

# Oxfordshire Energy Strategy Delivery Plan 2019/20

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# Delivering the Oxfordshire Energy Strategy

## 1 INTRODUCTION

The Oxfordshire Energy Strategy provides the strategic framework to secure a smart, clean energy infrastructure across the county, drive countywide decarbonisation and ensure that Oxfordshire prospers from clean growth.

Implementation will necessitate transformational change and require new approaches and solutions across all sectors in the county. The prize will be, thousands of new jobs, a thriving local economy, a vibrant business ecosystem, and better homes, workplaces and transport.<sup>1</sup>

Our ambition, and the scale of the challenge, is high but is matched by the resolve and commitment of local partners to work together to innovate, learn and deliver solutions. This collaborative approach – and national recognition of the strength of our energy community - has attracted over £80 million investment into the county to deliver nationally demonstrator projects in the first six months of 2019, alone.

Successful delivery of our flagship projects (highlighted in Box 1) together with the wealth of innovative local and national projects already underway – from the Hydrogen Hub, launched in March 2018, to connected autonomous vehicles, to the recently established Faraday Institute developing new battery technology - will achieve much in the short term to drive our low carbon transition and enable much more in the medium to longer term.

### Developing the Energy Strategy

The Oxfordshire Energy Strategy was approved by both the OxLEP Board and the Growth Board in late 2018. It was prepared following an invitation from BEIS for each LEP to work with their local partners to prepare strategies which responded to the energy priorities in their localities. Oxfordshire's strategy was led by a Steering Group including representatives from:

- Oxfordshire local authorities
- The Low Carbon Hub
- University of Oxford's Environmental Change Institute
- Thames Water
- Scottish & Southern Electric
- Private sector businesses

The strategy was developed through extensive engagement and consultation with a wider range of regional and national stakeholders. It builds on the influential *Oxfordshire Low Carbon Economy* report<sup>2</sup> which shows that, with the right policies in place, Oxfordshire could add a further £1.35 billion annually to the local economy and create over 11,000 new jobs by 2030, and in doing so, deliver emission reduction targets in line with local and national targets.

Critically, the strategy informs our Local Industrial Strategy (LIS), published in July, and Oxfordshire's wider growth ambitions, as outlined in the Oxfordshire Housing and Growth Deal, through the Oxfordshire Plan 2050 process.

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<sup>1</sup> Joining the Crowd, 2015

<sup>2</sup> University of Oxford Environmental Change Institute and Low Carbon Oxford, 2014. Oxfordshire's Low Carbon Economy. <http://lowcarbonoxford.org/reports/oxfordshires-low-carbon-economy/>

## Delivering the Oxfordshire Energy Strategy

### Box 1 Headline projects

**Project LEO**, a trailblazing InnovateUK partnership project led by SSEN, will demonstrate a smart, flexible energy system in Oxfordshire.

**Energy Superhub Oxford**, our second Innovate UK partnership project, led by Pivot Power LLP will pioneer new models of battery storage to support the acceleration of Oxford's electric vehicle charging capacity and fleets and provide low carbon ground-source heating to residential and commercial properties

**OxFutures**, an ERDF funded project led by the Low Carbon Hub, focusses on growing the low carbon economy:

- Oxfordshire Greentech is a new low-carbon business network, that brings businesses together to encourage innovation, collaboration and knowledge transfer. It has special interest groups around key themes, including EV transport, social enterprise and the built environment
- Oxfordshire Green Fund supports implementation of business energy efficiency measures through free energy audits and grants. Low carbon feasibility funding is available for new start-ups and established firms developing new products and services. This funding has now been extended for a further 3 years to March 2023.

The **Cosy Homes programme**, led by the Low Carbon Hub and NEF, will trial and demonstrate a model to deliver home energy efficiency, establishing trusted suppliers and installers and a follow through service to deliver best practice.

**Go Ultralow Oxford, V2GO, Electra and Park & Charge**, led by Oxfordshire County Council, Oxford City Council and supported by our four District Councils, will trial, innovate and deliver the charging infrastructure needed to support the transition to low emission vehicles.

