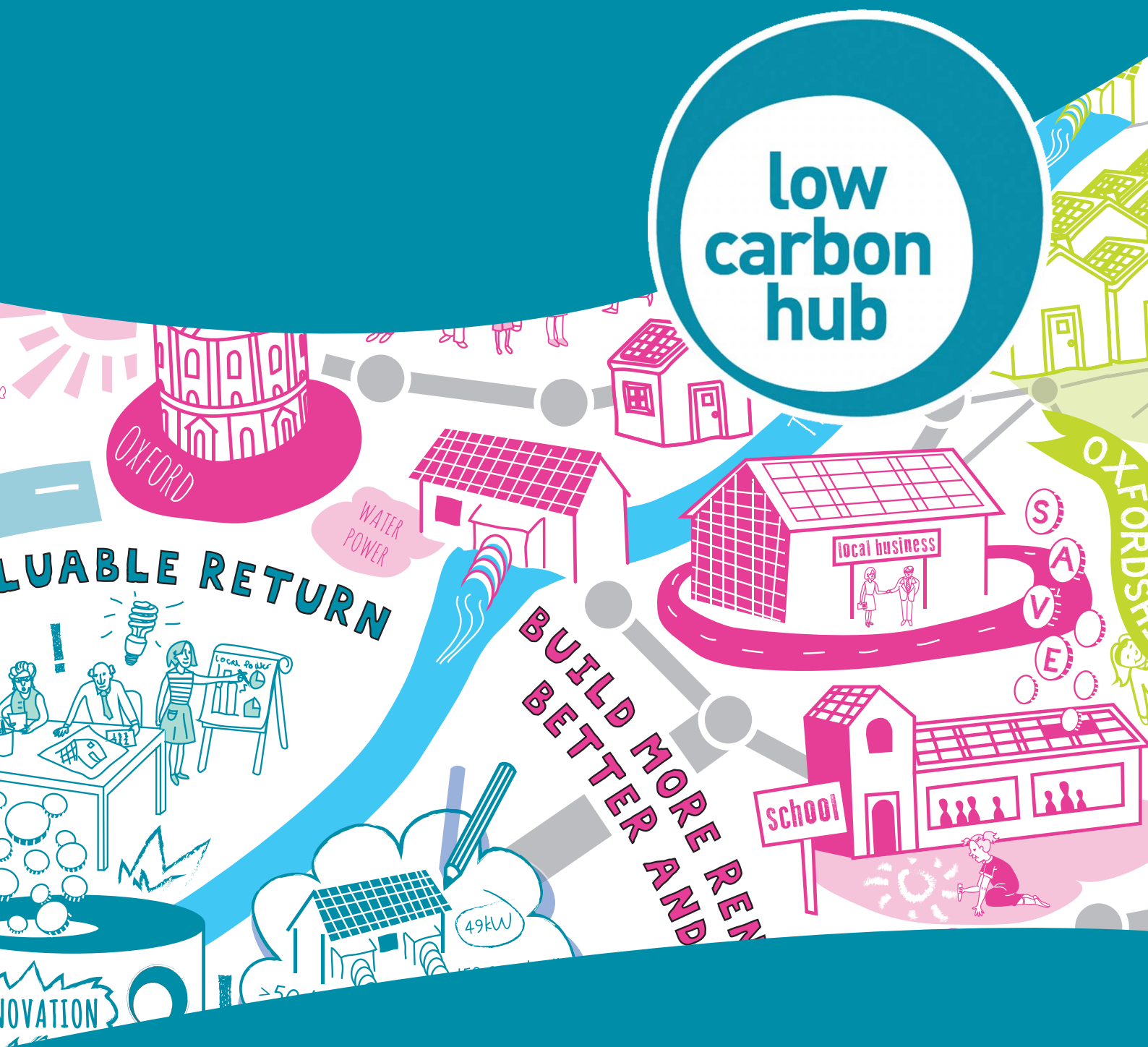


Scaling Up: Low Carbon Hub Annual Review 2014-15



Financial performance

IPS

In this first full year of trading, the Hub IPS increased its income from £3,530 in 2013-14 to £39,230 in 2014-15. Many installations were only operational for a small portion of the year, and in a full year we would expect the installations in service at the year-end to generate annual income of approximately £149,000.

