



HKD Energy Annual Report 2014-15



HKD Energy Limited
A Community Benefit Society registered with the Financial Conduct Authority no. 7021
Registered office: 15 East Gardens, Ditchling, Hassocks BN6 8ST
www.hkdenergy.org.uk

HKD Energy

Annual Report 2014-15

Purpose and vision

HKD Energy is a Community Benefit Society, formed in 2014 to develop renewable energy projects, promote energy efficiency, and create awareness of environmental and energy issues in our villages of Hassocks, Hurstpierpoint, Keymer and Ditchling.

Our vision is to create low-carbon communities, by making buildings more energy efficient and generating the electricity we need from renewable sources.

Activities

Community engagement

In our first year, HKD Energy directors and volunteers put much effort into getting our organization widely known in the community and by potential investors. We worked on:

- a website, www.hkdenergy.org.uk
- a Facebook page <https://www.facebook.com/HKDEnergy>
- a Twitter account @hkdenergy
- a mailing list of interested people
- articles in community newsletters including Talk About, Village Voice, Ditchling Dialogue and church magazines
- 5,000 flyers about HKD Energy, distributed at events and door-to-door in Hassocks and Hurstpierpoint (thanks to the scouts for their help with that).

It was also important to talk face to face with community residents and groups, to tell them about us and our hopes for renewable energy. In 2014 we attended 8 large community events in Hassocks, Hurstpierpoint and Ditchling, and talked to hundreds of people. We also briefed some key local organisations including Hassocks Parish Council and Hurstpierpoint and Sayers Common Parish Council.

This work in the community paid off when it came time to launch our first share offer.



Figure 1. At Ditchling Fair, June 2014

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Peer Mentoring: Community Energy South

Throughout 2014 we took part in a peer mentoring project led by OVESCO, the Lewes pioneer community energy group, supporting 12 groups like ours through the process of planning and setting up a community energy scheme. The project came at just the right time for us, and sharing ideas and experiences with similar groups at different stages of development was always helpful.



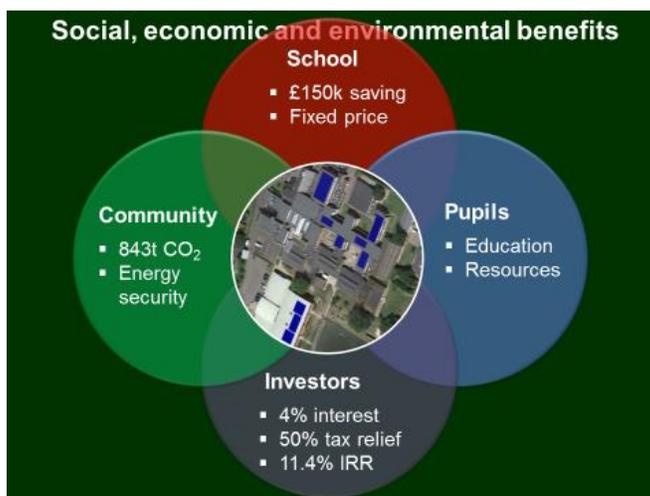
Figure 2 HKD Energy director at a Peer Mentoring meeting Sep 2014

Incorporation and FCA registration

The process of incorporating HKD Energy and registering with the Financial Conduct Authority (FCA) took much longer than we had expected. We got caught in a change of policy following the Co-operative and Community Benefit Societies Act of 2014, and had to reapply under new rules and with a new structure. Our registration as a Community Benefit Society was finally approved by the FCA in October 2014.

Downlands School solar project share issue

While we had a number of potential solar projects in mind from the beginning, Downlands School was always our first choice. It brings together all our villages, uses a lot of daytime electricity, has many south-facing flat roofs that are perfect for solar panels, and most of all was enthusiastic in supporting the concept. We developed both a technical project plan and a solid business plan, showing potential investors what they are buying into, how it will work and the potential risks and benefits.



Our business plan and share offer mapped out the Downlands project and the social, economic and environmental benefits it would offer. The final project plan was to put a total of 307 solar panels on the roofs of the main school and the sports centre, providing a large 80kW total project. At the time it was one of the largest school solar projects in the country.

Total cost was expected to be just over £100,000, allowing a contingency for unforeseen events. The returns to investors would begin after two years and continue until 2035.

The share offer was launched at an event at Downlands School on 8 November 2014. Guest speakers included Norman Baker, MP for Lewes and Howard Johns, director of OVEsCo. Students at the school were involved in making a video about the project, produced by the Eco Club, and through a 'Solar Revolution' art competition.



Figure 3 HKD Energy Directors with speakers at the share launch

Downlands Solar Project Investors

The share offer was fully subscribed within two weeks. 48 investors generated £100,350 of capital. Over 80% of investors live within a 4 miles radius of the school: they invested a minimum of £250 and a maximum of £6,200. Investors were very positive about the project:

I'm delighted that the project is going so well. Congratulations on planning and implementing it so thoroughly!

Congratulations! It shows how many takers there are out there for this kind of project. Well done!

We are most impressed by the brilliant organisation of this project. You all worked incredibly hard for the community

Congratulations with the project and I look forward to the second one

Installation

Following a tender process we worked with Solar Resources, a Haywards Heath company, to design and install the system. Installation on the roofs of the main school and sports centre could only take place outside term-time, and despite the usual February half-term rain and wind all the panels were in place by the time school started again. By early March the system started to generate electricity.