**High Potential Opportunity Programme**, funded by the Department for International Trade, aims to position Oxfordshire as a location for investment in low carbon technologies including fusion and battery technology, focussing on Harwell and Culham.

**This Delivery Plan** sets out how these projects knit together to deliver the ambitious objectives set out in the Energy Strategy (Box 2). The Plan identifies key priorities, sets out immediate and short term actions required or underway, and also flags up areas of uncertainty and where further work will be required to identify the delivery pathway.

It is a living document, to be reviewed and updated at least annually. At the same time we will review progress against the actions and objectives annually and will conduct a more detailed review at three to five year intervals.

This document sets out:

- Our approach to delivery (Section 2)
- Workstreams, key activities, milestones (Section 3 and annex A)
- How we will track progress (Section 4)
- Governance – how we will organise to coordinate and drive delivery (Section 5)

## Delivering the Oxfordshire Energy Strategy

### Box 2 Oxfordshire Energy Strategy Objectives

Our vision is:

**'For Oxfordshire to be at the forefront of energy innovation to foster clean growth'**

Our Objectives are to:

- 1. Secure a smart, modern, clean energy infrastructure – including increased electricity grid capacity - which supports our planned housing, industrial and commercial growth, and changing energy requirements;**
- 2. Lead nationally and internationally to reduce countywide emissions by 50% compared with 2008 levels by 2030 and set a pathway to achieve net zero carbon by 2050.\* We will realise the economic benefits of this low carbon transition by supporting:**
  - **ambitious and innovative clean generation projects across the county, both in urban and rural areas, and in growth locations;**
  - **projects that reduce energy demand and increase energy efficiency for domestic, industrial, commercial buildings and transport;**
- 3. Enhance energy networking and partnership working across Oxfordshire to focus on the low carbon energy challenges and funding opportunities created through the Clean Growth Strategy and the Oxfordshire Industrial Strategy.**

These objectives align with the ambition for the Clean Growth Grand Challenge as outlined in the UK Industrial Strategy – *'we will maximise the advantages for UK industry from the global shift to clean growth – through leading the world in the development, manufacture and use of low carbon technologies, systems and services that cost less than high carbon alternatives'*.

\*A number of our local authorities have declared or acknowledged a Climate Emergency. The implications of this new undertaking, and how we can scale up or bring forward projects will be considered as a key priority in this Delivery Plan (section 3.1).

## Delivering the Oxfordshire Energy Strategy

### 2 OUR APPROACH

Our approach to delivery leverages the Oxfordshire energy community's strengths, and focuses on:

- i. Innovation and learning – using the concept of Living Labs, which are being developed through the Oxfordshire Local Industrial Strategy and linked to new housing settlements including garden towns and villages, to provide a space to trial and demonstrate proof of concept.
- ii. Supporting delivery through:
  - policy and regulatory frameworks which make and shape markets;
  - sharing best practice; and
  - engaging with the delivery chain.
- iii. Coordination to increase impact and influence.