An operating loss of £59,230 was returned in the year. The financial structure of the IPS is such that operating losses are expected due to depreciation, the need to pay community benefit donations to the Low Carbon Hub CIC (these amounted to £11,902 in the current year), and in future years to pay returns to shareholders.

However, in the current year operating losses were higher than forecast, due to £34,589 of pipeline abortive costs incurred in respect of a project to install Solar PV arrays on several of the Diocese of Oxford's schools.

The Board does not anticipate that these costs will have a material impact on the future business model of the Hub IPS. Alternative projects with an equivalent rate of return have been sourced to replace the aborted projects. In addition, the Hub IPS has been successful in completing several projects in the year without spending the full contingency funds budgeted for those projects. The unspent contingency funds in respect of completed projects totalled £40,063.

CIC

The focus of the Hub CIC shifted in 2014-15 towards identifying, developing and completing pipeline projects. As a result grant income in relation to ad-hoc project work and the Intelligent Energy – Europe programme decreased significantly.

This was largely offset by project development fees, and community benefit donations received from the Hub IPS in respect of completed installations; and therefore overall total revenues decreased by just 6.5% to £678,316.

An operating loss of £28,520 was incurred, representing a significant reduction from the profit of £116,752 recorded in the previous year. However this loss was anticipated as the Hub CIC's business model transitions towards self-sufficiency.



Luke Marion

IPS

The Low Carbon Hub IPS finances renewable energy projects for businesses, schools, community enterprises and public sector partners providing them with cheaper electricity, providing energy resilience, enabling them to meet carbon reduction commitments, and delivering a positive corporate social return. Projects include rooftop and ground-mounted photovoltaic installations (solar PV), micro-hydro schemes and biomass. Projects are developed by the CIC, on behalf of the IPS.

Projects developed

Schools

We have developed increasingly effective channels with our local partners, leading to real momentum. The result has been nine operational schools so far and a saving of over 100 tonnes of CO₂ – and with many more schools in the pipeline!

Engaging schools

We made contact with approximately 100 schools; about a third of the schools within Oxfordshire. From this, we made 96 visits to 75 schools.

In most cases, meetings have been achieved by a warm introduction from a mutual contact – and we are extremely lucky to have fostered so many positive local relationships and benefited from practical assistance.

The key lessons for us in developing further schools projects are around trusted connections and project timescales (moving from an expression of interest to a contractual commitment). Unfortunately, we weren't able to proceed with any of the Diocese of Oxford's schools but are hopeful that they might be completed in the future.



Solar panels being installed at the Warriner School

Nine operational schools:

- Banbury Academy
- Charlbury
- Cheney Academy
- Edward Feild
- Fir Tree Jnr
- Larkrise
- The Warriner
- West Kidlington



Installation in progress at Fir Tree School.

Operational sites

Nine school installations are now operational with 1,846 solar panels working hard for us; with a total peak capacity of 461.5 kWp. They are generating sufficient electricity to meet the needs of 110 homes, and early generation performance is 10% ahead of plan... it has been a sunny winter believe it or not! Just over 100 tonnes of CO₂ was saved to the end of April 2015.

Developing projects

Three schools have passed all of the surveys and are in the process of completing contracts (143kWp). The first is Bure Park (Bicester) where we will install 240 panels by early June 2015. Eight further schools have signed-up and are under development (479kWp) – in most cases we are awaiting successful grid applications. Advanced discussions are ongoing with 13 additional schools (total potential 1MWp).



Anthony Simpson

Businesses

Norbar Torque Tools Ltd and Owen Mumford were our key business successes, and several other businesses have continued to express a willingness to progress with an installation. The last year has been a challenging one in respect of converting business prospects into completed project partners – uncertainties exist over the issues of grid connection and the complications of the necessary lease agreements.



Dr Barbara Hammond (Low Carbon Hub), Philip Brodey & Catherine Rohll (Norbar Torque Tools Ltd) at the press launch of the Solar PV project



The Solar PV installation at Norbar Torque Tools.

Norbar Torque Tools

The Hub has been working with Norbar Torque Tools since February 2014. Having outgrown their previous site in Banbury, Norbar have over the last two years been in the process of relocating to their new Wildmere Road site. In February 2015 Norbar signed a lease with us for a 250kW solar PV installation for a Phase 1 installation on their Highbay and Goods inwards buildings.

