

LOW CARBON HUB BUSINESS PLAN



2024-25

We are a social enterprise that's out to prove we can meet our energy needs in a way that's good for people and good for the planet



INTRODUCTION

This Business Plan covers a rolling 4-year period starting with baseline year of 2024-25.

Our strategy to 2035 sets out a challenging ambition for Low Carbon Hub, working with our network of community shareholders and local stakeholders. This business plan outlines our first steps towards meeting that challenge.

The energy policy environment in the UK remains uncertain following the change in government in July 2024. In response, we have developed this business plan to be as flexible as possible, starting from a known baseline. Achieving our ambition to grow our portfolio to 165 MW – necessary to meet our stretch scenario and fund our community benefit work through to 2050 – will require strong national policy backing. Greater clarity on policies addressing SME and domestic carbon reduction and demand management is also essential for us to build effective programmes that help communities decarbonise the grid edge while transitioning to renewable heat and power.

If national policy does not evolve in the way we hope, we can still have a significant impact by working with the renewable energy portfolio we currently have. However, this will make us far more dependent on effective partnerships with our local stakeholders, as we would be less able to 'go it alone'. We are fortunate to have benefited from consistent leadership by local authorities in Oxfordshire and a deeply committed innovation ecosystem in the region. This willingness to collaborate has been essential to the Low Carbon Hub's success and has helped establish Oxfordshire as a national leader in addressing climate challenges.

We are proud that the Low Carbon Hub can now offer its own resources to support these partnerships, enabling us to play a clear and consistent role for the benefit of all our 50 community shareholders, right through to 2050 and beyond.

By the end of this business plan period, we will have a clearer understanding of our trajectory and the partnerships we can count on. Wish us luck on this journey – we'll report back in 2028!



A handwritten signature in black ink that reads "Barbara Hammond".

Barbara Hammond, MBE
Chief Executive Officer of
The Low Carbon Hub IPS Limited

CONTENT

WHAT WE DO

Strategic aims	4
Business planning scenarios	6
Monitoring and evaluation	7

OUR MEANS

Financial forecasts	8
Capital structure	10
People	
Board of directors	12
Current organisational structure	14
Future organisational growth	16
Team	16
Corporate structure	16
Partners and influence	16
Community shareholders	16
Local Authority partners	16
Distribution network	16
Funding partners	16
National ambition	16

OPPORTUNITIES

Commercial portfolio business development	18
Commercial portfolio operations	18
Community benefit programmes	18