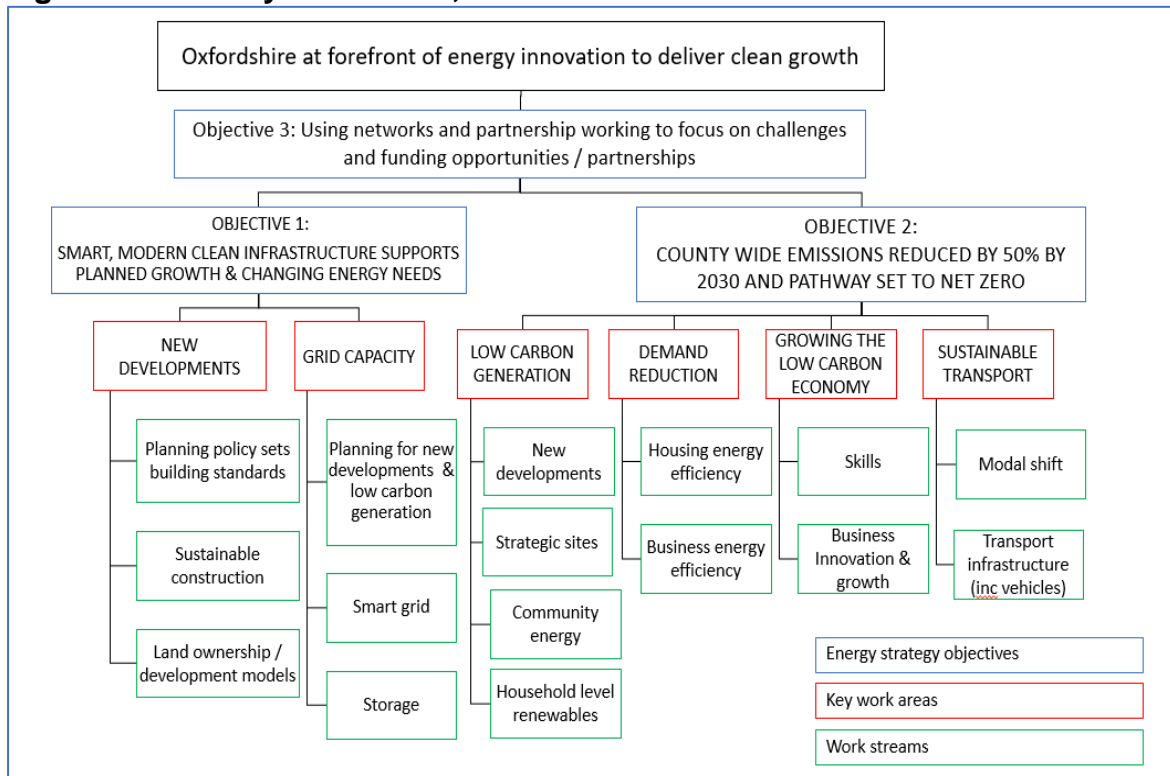
Collaboration and partnership working are key to delivering the strategy. Whilst effective programme and project management and collective oversight will be needed to steer and prioritise, the end result will be achieved through a multitude of autonomous projects. A rigorous review process will monitor progress against our objectives and prioritise areas for further action and investment.

# Delivering the Oxfordshire Energy Strategy

## 3 WORKSTREAMS AND PRIORITIES

The Energy Strategy extends across all sectors, power, heat and transport. The projects and actions needed to meet our objectives fall into key themes which reflect this and will be delivered through a range of interdependent, mutually supporting workstreams. Figure 2 provides a schematic overview – there will be many interconnections and cross fertilisation between the workstreams. Actions will be required across the full spectrum.

**Figure 1. Delivery framework, themes and workstreams**



## Delivering the Oxfordshire Energy Strategy

### 3.1 Key priorities and early actions

A number of areas require immediate or early action:

- i. The growth agenda and increasing shift to decentralised energy drives the need to secure capacity and flexibility in our electricity network
- ii. The development of the Oxfordshire Plan and the refresh of the Local Transport Plan offer immediate opportunities to ensure appropriate prioritisation of emissions reduction, energy efficiency and low carbon energy infrastructure
- iii. Planning for the necessary step change in renewable generation, identifying options for cost effective pathways and key enabling actions
- iv. Identifying models to drive energy efficiency in homes and businesses and enable delivery at scale
- v. Developing a framework of principles to underpin the concept of 'Living Labs' which partners from across the public, private and community sector can endorse, and which will guide the roll out of programmes and data sharing across potential locations.

We also need to consider our headline objective to reduce greenhouse gas emissions (in line with the newly amended target set in the UK Climate Change Act to achieve net zero emissions by 2050) in light of local and national calls to achieve carbon neutrality much sooner.

At beginning of June 2019, a number of the Oxfordshire local authorities have passed Council motions declaring or acknowledging a Climate Emergency. All commit to further reducing emissions across the local authority estates; South Oxfordshire District Council has appointed a cabinet member for Climate and Ecological Crisis Response.