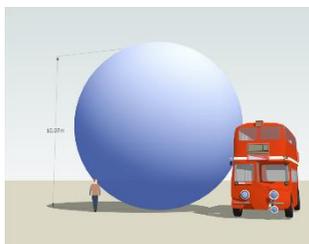


Figure 4 Solar Resources install panels on the Downlands School main building, Feb 2015

Generation in the first Financial Year

Although the system was operational for under four months to the end of the financial year on 30 June 2015, electricity generation went well. The main school generated 18,853 kWh and the sports centre generated 10,262 kWh. In more everyday equivalents this means:

117 cars taken off road for a year



308,000 kettles boiled



15.4 tonnes of carbon saved (here's an image of just 1 tonne)

Impacts

Our small volunteer project with no paid staff raised £100,350 in community investment in two weeks. We engaged local firms for the installation: with the local multiplier effect we estimate the added value to the local economy as £172,720 from just our first project. Nationally a survey of 80 community energy projects like ours found they had raised £28m in community share issues and leveraged another £50m in private investment.¹

However, HKD Energy was always intended to be about more than money. Only four months into active operations, it is too early to expect clear evidence of our impacts, but some areas are already making themselves apparent.

Raising awareness in the community

We worked hard at making local residents aware of HKD Energy and the value of local renewable energy projects: distributing leaflets in person and door-to-door, talking to hundreds of people at community events, the Hassocks market and local garden centre, briefing other local groups and articles in local newsletters and the press. The impacts of that work are not easy to document, but an indication of the increased awareness and interest in renewable energy is that we have been approached by 8 local organisations about potential future projects. Anecdotally we know that some of our investors and supporters are now considering solar for their own homes or community buildings they are involved with.

¹ Quantum Strategy and Technology Ltd, Community Energy: Generating More than Renewable Energy. Report for Community Energy England, October 2015

It's clear that there is interest, support and opportunities for further renewable energy projects in our communities.

Carbon saving

Over the 20 year span of the Downlands School project we expect to save the equivalent of some 843 tonnes of carbon dioxide through generating electricity directly from the sun. In just the first 4 months of generation we have already saved the equivalent of 15.4 tonnes, so we are firmly on track to meet or exceed our target.

Saving money for the school

Over the 20 year project we expect to save Downlands School around £150,000 in electricity costs by charging about a third of the price per unit they are currently paying, and fixing that for 20 years. In the first four months of operation we saved the school about £2,000 in electricity costs. Given the ever-tighter finances for schools, even relatively small sums can have an important impact. Downlands School Head Teacher, Rose Hetheron, sent us these comments about the school's experience with the solar project:

Since the successful installation and operation of the solar panels in February 2015 the school very quickly recognised the cost savings to our energy budgets and usage. We were grateful for the wall to wall sunshine through a very sunny Spring that kept all the dials whirling.

We would also like it recognised that working with HKD has been a delight and issues that can and do arise from time to time are dealt with promptly, effectively and efficiently. The members are very conscious that whilst the school is benefitting hugely from this scheme that we spend little or no time on any matters regarding the running, maintenance and management of the scheme. I would like it publicly stated that they have all been truly fantastic and professional and are a delight to work with. I would also like to publicly thank again all the investors.

Educational impacts

Over the 20 year project we estimate that nearly 7,000 pupils will come into close contact with this renewable energy, seeing first-hand how a system like this can immediately start cutting carbon. TiGO software is tracking the data from generation, showing charts and graphs of generation by the hour, day and month: this is now available to teachers to use as part of the curriculum.

The simple charts we receive weekly show the considerable reduction in our energy consumption when the panels 'kick in'. It is a very good visual means to show our pupils what an effective means of producing free energy the solar panels are. It also helps to raise pupils and staff awareness of saving and conserving more energy throughout the day by switching off lights and other electrical appliances when not needed. Rose Hetheron, Head Teacher, Downlands Community School

Future plans

Downlands School bonus payments

As the Downlands School solar project develops it will generate a modest surplus (expected to be c. £23,000 in total), all of which will go to the school. However, in the early financial years, HKD Energy needs to retain yearly profits (after maintenance, taxes and investors) as working capital to replace equipment as it wears out. Directors currently expect to begin paying bonuses to the school in year 11, but will review the financial position each year.

Repaying investors

Our business plan for the Downlands project starts annual interest payments to investors in Year 3. This allows a contingency fund to be built up to cover costs of repaying in full the investments of anyone who dies. From Year 4 we will begin to repay capital to investors (investors who claim tax relief must hold their investment for at least 3 years).

New projects

Following the successful share offer and installation of the Downlands project, directors have been exploring potential sites for future projects. We agreed our priority would be community buildings and other high-profile sites that would help build public awareness of renewable energy. Because the business plan depends on generating some income from sale of electricity to the building user, we need to reduce the risk of default by selecting buildings where there is high likelihood of continued tenancy. There are also technical constraints: for example roof-mounted solar needs to have good orientation to the sun.

An initial list of 20 potential sites for future projects had been whittled down to 7 by the end of the financial year, with 3 being particularly promising. However, a series of policy changes by the government has made it difficult to plan for any new projects. For those of us committed to community energy these are frustrating times. Once government policy is clearer we hope to be able to make plans for more projects.