Norbar was commissioned at the end of March 2015 and is, we believe, the largest community-owned rooftop Solar PV installation in the UK, saving over 2,200 tonnes of CO₂ over the lifetime of the installation.

Owen Mumford

In March 2015 Owen Mumford signed Heads of Terms for Solar PV installations on their sites in Woodstock and Chipping Norton. Subject to a successful grid application this will see a minimum 375kW installed across both sites during the course of the next year, saving a further 160 tonnes of CO₂ each year.

Other projects

Feasibility studies are being carried out for a further 2.3MW of installed capacity on the rooftops of other businesses, community hospitals, technical colleges and farm buildings across Oxfordshire. As awareness grows of what the Hub is achieving we are finding that more and more businesses and organisations are becoming interested in our value proposition.



Als Parker & Tim Crisp

Shared community ownership

Shared Community Ownership for renewable energy schemes is an emerging concept in community energy and supported by Government. A landowner, and a supporter of our work, approached the Hub to co-develop a stand-alone ground mount Solar PV project with a neighbour and their commercial developer. The overall size of the proposed scheme is 5MW with a likely 40% community ownership through the IPS. This is one of the first schemes of its kind in the UK and will take up to two years to develop.

Grid constraints

The Hub has been thwarted in its attempts to acquire viable grid connections in the Bicester area (and in many other parts of Oxfordshire) due to a DNO-stated over-capacity on their network. Consequently the Hub, with support from Oxfordshire County Council and Cherwell District Council, held a series of meetings involving Bicester Vision, Eco Bicester, the University of Oxford and Bioregional to address the problem. Dialogue was established with the Distribution Network Operator (Scottish and Southern Electric Power Distribution) and a report published in March 2015, identifying a need for SSEPD to enable flexible connections.



Steve Drummond

Investment raised

Our 2014 share offer raised £1.694 million and we now have 345 members of the IPS endorsing the Hub's vision to build decentralised, community-owned renewable energy in Oxfordshire.

Community share offer

The big marketing and communications campaign was developing and marketing the Hub's first community share offer, which was launched on the 23rd September to 4,000 via the "Twittersphere" and to the press at Larkrise Primary School, one of our first solar schools.

With the offer launched, we had six weeks to raise £1.5 million into Solar PV on 18 local schools and three businesses.

This required a big push, including a community launch for 100; three investor launches; launches in two schools; attending 70 events; press coverage in local and national papers and 78 local newsletters; radio interviews, including a slot on Radio 4's *Costing the Earth*; a social media campaign; promotion around Good Money Week; and a friend-get-friend email campaign. The offer closed on the 28th of November and raised £1.694 million, well over our target.



23 kids were given Low Carbon Hub balloons for the photo-shoot to represent the amount of CO₂ our portfolio of 2014-15 projects will save every minute

We couldn't have done it without our existing investors, local organisations and networks, and our community champions, so a huge thank you to our wonderful supporters who put their weight and energy behind marketing the share offer.



Wendy Twist & Georgina Matthews

Oxford City Council Revolving Loan Fund

Oxford City Council provided a capped, £2.3 million fixed-term loan facility to the Hub IPS to enable us to fund individual renewable energy community projects, in advance of our community share offer in September. Monies drawn down from the facility are repaid with 5% interest. The Council also agreed to revolve the facility to provide funding for other renewable projects in our pipeline.

Working capital for project development

The share offer was mostly about financing the construction of the schools projects, but in the prospectus we also included £200,000 for financing the development of new projects. This development money is being put to use in developing an exciting stream of new projects including hydro and ground-mount solar.

IPS Investment Committee

The IPS investment committee meets monthly to support management in the development of the Hub's project development activity and to ensure the IPS board is fully involved in both project approval, and development and approval of the project funding strategy.

The project development work is carried out by the CIC, so the committee works with the CIC management to ensure that project risks are adequately addressed in the contracting and financing of each project, and reports to the full board on exceptional items. Projects are assessed and given preliminary approval (or not!) prior to any third-party spend (e.g. structural surveys, planning applications).



Steve Drummond

Project monitoring & impact

Just installing solar panels and forgetting about them represents not only a financial risk if they are not performing as expected, but also reduces our impact in creating a viable alternative for our energy needs.

Monitoring our installations is a key part of our operation, where we check their performance on a daily basis and can act promptly, if things are not working as expected. We compare daily solar radiation data with actual outputs, as well as monthly, quarterly and yearly predicted generation versus actual.