This Delivery Plan is a living document, and we will work with all authorities across Oxfordshire to consider the implications of this new undertaking and how projects within the Plan can be scaled up or, where resources permit, can be accelerated and brought forward.

Table 1 sets out the key actions we will take over the next three years to address these priorities and highlights the outcomes we expect to achieve in Year One.

A full list of the Energy Strategy commitments and the projects and actions (currently underway or planned) to meet these is included in Annex 1.

## Key Priorities and Actions (Years 1 to 3)

<b>Objective 1: Secure the energy infrastructure to support clean growth</b> <i>A secure, smart, modern clean energy infrastructure supports planned housing and economic growth and changing energy requirements</i>		
Priority Actions	Lead organisation(s)	Year 1 milestones
(i) Through <b>Project LEO (Local Energy Oxfordshire)</b> pioneer the Distribution System Operator approach to facilitate planning and implementing of an integrated local energy system <ul style="list-style-type: none"> <li>- create a local energy marketplace to maximise flexibility and balancing to unlock grid constraints, and reduce the need for additional and costly network upgrades to support increasing demand</li> <li>- provide a platform as key enabler to unlock significant expansion of community low carbon energy (supporting objective 2)</li> <li>- deliver nationally and internationally significant learning on local energy system implementation and management</li> </ul>	SSEN, in partnership with Low Carbon Hub, University of Oxford, Oxford Brookes University, Oxfordshire County Council, Oxford City Council, Nuuve, EDF Energy, Open Utility, Origami Energy.	Inception and second phase of LEO complete
(ii) Through the <b>Energy Superhub Oxford</b> (ESO) pioneer new models of battery storage to support the acceleration of Oxford's electric vehicle charging capacity and fleets and provide low carbon ground-source heating to residential and commercial properties.	Pivot Power LLP in partnership with Oxford City Council, University of Oxford, Habitat Energy Ltd, Kensa, RedT Energy	Initiate ESO project
(iii) Deliver demonstrator projects to trial and install EV charging infrastructure, including <b>Go Ultra Low Oxford, Electra, Park and Charge, VPACH</b> <ul style="list-style-type: none"> <li>- Build on the Go Ultra Low Oxford (GULO) project to expand EV infrastructure, drawing on energy system mapping.</li> <li>- Ensure supporting policies are embedded in the Oxfordshire Plan and Local Transport Plan.</li> </ul>	Oxfordshire Local Authorities	<ul style="list-style-type: none"> <li>• GULO trial stage completed. Stage 2 commenced.</li> <li>• VPACH and Park and Charge feasibility studies completed.</li> <li>• Funding applications for demonstration phase submitted.</li> </ul>
(iv) Through the <b>Oxfordshire Plan process</b> : <ul style="list-style-type: none"> <li>- Seek to embed policy in the Oxfordshire Plan to require new developments to achieve high standards of energy efficiency and incorporate low carbon generation</li> </ul>	Oxfordshire Local Authority Planning Teams	Draft Oxfordshire Plan incorporates low carbon policy



## Delivering the Oxfordshire Energy Strategy

<ul style="list-style-type: none"> <li>- Build evidence base and share best practice on low carbon delivery from existing pioneer developments to support policy.</li> <li>- engage developers in strategic dialogue on raising ambition to shape market expectations.</li> </ul> <p>(v) Explore scope for earlier action to <b>set energy efficiency targets in planning policy</b> via Local Plans and through influencing national policy direction.</p>	<p>Energy Strategy Operational Group + Local Authority planning teams</p> <p>Energy Strategy Group</p>	<p>Evidence base compiled to support Oxfordshire Plan</p>
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<p><b>Objective 2. Lead nationally and internationally to reduce countywide emissions by 50% compared with 2008 levels by 2030 and set a pathway to achieve net zero carbon by 2050</b></p>		
<p>Priority Actions</p>	<p>Lead organisation(s)</p>	<p>Year 1 Milestone</p>
<p>(i) Consider implications of Climate Emergency declarations passed by Oxfordshire Local Authorities and how projects can be scaled up or, where resources permit, can be accelerated and brought forward to achieve earlier emission reductions.</p>	<p>Energy Strategy Operational Group</p>	<p>Energy Strategy emission reduction target reviewed</p>