RISK

19



WHAT WE DO

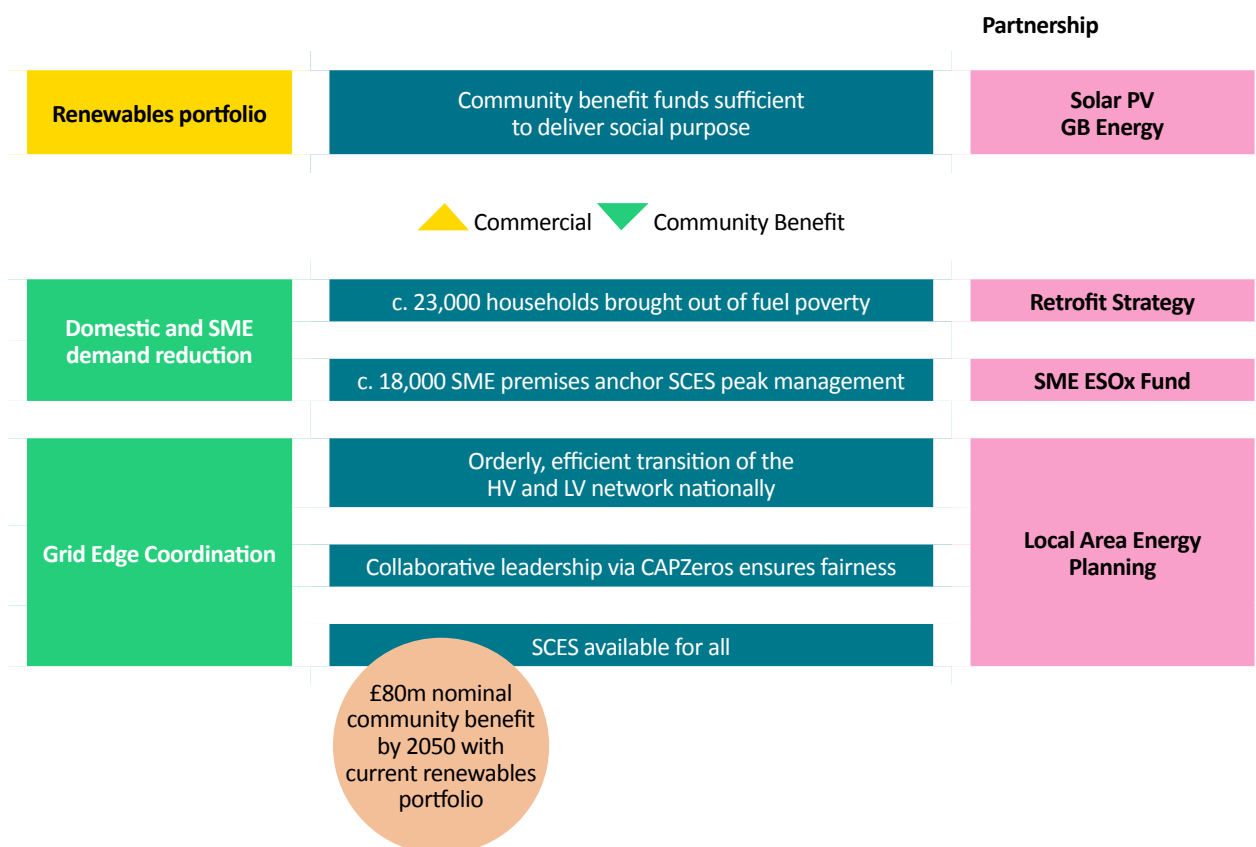
Strategic Aims

We published our [10-year strategy to 2035*](#) at our 2024 AGM. The key diagrams are repeated here to show the benefits we are aiming to deliver by 2050 and the outcomes we will monitor progress against between now and 2035.

We chose the date of 2035 both because it gives a 10-year period for our strategy and because we expect our energy system in the UK to be decarbonised by then. It is a staging post as we move on from there to the long, hard process of decarbonising heat and transport.

The Low Carbon Hub needs to play its part in helping to decarbonise the energy system by moving our existing power needs to renewable electricity; we also need to make sure that by 2035 we have developed robust, consistent programmes that we can fund at the right scale to help households in fuel poverty and SMEs to reduce their demand, and benefit from the transition by becoming smart users and producers of renewable electricity.

Just and Fair Hub: Benefits by 2050



*10-year strategy to 2035: <https://www.lowcarbonhub.org/reports/low-carbon-hub-strategic-plan-2024-to-2035/>

2035 outcomes

We will monitor and report on the Outcome Indicators set out below so that we can understand where we are in achieving the order of magnitude scale of delivery that will set us on the road for 2050.

2035 orders of magnitude required

	From...to
Renewables portfolio business development	£2m community benefit surplus per year	£14m community benefit surplus per year
	23.4 MW installed	165 MW installed
Renewables portfolio operations and maintenance	£2.8m income	£20m income
Domestic and SME demand reduction	0 Whole House Plans funded	23,000 Whole House Plans funded
	0 fabric retrofits funded	9,200 fabric retrofits funded
	20 SME energy assessments	18,000 SME energy assessments
	£0 SME grant fund	£7m SME grant+match fund
Grid Edge Coordination	1 pilot CAPZero	63 CAPZeros
	£59k stewardship fund	£3m stewardship fund

Business planning scenarios

We recognise that the Outcome Indicators for 2035, as set out in our 10-Year Strategic Plan, are very challenging. This is our Stretch scenario for the period and relies on some big renewable energy projects coming through, particularly solar groundmount, for which the development process will exceed 3 years.

To start with, we are therefore working to a scenario we have called Grow where we are attempting to add 3MW of new solar rooftop projects to our portfolio while we identify and develop large-scale opportunities which will allow us to move

into the Stretch scenario. If no new solar rooftop projects come through, we can fall back to our Baseline scenario and still make progress on our community benefit targets.

The reporting metrics for the Grow scenario are set out in the table below. We have shown our Baseline year (2024-25) numbers and then the following three years. We have treated 2024-25 as a year when we are reviewing and setting up programmes and goals for subsequent years. We will publish an update to the plan each year with revised outcome targets according to progress made by the end of each year.