In 2013-14 our forecast generation was 27.2 MWh, with actual generation of 28.5 MWh. Our installed capacity increased substantially in 2014-15 with the predicted generation getting to 255.5 MWh and actual generation reaching 260.9 MWh. This represents 140 tCO₂e saved. With a full year in operations these same installations are forecast to generate 753.3 MWh and save 405 tCO₂e.

Oxford Bus Company

This has been the first full financial year of operation of the Oxford Bus Company installation and as a result the first Community Benefit donation of £11,902 was made to the Hub CIC. This helped fill the funding gap in the cost of installing external wall insulation to houses in Barton, described further on page 10.

Management systems

As we grow we will need to build excellent management systems and processes and so a further focus for this year has been developing good systems for Project Management, Financial Management and the Operations and Maintenance of our built projects. We have migrated our accounting system to QuickBooks and are developing a project management system for our pipeline of IPS projects using QuickBase.

These two systems can work together to give us a very flexible and powerful approach to managing and monitoring all aspects of the IPS projects. We have increased the capacity of our Finance Team by recruiting an apprentice bookkeeper.

We are confident that these additions will allow us to manage our finances robustly, but with our ambition to scale up strongly in mind. We have put in place a more regular meeting of the Investment Committee to govern our pipeline as it grows; this monthly meeting is supported by the management information we can now easily obtain from these new systems.



Rachel Boyes-Watson & Adriano Figueiredo

The Low Carbon Hub CIC helps communities to develop locally owned renewable energy projects on community assets. These projects provide cheaper electricity, an income for the local community and opportunities for local people to invest. The Hub team supports community volunteers through the complex process of developing their project, getting the project to investment-readiness and raising necessary finance.

The CIC uses grant funding for innovation projects and local network development to help commercialise new technologies, financing options and business models that will provide community benefit. The CIC also develops projects on behalf of the IPS.

Community benefit

Our focus on community benefit is what separates us from commercial project developers, which our business partners and investors value as much as our communities. In the last year:

1. We undertook the Barton EWI project: part funding the installation of External Wall Insulation to 18 properties
2. We supported and are supporting a range of community energy schemes by contributing both time/expertise and grants
3. We spent time influencing strategy and policy. For example, our expert voice is a key reason why DECC now has a Community Energy Strategy.

Projects supported

Barton EWI

Barton is a community in East Oxford, just outside the ring road by Green Road roundabout (aka Headington roundabout), and it is classified as an area of multiple deprivation (IMD). Large parts of the estate consists of post World War II steel frame pre-fabricated houses (BISF) with very poor wall insulation, which leads to high fuel bills and poorly heated properties; and the adverse impact it has on residents' health and well being.

A significant proportion of the housing in the estate is owned by Oxford City Council, which has improved the insulation of its stock over the years. However, many of the properties that were bought under the Right to Buy programme have not had remedial work done on them.



A typical Barton house after it has been retrofitted

The ECO and Green Deal programmes by central Government provide funding for such works, but the maximum amount available is not enough to cover the costs.

The Hub, in partnership with Oxford City Council, developed a project called Warming Barton that consisted of carrying out Energy Performance Assessments in privately owned properties and part funded the installation of External Wall Insulation to 18 properties.

The total costs of the works came to £130,000 with ECO and Green Deal funding of £70,000, leaving a funding gap of £60,000, which the Hub CIC funded with a mix of own funds, other grants and Community Benefit donation from the IPS.

The projected carbon savings is 725 tCO₂e over 20 years.

Community energy schemes

The CIC has been working to bring to fruition a number of large-scale community projects; and has Technical Assistance Agreements with the following:

- **Abingdon Hydro**, a 100kW project where the Hub helped the community group with financial modelling and share offer development: £815,000 of share equity has been raised and the group is looking to secure loan funding to enable them to build the project
- **Goring Hydro**, a 270kW project where the Hub funded environmental studies and engineering design. The planning application should be submitted in FY 2015-16