<p><b>Objective 2a. Increasing local low carbon generation</b> <i>Significant increase in local renewable generation supports reduction of countywide emissions by 50% by 2030</i></p>		
<p>Priority Actions</p>	<p>Lead organisation</p>	<p>Year 1 Milestone</p>
<p>(i) Initiate <b>Project LEO local energy systems mapping</b> to identify strategic opportunities for low carbon generation</p>	<p>Oxfordshire County Council, Oxford Brookes University, University of Oxford</p>	<p>Land use map completed. Energy data collection commenced.</p>
<p>(ii) Identify scope for significant scale up of renewable generation in a post-FiT world: (vi) identify barriers and key supporting actions needed and incorporate these into forward workplan (vii) model potential cost-effective pathways for expansion (viii) from this identify key further priority actions needed to maximise expansion at scale, building on existing strength in community renewables and linking as necessary with the Oxfordshire Plan process</p>	<p>Project LEO team Low Carbon Hub</p>	<p>Energy system planning commenced.  First non-subsidised schemes implemented</p>

## Delivering the Oxfordshire Energy Strategy

(iii)	Explore options to incorporate low carbon solutions for water heating (and residual space heating where required) in new developments from 2025 in line with proposed Future Homes Standard.	Energy Strategy Operational Group	Energy system planning commenced
(iv)	Develop a framework of principles to underpin the concept of 'Living Labs' to guide the roll out of programmes, data sharing across potential locations and ethical requirements for dealing with real households and businesses.	OxLEP Project LEO WP6 (University of Oxford and Low Carbon Hub)	Report on proposed ethical standard and engagement methods.

### Objective 2.b. Increasing energy efficiency and reducing demand

*Significant increase in energy efficiency and reduction in demand across the domestic, business and transport sectors supports reduction of countywide emissions by 50% by 2030*

(i)	Through <b>Cosy Homes Oxfordshire</b> , build a countywide home retrofit scheme (including local supply chain) using the successful delivery model, RetrofitWorks	Low Carbon Hub NEF Retrofit Works	Cosy Homes Oxfordshire initiated: - Pilot service in five communities - Grow a supply chain of installers to support the initiation of 550 retrofit jobs
(ii)	Establish a <b>cross-Oxfordshire task and finish group</b> to support a step change in domestic energy efficiency  a. Build on and scale up <b>Cosy Homes project</b>  b. engage homeowners, tenants and stock managers to support change (including through Oxford exemplar approach and pilot project: work with landlords and use enforcement powers under minimum Energy Efficiency Standards legislation (MEES) if necessary to improve properties in EPC bands F&G )  c. share best practice across local authorities on driving residential energy efficiency	Low Carbon Hub  Oxford City Council	BEIS-funded pilot enforcement project delivered
(iii)	Through the <b>Oxfordshire Local Transport Plan refresh</b> ensure that Energy Strategy objectives are supported (modal shift and transition to ultralow emission vehicles)	ES Operational Group – Local Authorities	Local Transport and Connectivity Plan draft includes low carbon policies