Table 1: Outcome, indicator metrics for 'Grow' scenario

Metric	Outcomes	Indicator	Baseline	Grow		
			2024-25	2025-26	2026-27	2027-28
Planet	Number of installations	No.	55	58	62	65
	Installed capacity	MW	23.9	25.5	26.5	27.5
	Annual generation	GWh pa	18	26	27	28
	Domestic Whole House Plans funded	No.	106	106	150	200
	SME energy assessments funded	No.	79	79	150	200
	SME grant and revolving loan fund	000k	0	0	100	200
	CAPZeros in place	No.	1	1	2	5
	CAPZero stewardship funding	000k	0	50	100	250
Prosperity	Total equity investment	£m	9.8	10.8	11.8	12.8
	Third party financing	£m	6.4	6.4	6.4	6.4
	Interest to investors	£m	0.457	0.495	0.495	0.495
	Surplus spend on community benefit	£m	0.473	0.82	0.84	0.85
People	Investor members	No.	1,773	1,800	2,000	2,200
	Community shareholders	No.	46	46	48	50
	Rooftop host organisations	No.	45	47	50	55
	Formal partnerships: funding and delivery	No.	0	1	6	6

It should be noted that:

- Funding targets for domestic and SME demand reduction assume that our community benefit funding is matched with national or local public funding, and that this is agreed as part of the formal partnership agreements we anticipate setting up with Oxfordshire local authorities.
- Surplus spend on community benefit includes salaries. The budget tables below make clear what the split is.
- The size of our ambitions for portfolio growth will be strongly affected by the Local Power Plan, part of the GB Energy company being set up by the government with Royal Assent expected in the spring of 2025. We are waiting to see what the governance arrangements for this funding will be, and what the timetable is for setting it up. Again, the current financial year will focus on setting up our approach. The table below sets out the possible size of the prize for Oxfordshire if we work in partnership with local authorities to spend, and leverage, these funds. If we work in partnership, the total fund value should be at least £50m over the 5-year parliament. If we don't, then we would focus on orchestrating the use of up to £20m low-cost finance, and £1m capacity building funding, to increase the number of community energy businesses in Oxfordshire, the total amount of community-owned portfolio, and the total amount of community benefit funding.

Monitoring and evaluation

We will report progress annually in our Annual Report. The Board will collaborate with the management team on a yearly cycle to review how effectively work programmes are delivering strategic outcomes. We aim to deliver impact that maximises leverage of our community benefit funds and is:

- tangible
- visible
- lasting
- replicable
- scalable.

Table 2: Potential use of Local Power Plan funds in Oxfordshire

Outcome	Allocation	Lead	Conditionality	Output
Capacity Building	£1,000,000 Grant funding	LA	Clear plan to deliver community benefit	Set up costs Business planning Pre-development costs Partnership development
Investment ready projects	£3,750,000 Development loan repaid if project happens	CE	Specific projects £8k/MW community benefit minimum	Pre-development complete OR shared ownership agreement
Commissioned and operational projects	£29,000,000 >100% grant but vfm tests applied	LA	Investment ready projects built in low-income areas or on public estate. £80k/MW community benefit minimum	Completed projects OR shared ownership agreements completed
	£16,250,000 Construction loan repaid if project happens	CE	Investment ready projects £8k/MW community benefit minimum	
Total funding	£50,000,000	Partnership arrangements encouraged as also leverage of funding Could be part of replication scenario in other LAs		

OUR MEANS



Our impact relies on our community benefit profit and our people. Community benefit profit comes from the solar rooftops owned by the Low Carbon Hub IPS and our two wholly-owned subsidiaries, Ray Valley Solar and Sandford Hydro.

Our people are all employed by the Low Carbon Hub IPS Limited. The financial forecasts below are consolidated, showing totals across all three entities.



Financial forecasts

Our consolidated cashflow forecast is outlined in Table 3 on page 9. It shows the balance of funds for each year after covering core costs needed to run the business and the renewable energy portfolio. Remaining funds are used to achieve community benefit targets, including staff costs.

These forecasts show that we will have the funds required to significantly increase activity in domestic and SME demand reduction, as well as grid edge coordination, while maintaining a cash balance for prudent risk management. During this period, we will raise new funds into the Community Energy Fund to replace any withdrawn or repaid funds.