- **Low Carbon South Oxford**. We have been helping the community group with the feasibility stage of their Solar PV project to develop small scale projects on local community buildings
- **Osney Lock Hydro**, a 49kW project now built and operating. The Hub funded marketing costs for the share offer in 2013 and has since helped with financial modelling and legal costs. The Hub will also be working with OLH on monitoring and communications systems using the operating data produced by the project
- **Oxford North Community Renewables**. The Hub underwrote the legal costs for their share offer to build solar projects at St Barnabas and Cherwell School. The investment was raised last year and the projects were built this year. The projects are being monitored using the new Hub systems on QuickBase
- **Sandford Lock Hydro**, a 300kW project that the community group in Sandford asked the Hub to take forward on their behalf. All approvals are in place for the project now except planning permission. A decision on this is expected by the end of July 2015, which, if positive, would allow us to start building in September
- **Southill Solar**, Southill Solar, a 5MW solar park project in Charlbury. We supported Sustainable Charlbury with the community engagement work on this project, advised on financial modelling and contributed costs (working with Westmill Solar) to secure the grid connection. The project is now back into the planning process and we are hoping for a positive result by the end of July 2015



Communities marking Bring Your Brolly Day for the Southill Solar campaign. (picture courtesy of Tim Crisp)

- **Watchfield Green Energy.** As with South Oxford, we have been helping the community to develop small-scale solar PV projects on local community buildings. A small PV array on the Sports Pavillion will be installed this summer. We hope this begins a repeatable model for other small-scale PV projects in communities
- **West Oxford Community Renewables.** We have helped with the financial modelling and share offer development for WOCRe's latest investment raise to buy-back the Matthew Arnold 100kW solar PV roof from Oxfordshire County Council. The Hub is also working with the WOCRe team to monitor their projects using our QuickBase system.

Outside Oxfordshire

- **Reading Sustainability Centre:** We are helping a potential hydro project at Caversham Lock with its feasibility stage. We feel it is important to share our knowledge with groups where they are located either close to us, or developing technologies where we have particular expertise, such as hydro

- **Ham Hydro** a 1.6GWh project at Teddington Lock. This project has asked for our help in working with the Environment Agency on the legal agreements needed to take their project forward

We have also helped with feasibility work on a number of hydro projects. We hope that Flight's Mill at Kirtlington, Radcot Lock at Faringdon and Day's Lock at Dorchester will still come forward for development. Unfortunately, the project at Godstow Lock proved not to be feasible, because the water there is shared across so many different channels.



Adriano Figueiredo

Hook Norton Low Carbon

Funds held by Hook Norton Low Carbon (HNLC) have been lent on a short-term basis to both the Hub CIC and to Osney Lock Hydro to help bridge short-term cash flow gaps in both organisations. We think this is a brilliant development of the low carbon community network in Oxfordshire, and we are grateful to HNLC. We hope to explore the development of wider local funds with the range of groups in Oxfordshire, which have a long-term income from renewable energy projects.

Community shareholders

*Our 22 community group members each have a £1 'B' shareholding in the CIC to ensure our operation is transparent and is guided by those it is set up to serve. The aim of this separate shareholder class is to link the Hub to those communities. One member – **Mark Luntley** from Westmill Solar – was elected by our community shareholders to sit on the board of directors.*

I was elected in 2014 and joined the CIC board as a non-Executive Director. I have a two year-term.

My remit has two equal parts. To build awareness about the Hub work, and to influence the Hub work programme - so it takes account of community priorities.

In the last year I have met individual groups and helped organise two events where communities were able to share experiences and highlight issues they see as important. Not every group could attend, so this was supplemented by a questionnaire about potential Hub priority areas. That is being built into the Business Plan.

That plan sets ambitious targets for:

- powering down through a community energy service
- a range of innovation pilots
- working with low carbon groups
- a campaign to raise local awareness.

In its first full year the Hub's focus has been on raising funds and delivering against a challenging programme of renewable energy schemes. This is critical for the Hub's long-term viability. The CIC board agreed in the first year to use the small community surplus to support energy improvements in Barton.

As the Hub develops it should start to generate more surpluses from its projects. The Hub CIC Board agreed to work with communities in deciding how those surpluses



Shareholders on a tour of Westmill Solar Farm. (picture courtesy of Ian Curtis)

are used. We will consult on that approach in the coming months. The aim is to balance “strategic” investments, for example fostering innovation, with funds for groups to spend in their area.

We expect communities to challenge the Hub, but the hope is by using our collective experience we will create more than the sum of our individual parts.



