of community ownership of renewables in the UK, Energy4All has a challenging and exciting future.

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

If you have a project in mind, please take the first step to realising this possibility by looking at our detailed guide to the process at: [www.energysteps.coop](http://www.energysteps.coop)

Energy4All is grateful for the enthusiastic support of other organisations, without whom we could not have achieved such successes. Our thanks go to the Co-operative Bank, Co-operative Development Scotland, Co-operatives UK, the Co-operative Group, East Midlands Development Agency, Advantage West Midlands, South East England Development Agency and Falck Renewables plc.



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## What our partners say about Energy4All

“ At 6.5 MW, Westmill is the largest wholly-owned community energy scheme in the UK. Over a period of several years, Energy4All helped the project achieve planning consent, raised the required equity from a community share issue, used its credibility with lenders to secure bank finance and negotiated all the required construction contracts. During this process a series of legal, practical and financial problems had to be overcome. The successful commissioning of the project in early 2008 is due to a great extent to the expertise, tenacity and commitment of Energy4All. ”

Mark Luntley, Chairman,  
Westmill Wind Farm Co-operative

“ Energy4All has delivered on all its commitments to both the communities and ourselves. By having a profound understanding of both the business world and the aspirations of communities, they have managed to link the two with notable success. Their robust systems and attention to detail make administration remarkably painless. We look forward to co-operating with Energy4All on many future projects. ”

Charles Williams, Development Director,  
Falck Renewables plc

“ We have always found Energy4All innovative and highly professional in their business dealings on behalf of the communities they represent. They have a well balanced management team which is supported by a strong administrative function. What is additionally pleasing is that the business and all employed show a commitment to the ethics of social enterprise. ”

Chris Matthews, Senior Manager  
Renewable Energy and Asset Finance  
The Co-operative Bank plc