Table 3: Financial forecasts

	Cash Budgets			
	2025-26	2026-27	2027-28	2028-29
Income				
New renewables	£168,634	£172,007	£175,447	£178,956
Generation	£2,523,325	£2,573,792	£2,625,268	£2,677,773
Grant income	£25,000	£25,000		
Total income	£2,716,959	£2,770,799	£2,800,715	£2,856,729
Operations and Maintenance Expenses	£474,462	£483,951	£493,630	£503,503
Net operating income	£2,242,498	£2,286,848	£2,307,085	£2,353,226
RVS interest and capital	£331,452	£331,452	£197,246	£197,246
Non-Salix interest and capital	£121,633	£121,633	£121,633	£121,633
Salix interest and capital	£107,677	£107,677	£107,677	£107,677
Member interest	£494,924	£494,924	£494,924	£494,924
Total financing costs	£1,055,686	£1,055,686	£921,480	£921,480
Expenses				
Company expense	£126,372	£128,899	£131,477	£134,106
Office costs	£195,060	£198,961	£202,941	£206,999
Staff costs	£942,492	£961,341	£980,568	£1,000,180
Total expenses	£1,263,923	£1,289,202	£1,314,986	£1,341,285
Surplus after financing and expenses	-£77,112	-£58,041	£70,618	£90,460
Community benefit spend				
Staff (included in costs above)	£622,571	£636,268	£650,265	£664,571
ESOX	£200,000	£200,000	£200,000	£100,000
CAPZero				
Total	£822,571	£836,268	£850,265	£764,571
Remaining cash balance	£904,304	£646,263	£516,882	£507,342

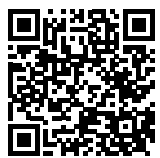
Capital structure

Our capital is currently invested over five portfolios as shown in the table below. Investment and loan funding totalling just over £17m has been used to develop a portfolio of 23.9MW with a starting book value of £19.5m. The capital structure follows rules set down by the Board: firstly, that loan finance should be less than 50% of the total requirement; secondly, that loan finance should be cheaper than shareholder equity.

Table 4: Capital Structure

Capital Structure		
Share offer	Starting capital	Remaining capital
Solar 2014	£1,844,000	£1,511,058
Solar 2016	£792,000	£669,046
ONCORE	£242,937	£202,022
Sandford Hydro	£1,474,177	£1,434,511
Community Energy Fund		
Issue 01	£678,876	£637,918
Issue 02	£103,549	£88,549
Issue 03	£728,650	£714,650
Issue 04	£1,547,744	£1,529,244
Issue 05	£1,500,000	£1,039,453
Issue 06	£1,948,146	£1,948,146
Total	£10,860,079	£9,774,597
Loan finance into Ray Valley Solar		
Oxford City Council Salix	£2,000,000	£1,818,404
Oxford City Council non-Salix	£2,000,054	£1,802,006
Triodos	£2,200,000	£2,091,602
Total	£6,200,054	£5,712,012
Grand totals	£17,060,133	£15,486,609
Total project value funded including grant funding		
Rooftop solar	£4,568,153	
Ray Valley Solar	£11,100,832	
Sandford Hydro	£3,862,795	
Total	£19,531,780	

Watch our latest case study drone footage celebrating the installation of more rooftop solar for Norbar



People

Board of Directors

The Low Carbon Hub operates across a broad waterfront of activity; we are lucky to have a Board of Directors that allows us to cover that breadth, but with a depth of experience and skill that is exceptional. Our Non-Executive Directors have been carefully chosen to cover governance, finance, community energy and business development skills along with deep professional experience in energy technology, energy project development and financing, energy systems and local government.

Our Executive Directors are *ex officio* members of the Board and responsible for managing delivery of our business plan under the leadership of our Chief Executive, Dr Barbara Hammond MBE. The Board is chaired by Steve Drummond, who has been a Non-Executive Director since our inception in 2011.

All Board Directors are elected into post by our members and have to stand down or stand for re-election every three years, with one third of the Director posts up for election every year. We have a Communities Director who is nominated to be elected for a three-year term by our Community Shareholders. This post is currently held by Al Kitchen.

Sub-committees

There are six sub-committees of the Board covering the following areas:

- Audit
- Community Grants
- Investment
- Nominations, Governance and Risk
- Remuneration
- Strategy



Board and team visit to Sandford Hydro.



Key to Committee Members

A	Audit Committee
G	Grants Committee
GR&N	Governance, Risk and Nominations Committee
I	Investment Committee
R	Remuneration Committee
S	Strategy Committee
*	Denotes Chair of Committee

Board of Directors and Executive Team



Steve Drummond

Chairman, Non-Executive Director **GR&N**
Board member since 2013, brings 40 years of energy sector experience. CEO of Electrogenic Ltd.



Barbara Hammond, MBE

CEO, Executive Director **A, GR&N, R, S**
Founder and CEO since 2012, drives sustainability initiatives, pioneering community energy and leading Low Carbon Hub.