Mark Luntley

The 22 CIC ‘Class B’ shareholders are:

Blewbery Energy Initiative, Hook Norton Low Carbon, Kidlington Versus Climate Change, Low Carbon East Oxford, Low Carbon Headington, Low Carbon Oxford North, Low Carbon West Oxford, Oxford North Community Renewables (ONCORE), Osney Lock Hydro, Rose Hill and Iffley Low Carbon, Sandford Hydro, Sustainable Charlbury, Sustainable Faringdon, Sustainable Kirtlington, Sustainable Wallingford, Transition Chipping Norton, Transition Eynsham Area (Green TEA), West Oxford Community Renewables (WOCORE), Westmill Sustainable Energy Trust (WeSET), Westmill Wind Farm, Westmill Solar, Wolvercote Commoners Committee

Grant income raised

Work stream	Donor	Grant Amount £
Bicester Micro-Grid	Cherwell District Council	8,000.00
Bicester Micro-Grid	Oxfordshire County Council	25,000.00
IEE WP2 Grant - Investment Readiness	Oxfordshire County Council	57,900.04
IEE WP3 Grant - Solar Schools	Oxfordshire County Council	60,507.00
LCO week 2014	Oxford City Council	6,000.00
LCO week 2014	Oxford Strategic Partnership	4,000.00
LCO week 2014 film	West Oxford Community Renewables (WOCORE)	200.00
LCO week 2014 film	University of Oxford - Knowledge & Impact Team	500.00
Low Carbon Oxford: Joining The Crowd Report	Oxfordshire County Council	5,000.00
Total Grant Income		167,107.04



Westmill Solar Farm (picture courtesy of Ian Curtis)

Innovation pilots taken forward

Bicester grid

Anecdotal evidence suggests that more than 10MW of renewable energy projects in Oxfordshire have been delayed because of grid constraints. This is affecting the Bicester area in particular, with a limitation on the amount of non-domestic renewable energy projects until the grid is upgraded; as well as frequent daily power outages.

Oxfordshire County Council and Cherwell District Council jointly funded a series of investigations into the problems connecting solar generation to the grid in and around Bicester and is leading a series of initiatives aimed at changing the way that the local network operator (SSEPD) deals with requests to connect new renewable energy generation.

As part of our report on the Bicester Grid a series of recommendations were made with regard to connecting new solar projects, and the Hub is taking a lead in moving this forward. The Hub has input into an Ofgem consultation on the matter, and plans to lead a campaign to Ofgem, DECC and others to spearhead change, not only for Bicester but for Oxfordshire as well.

Woodshare

Currently unmanaged woodland in the County could produce 35,000 tonnes of woodchip per annum, if brought into management. Woodfuel could have a significant impact in enabling households to move away from expensive and carbon-intensive oil-fired heating, thus helping those in fuel poverty have access to more affordable heat and power; as well as providing wider environmental benefits.

Thanks to grant funding from Oxfordshire County Council, the Hub was able to move forward on a pilot study of the potential for a Woodshare business; in partnership with Tom Curtis from 3Keel and others, including the Forestry Commission, Sylva, and TOE2.

By bringing supply and demand side stakeholders together, we believe we can define a financially viable Oxfordshire woodfuel business. The Hub is now pursuing innovation funding to take the feasibility work to the next stage. The ambition is to develop a locally sourced and locally owned supply for what will be a growing number of public sector, business and domestic woodfuel boiler installations in Oxfordshire.

Oxford PV

More than 12 years in development, Osney Lock Hydro is the first community owned hydro scheme to be built on the Thames. It has been fully operational since the beginning of 2015, generating clean electricity and an income stream for community projects in west Oxford.

With the support of Oxfordshire County Council, Osney Lock Hydro was able to do some work with the Oxford University spin-out Oxford PV to see if they could offer the first site for pre-commercial installation of the new product on the new Turbine House. Unfortunately, it has not proved to be possible so far because it has taken a bit longer than planned for Oxford PV to scale up the size of their new panels. The architect at Osney Lock is still looking for ways to incorporate a small panel of the new product.



Anne Augustine



*Fitting the Archimedes screw at Osney Lock Hydro
(photo courtesy of Andrew Watson)*

Networks strengthened

The Hub is increasingly seen as a trusted partner in shaping the region's low carbon agenda, working strategically with businesses, universities and local authorities, identifying barriers and opportunities, and leading the transformation to a decentralised, resilient and locally owned energy system for Oxfordshire.