Mairi Brookes

Smart Energy Systems Director, Executive Director **S**
Board member since 2023, drives community energy, focuses on carbon emissions reduction and innovation.



Maxine Frerk

Non-Executive Director **R*, S**
Board member since September 2023, leverages grid edge expertise, enhancing customer communication and innovation at Low Carbon Hub.



Al Kitchen

Non-Executive Director **G*, R**
Board member since September 2023, champions community engagement, representing affiliated organisations and advancing Low Carbon Hub's mission.



Tim Jones

Renewables Portfolio Director, Executive Director **I**
Board member since 2023, brings 35 years' energy sector experience, managing renewables investments.



Mish Tullar

Non-Executive Director **G, S***
Board member since June 2023, leads strategy development, leveraging corporate communication expertise and collaboration with Oxford City Council.



Lenah Oduor

Non-Executive Director **A***
Board member since September 2023, brings financial expertise, chairing the Audit Committee at Low Carbon Hub.



Rob Kesterton

Non-Executive Director **A, I***
Board member since June 2023, merges finance acumen with renewable energy experience, chairing the Investment Committee for Low Carbon Hub.



Chris Woolhouse

Non-Executive Director **GR&N***
Board member since June 2023, leads governance, leveraging legal expertise and commitment to the low-carbon transition at Low Carbon Hub.

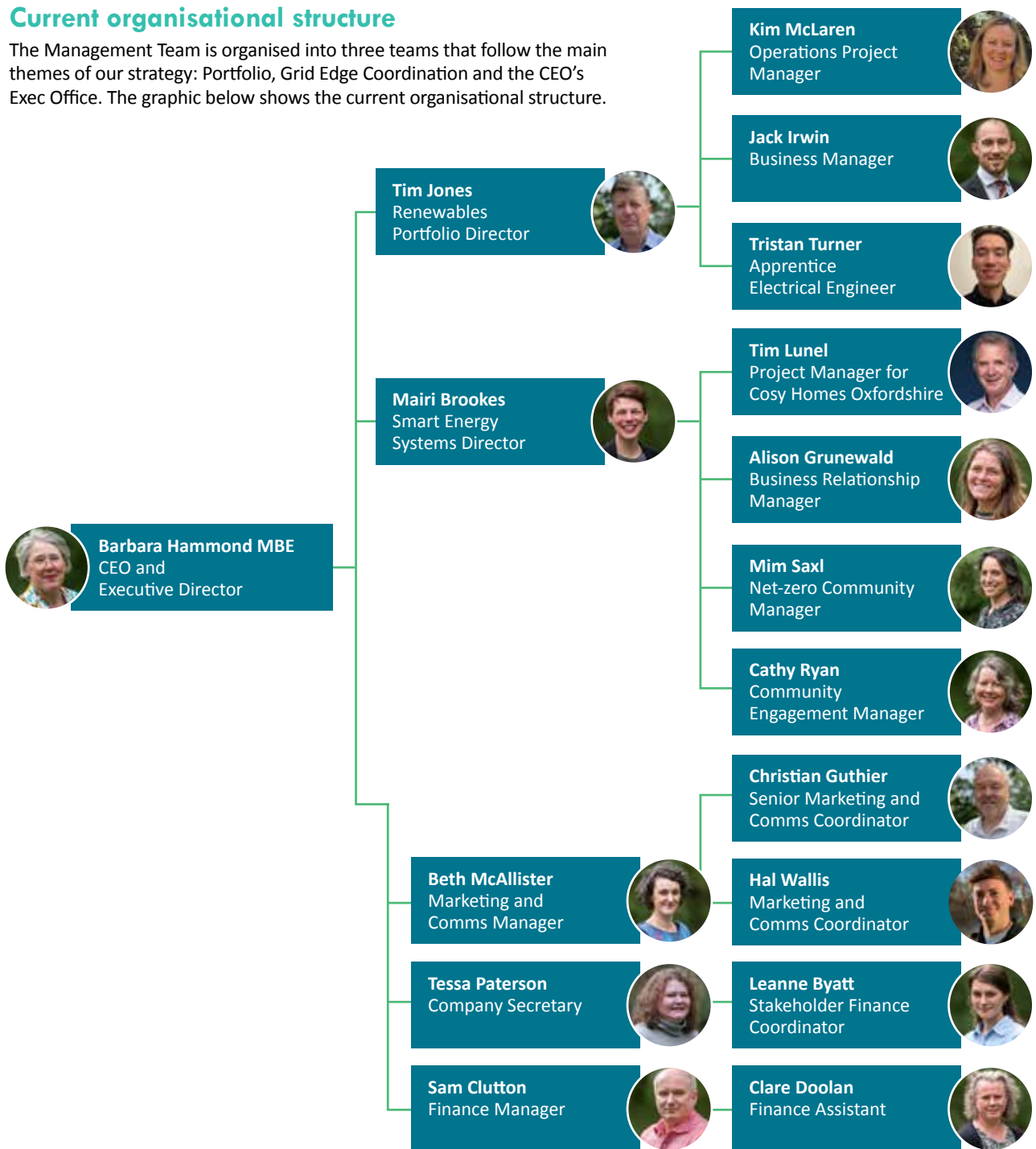


Chukwuemeka Godwin Nwangele

Non-Executive Director **I, S**
Board member since July 2023, serves on the Investment Committee.

Current organisational structure

The Management Team is organised into three teams that follow the main themes of our strategy: Portfolio, Grid Edge Coordination and the CEO's Exec Office. The graphic below shows the current organisational structure.





Board and team visit to Sandford Hydro.

Future organisational growth

Team

If we successfully achieve the scale-up in activity set out in our strategy, the Low Carbon Hub team will need to grow substantially, particularly in Grid Edge Coordination. During the first plan period, we will define a ‘hub and spokes’ model, building core technical expertise in Grid Edge Coordination and CAPZero (Community Action Plan for Zero-Carbon Energy) development, while working with communities and local authorities to grow local teams that can steward CAPZero objectives on the ground.

Corporate structure

Scaling up our renewable energy portfolio will likely lead to more wholly-owned subsidiaries managing major projects, as we already have for Ray Valley Solar and Sandford Hydro. Managing this should be straightforward, as our auditing and accounting processes already treat Low Carbon Hub IPS Ltd as a consolidated group of related companies.

Partners and influence

We cannot achieve the outcomes in our strategy without close and efficient collaboration with local partners: our community shareholders, Oxfordshire Local Authorities, and initiatives such as the Zero Carbon Oxfordshire Partnership, the Local Area Energy Planning partnership, and 100 Together.

Community shareholders

We currently work with 46 community shareholder groups across Oxfordshire, as shown on Map 1 (page 17). Over the next 10 years, we aim to expand this network to at least 63 groups, with one for every primary substation area (PSA) in the county. By working with these communities and their local authorities, as we are doing in West Oxfordshire, we plan to develop and steward a Community Action Plan for Net Zero (CAPZero) in all 63 PSAs.

Local Authority partners

We are working to establish a more formal partnership with Oxfordshire Local Authorities with three main foci:

1. Preparing a robust partnership approach to manage £50m in Local Power Plan funding for renewable energy projects and community capacity building.
2. Developing systematic, funded approaches to address fuel poverty, particularly in low-income areas, places with high deprivation indices, and areas off the gas grid.
3. Advancing the CAPZero and stewardship services so they can identify and fund community energy projects, ensuring that all community benefit arising supports the effective transition to a zero carbon grid edge.

Distribution network

Innovation will continue to be important as we work with partners to develop reliable, speedy approaches to transitioning the Grid Edge, the low-voltage and high-voltage networks where we all live and work. Key partners will be our three Distribution Network Operators (SSEN, NGED and UKPN), our universities, and key local businesses, such as Roadnight Taylor. See Map 3 which shows Oxfordshire's DNOs (page 17).

Funding partners

As well as technological innovation, we will need financial partners to bring in large amounts of funding if we are to meet our strategic targets. Approaches such as the one we are exploring through the Local Carbon Offsetting Project (LCOP) where large businesses do ‘insetting’ of their carbon reduction targets by investing locally to support retrofitting of their supply chain and local businesses will be crucial.