Community energy

The Hub continues its work to influence Government on community energy. We are a member of the ministerial Community Energy Contact Group and Barbara Hammond, our CEO, chaired the Community Hydro Working Group, which reported into DECC in September 2014.

We are increasingly working within a wider, national context where community energy is organising into a proper economic sector of activity. We are very pleased to be members of the new Community Energy England body that represents our interests and provides a 'voice' on our behalf into government and business. We are also part of the Community Energy Coalition organised by Forum for the Future that brings together the support of large membership organisations such as the National Trust, the RSPB and others.

Good Food Oxford

In 2014 Cultivate and Low Carbon Oxford partnered to launch Good Food Oxford, a network aiming to bring together organisations and businesses across Oxford working towards a fair, healthy, ethical and sustainable food system.



Celebrating the launch of Good Food Oxford during LCO Week 2014.

GFO's first year was a busy one, with a significant achievement being the publication of the Oxford Good Food Charter, a collective vision for healthy, fair and sustainable food for all in the City. The Charter was launched at the Town Hall as part of Low Carbon Oxford Week, followed by a food festival in Bonn Square promoting the city's food producers. The Charter has now been signed by both the City and County Councils and over 100 other organisations. GFO offers continuous support to this network of signatories, catalysing action, research and partnerships, as well as organising events.

The largest event this year was the Oxford Pumpkin Festival, in collaboration with London-based Hubbub, to draw greater public attention to issues around

food waste. Central to GFO's mission is engaging new audiences in sustainable food, and the Pumpkin Festival involved over 20 groups, from community organisations in Rose Hill, to artists and musicians, and the Oxford Botanical Gardens. A grand 'Disco Soup' in Bonn Square fed 800 people, while the pumpkin-themed publicity campaign garnered attention in the Sun, the Daily Mail, the Independent and the Huffington Post!

2015 kicked off with a Good Food Oxford dinner for 200 guests at Oxford Town Hall during the Oxford Real Farming Conference, cooked by Oxfordshire chefs with locally-produced ingredients from Cultivate and other farms.

Good Food Oxford has now secured funding for a staff team of two for the next two years, thanks to the Fund for Sankalpa, and is currently formulating a long-term strategy for building a more sustainable food system in Oxford. We are grateful to the Low Carbon Hub for the support in getting us started.



Hannah Jacobs

Low Carbon Oxford

Low Carbon Oxford brings together organisations from the private, public and not for profit sectors to transform Oxford into a sustainable and inclusive low carbon city. The Hub managed the LCO network and its activities from 2013 to 2015; overseeing the expansion of the network from 15 to 45 organisations, Oxford's first ever Low Carbon Week and the launch of Good Food Oxford.

Oxfordshire's Low Carbon Economy

Oxfordshire's low carbon ecosystem contributes more than 7% to the local economy, a report published by Low Carbon Oxford and the Environmental Change Institute at the University of Oxford has found. The region's innovation strengths also align to areas of need in decarbonising the County, including renewable electricity and the built environment.

There are major opportunities in transport, buildings and low carbon electricity, where investment in innovation and business growth, and investment in infrastructure, can be mutually reinforcing; with Oxfordshire able to act as a 'living laboratory' for a low carbon economy. Combined, these opportunities could create an additional 10,000 jobs for Oxfordshire by 2030; in addition to the 80,000 already estimated as part of the City Deal and Strategic Economic Plan.

To deliver the potential of Oxfordshire's low carbon economy will need a four-pronged approach, underpinned by collaborative leadership:

- First, support should focus on identified growth sectors and areas of strong business opportunity, in particular alternative fuel vehicles and renewable and smart electricity innovations, as well as appropriate cross sector collaborations.
- Secondly, there is an opportunity to drive and support leadership in these sectors through investment in decarbonising Oxfordshire's infrastructure and the development of the living laboratory to deploy existing and developing technologies. This is likely to require support for demonstration projects, testbeds and field trials.

- Thirdly, public strategies (including land use planning), funding and cluster support (e.g. smart cluster branding and a cluster champion) are needed to develop the cross-cutting enabling infrastructure and networks to nurture the full range of innovation, growth and infrastructure opportunities.
- Fourthly, more work is needed to develop specific business cases for public and private sector investment in innovation, business growth and infrastructure.