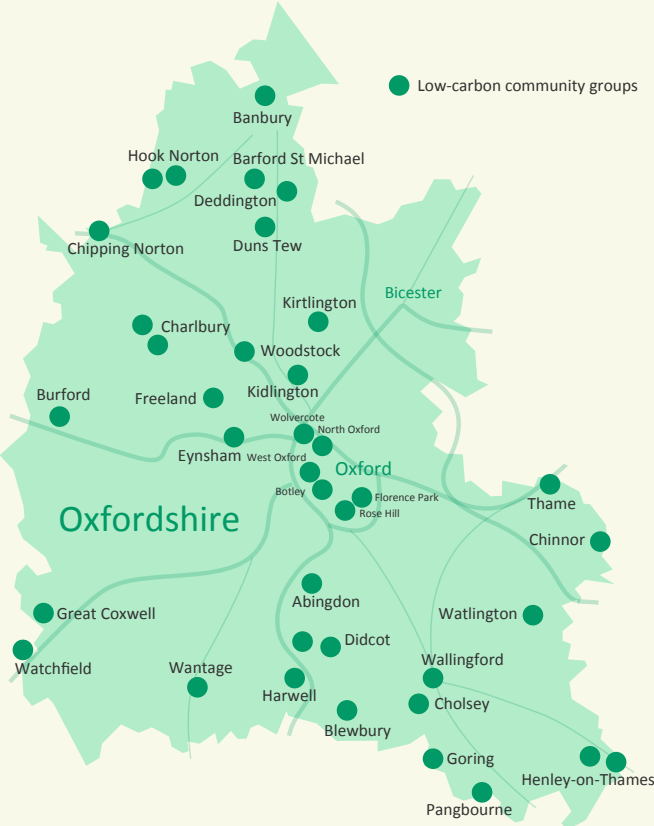
National ambition

Solutions to local and grid edge transition require speedy replication and scaling if the UK is to meet the legal targets enshrined in the Climate Change Act 2008. We will need to set aside funding and resource to make sure that we can play our full part in working with others to share knowledge, and in influencing government, Ofgem and the Climate Change Committee to promote a supportive policy agenda and regulatory environment.

Our local authority partners are already well-embedded in networks of local authorities where take-up of new approaches can be promoted. These include the Oxford-to-Cambridge Arc and the Fast Growth Cities Network.

Community energy businesses now number nearly 600 in the UK, with Community energy sector organisations in each of the devolved nations helping to amplify their voice. We will work closely with Community Energy England to ensure that there is a clear national ambition set out for community energy businesses to share, disseminate and scale successful approaches to grid edge transition.

Map 1: Low Carbon Hub Community Group Network

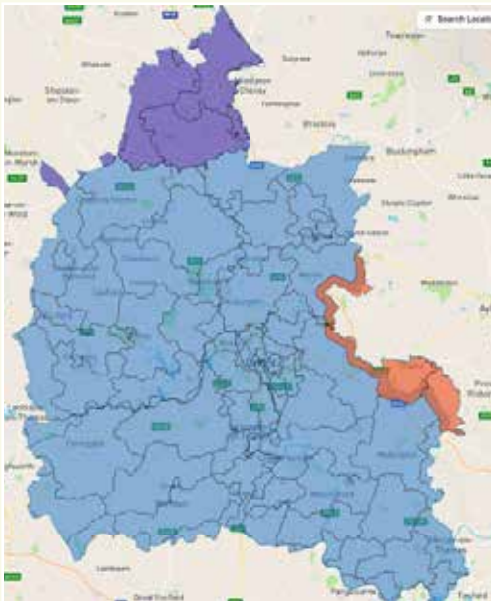


Map 2: Districts and parishes within Oxfordshire



Note: Maps taken from LENZA tool

Map 3: The DNOs and their primary substation areas



63 Primary substations in Oxfordshire (50 of which are SSEN).

OPPORTUNITIES

Commercial portfolio business development

Low Carbon Hub currently owns 4.3MW of solar rooftop projects on 55 roofs; 19.2MW distribution-scale groundmount solar at Ray Valley Solar; and a 0.44MW run-of-river hydro project at Sandford Hydro.

In this plan period, our aim is to grow our solar rooftop portfolio to 7.3MW. The context for this is more challenging than it has been because: the Feed-in Tariff no longer exists; solar PV costs have come down substantially, so that viable roofs have to be bigger; and we are coming closer to the point where businesses might find the payback period on their own capital short enough to make self-investment attractive. The leadership shown by Government in putting GB Energy and the Local Power Plan in place might change this situation substantially.

Alongside the solar rooftop portfolio, we will do the pre-development stages of larger projects we expect to come to fruition around 2030. The grid connection situation in Oxfordshire is difficult because the queue of projects is already there that is required for 2030. Our focus will therefore be on: projects that already have a grid connection secured; projects that can deliver all of the energy generated to a single user through a private wire; and sub-1MW solar and wind projects. Specific activities will be to:

- Make offers for solar groundmount projects at pre-planning or pre-tender stages with secured grid connections, while advocating for shared ownership provisions under the Infrastructure Act 2015.
- Review onshore wind capacity and pre-feasibility studies to identify up to 16MW of projects to take through feasibility and pre-development stages.
- Investigate the grid connection and financial models for 20MW of battery storage for which we already having planning approval at Ray Valley Solar.
- Develop financial models for sub-1MW solar and wind projects.