The Hub and the Oxfordshire Local Enterprise Partnership (OxLEP) are working together to develop a low carbon economy plan, as part of the Oxfordshire Business Support programme.

Oxfordshire's European Structural & Investment Fund (ESIF) 2014-20

We have been working with OxLEP and the ESIF Programme Board to shape the low carbon economy component of Oxfordshire's ESIF Strategy and Implementation Plan. This will account for 20% of the allocated ERDF and EAFRD funds between now and 2020. The first project calls are expected mid 2015.

Social enterprise



Communities marking Bring Your Brolly Day for the Southill Solar campaign.
(picture courtesy of Tim Crisp)

Oxfordshire was the first county to achieve Social Enterprise UK's "Place" status. The Oxfordshire Social Entrepreneurship Partnership (OSEP) was formed in 2014 to build a culture of social innovation and encourage social investment and growth; and to promote the integration of social enterprise into the local economy. The Hub is a member of OSEP's Stakeholder Group, as well as being a member of Social Enterprise UK.



Anne Augustine

Looking forward: 2015-16

2015-16 will be a year of real challenge for the Low Carbon Hub. We will be **scaling up** our the IPS pipeline of projects and preparing for a major equity raise in the Spring of 2016 alongside scaling up our support to community energy projects through the CIC.

We will be going beyond renewable power into renewable heat, energy efficiency in schools and developing much wider, longer term work on energy infrastructure and the low carbon economy across the whole of Oxfordshire.

This is a hugely ambitious programme; this coming year should see us putting the foundation stones in place to achieve it. The main objectives and deliverables from our business plan are listed below.

Objectives to 2018

The 2013-18 Business Plan sets out our Scaling Up ambitions:

- £15m of investment into the Hub IPS
- 14MW of renewable energy projects
- 20 communities supported to develop 8MW of renewable energy projects worth £10m
- A long-term income stream for Hub CIC of £750,000 per annum that supports:
 - i) Mobilised and empowered networks of communities, businesses and researchers
 - ii) A 5-year low carbon innovation support programme for Oxfordshire and associated innovation pilot projects
 - iii) A full funding structure for community energy projects.

Implementation plan for 2015-16

IPS

- Secure Hub IPS pipeline of schools and businesses up to £5m in value
- Bring the Sandford Hydro project to construction readiness, up to £3.5m in value
- Grow the Construction Finance Facility to meet pipeline needs and support the installation of Community-led projects up to £5m in value
- Market all Hub IPS products for 2016 pipeline

CIC

- Support installation of Community-led projects up to £5m in value
- Roll out LED lighting product to schools and businesses
- Secure funding for Smart Grid and biomass feedstock projects
- Secure ESIF funding for 5-year low carbon innovation and support programme and start delivery

Risks and challenges

We are confident that we are building a good, solid platform for scaling up on both the IPS and the CIC sides of the business. There are risks and challenges ahead however:

- We need Government to maintain the commitment to Community Energy of the last administration
- If all goes to plan with our pipeline delivery, we will need to diversify our sources of funding and also review our corporate structure to enable us both to contain risk and grow beyond the limits set around individual social enterprises
- We have not yet identified a good business model for the crucial Powering Down part of our mission.

Of these risks, the third is the both the most important and the most challenging. We will not reach our ambitious targets for de-carbonising the energy system of the County if we cannot work out how to encourage individual householders and business owners to retrofit in very significant numbers.

We think a key part of this will be to link smart use of renewable heat and power with incentives to make buildings more energy efficient. Two of our community shareholders are already involved independently in exciting pilots for possible approaches and we will hope to work with them and their partners on scaling up if the pilots are successful.

We are also working with Hook Norton Low Carbon on how we might repeat and scale up their Revolving Loan Fund for household retrofitting, so that we have a truly local approach to financing small-scale domestic works in a trusted and low-cost way.



Dr Barbara Hammond, MBE

A handwritten signature in black ink, appearing to read 'Barbara Hammond'.



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The Low Carbon Hub is two organisations working together: the Low Carbon Hub Industrial and Provident Society (IPS) Ltd for the benefit of the community [registration number: 319903R] and the Low Carbon Hub Community Interest Company (CIC) [registration number: 75883663]. Both are registered in England and Wales and the registered address is 23 Park End Street, Oxford OX1 1HU.