Commercial portfolio operations

Our priority is to maximise efficiencies and ensure our portfolio meets or exceeds generation and income targets. This includes automating billing for solar rooftop income, completing improvement works at Sandford Hydro, and monitoring Ray Valley Solar performance to better forecast the benefits of bifacial panels.

A key challenge as we move forward in the transition to zero carbon energy will be in forecasting electricity market developments to secure favourable Power Purchase Agreements and capitalise on incoming flexibility markets.

Community benefit programmes

Our strategy sets out very clear 2050 benefits and 2035 outcomes we want to achieve around domestic fuel poverty, domestic transition away from oil heating, SME decarbonisation and grid edge coordination. Our challenge is a decade of unclear national policy framework and unpredictable government spend: we are left without a complete set of products and services to implement our vision and for which the impact evidence is clear. We have developed an Innovation Gateway process to address this situation: everything we do will be clearly described and costed at each stage of development from pilot to a 'business as usual' model that is accepted by the Board.

We are starting with our ESOx service that is focused on SME demand reduction and for which we have a lot of evaluation evidence to show that the OxFutures ERDF programmes from which it developed have been very successful. There is also a clear need for the service because:

- 96% of Oxfordshire's businesses are SMEs;
- they use about the same amount of energy as households; however,
- the only policy that tackles the problem is the Shared Prosperity Fund (UK replacement of ERDF funds). These funds are small and are likely to end after a one-year extension to March 2026.

We will then move onto our services to create and steward Community Action Plans for Zero-Carbon Energy (CAPZero) and, focusing on how we repeat the West Oxfordshire pilot in a way that improves on it whilst radically reducing the cost of developing each plan.

We will continue to support the Cosy Homes domestic retrofit partnership. However, it currently focuses on 'able-to-pay' households and so does not fully address our new strategic outcomes. It is anticipated that there will be substantial government funding to help vulnerable homes, flowing through local government. Our priority is to call for a County Retrofit Strategy and to work with our local authorities to ensure it includes a partnership structure that sets out how Low Carbon Hub and the councils will work in partnership to achieve our common and aligned strategic goals.

Open grants to community shareholders

We will continue offering small and large grants to community shareholders to support local carbon-cutting initiatives.

RISK

The table below highlights key risks to monitor, with scoring reflecting the status as of publication. While impact scores are expected to remain stable, likelihood scores may change depending on the success of mitigation actions or the emergence of new issues.

Mitigation action is taken when issues are identified and crystallised. These actions are logged in an issues log, which records all identified issues, the mitigation steps taken, and

whether they successfully resolved the issue.

The two risks currently flagged as red relate to:

- The ambitious scale of portfolio growth required by our strategy to generate the community benefit funds necessary for achieving our social purpose; and
- The need for highly effective local partnerships to be in place to support the scale-up we think is essential.

Risk owner	Risk	Likelihood	Impact of highest risk	Overall
Portfolio operations and maintenance	Net trading surplus is not enough to cover shareholder returns	2	6	12
	External market pricing	2	5	10
	Health and safety or environmental incidents on site	2	6	12
Portfolio business development	Planned portfolio growth is not achieved	5	5	25
	Supply chain dependence	2	4	8
	PPAs and contract negotiation	4	4	16
	Costs sunk into new projects are uncontrolled	4	4	16
Exec Office	Low Carbon Hub does not have the right partners to achieve its business plan targets	4	6	24
	Office systems are not fit for purpose	1	5	5
	Business cannot continue operating in the event of disaster	1	6	6
	The business cannot recruit and retain the right people	4	4	16
	The business is vulnerable to employment tribunal cases	1	4	4
	Low Carbon Hub cannot prove community benefit purpose to FCA satisfaction	1	6	6
	Finance	Audit process is not well-managed	1	4
	Financial management processes not fit for purpose	1	5	5
	External interest rate and inflation changes	1	5	5



The Low Carbon Hub IPS Limited,
Holywell House, Osney Mead, Oxford OX2 0ES
Tel: 01865 246099 or visit www.lowcarbonhub.org

The Low Carbon Hub IPS Limited is a registered society under the Co-operative and Community Benefit Societies Act 2014.
Registration number 31903R. Registered office: Holywell House, Osney Mead, Oxford OX2 0ES

Photo credits: Low Carbon Hub