## Delivering the Oxfordshire Energy Strategy

(iv) Initiate implementation of first <b>Zero Emissions Zone</b> by 2020	Oxford City Council + Oxfordshire County Council	
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<b>Objective 2c: Realise the economic benefits of the low carbon transition</b> <i>Increasing investment and jobs in the low carbon sector</i>		
<p>(v) Support significant increase in business energy efficiency</p> <ul style="list-style-type: none"> <li>- Through <b>OxFutures</b> support local SMEs to reduce energy consumption.</li> <li>- Support an increase in low carbon business innovation</li> <li>- Explore options to secure funding to continue the GreenTech low carbon business network beyond 2020</li> <li>- develop an ambitious <b>energy efficiency and renewables programme targeted on strategic business growth locations</b></li> </ul> <p>(vi) <b>build a local retrofit coalition</b> supply chain by engaging developers, service commissioners and procurement leads, and aligning skills support. Explore options for Oxfordshire GreenTech special interest group (linked to Cosy Homes and OxFutures2 SME energy efficiency programme)</p>	<p>OxFutures - Low Carbon Hub</p> <p>Oxfordshire Greentech</p> <p>Energy Strategy Group working with Project LEO, ESO and OxFutures2</p> <p>Oxfordshire GreenTech / Energy Strategy Operational Group</p>	<p>Complete 136 business energy audits and provide £56,250 in energy efficiency grants to SMEs.</p> <p>Support 8 new low carbon products and services and 5 new start-up businesses with £225,000 of low carbon innovation feasibility funding and £133,300 of innovation implementation funding.</p> <p>Oxfordshire GreenTech recruit new members and deliver networking events</p>
<p>(vii) Establish <b>clean growth Living Labs</b>, to drive innovation and delivery in community energy efficiency and renewable generation, building on existing exemplar projects (and see Obj 2a, action iv)</p>	<p>OxLEP Project LEO</p>	<p>Framework of principles to underpin the concept of 'Living Labs' agreed</p>

## Delivering the Oxfordshire Energy Strategy

<b>Objective 3. Enhancing networking and partnership working across Oxfordshire</b> <i>Align and focus efforts of Oxfordshire energy community</i>		
Priority Actions	Lead Organisation	Milestones
(i) Establish a high-level <b>Energy Strategy Group</b> to set direction and bring together key players at a senior level, in order to <ul style="list-style-type: none"> <li>- take a clear leadership role in driving forward the clean growth and low carbon agenda across Oxfordshire, linking with and influencing national and international policy networks</li> <li>- guide priorities and allocate resources to drive implementation of the Energy Strategy</li> </ul>	OxLEP	ESG membership agreed. First meeting held by November 2019
(ii) Establish an <b>Energy Strategy Operational Group</b> building on existing collaborative working across the Oxfordshire energy ecosystem, to <ul style="list-style-type: none"> <li>- manage delivery of the work programme set out in this Delivery Plan</li> <li>- support an <u>innovation ecosystem</u> by matching ideas to resources and identifying opportunities to focus funding bids towards Energy Strategy priorities</li> <li>- develop a <u>delivery support infrastructure</u> bringing together stakeholders across the delivery chain to commission and support analysis, identify and spread best practice, and drive, manage and track progress in delivery Energy Strategy objectives</li> </ul>	OxLEP	ES Operational Group established  First meeting held by November 2019
(iii) Set out through the <b>Oxfordshire Plan process</b> an integrated plan aligning growth with infrastructure, setting out a clear vision for clean growth providing <ul style="list-style-type: none"> <li>- a basis to develop compelling business cases to regulators and Government for the necessary supporting infrastructure and innovation investment</li> <li>- a clear framework for the private sector to assess market and investment opportunities</li> </ul>	Energy Strategy Group	Energy Strategy Group meet by November 2019  ES Operational Group establishes stakeholder group to support development of strategic approach

## 4 TRACKING AND MANAGING PROGRESS

### 4.1 Targets and Trajectory

#### Headline commitments

The Energy Strategy sets a target **to reduce countywide emissions by 50% by 2030 from a 2008 baseline of 5,700 ktCO<sub>2</sub>** and a commitment to set the pathway to **net zero by 2050**.<sup>3</sup>

By 2016 (latest figures at time of writing) county wide emissions have already fallen by 22%, driven largely by grid decarbonisation and falling demand from the industrial and commercial sector.

Emissions modelling carried out early in the development of the Energy Strategy informed the scale of actions needed to accommodate planned housing and employment growth and meet the countywide emission reduction target (Box 3). Using Scenario C set out in the influential Low Carbon Economy report published in 2014<sup>4</sup>, the model assumed that by 2030, **56% of total electricity demand** (and 40% of heat) would be met from low carbon sources, equivalent to approximately **2,050 GWh of electricity**. Most of this demand is likely to be met by solar energy, requiring an **increase in capacity from around 300 MW currently installed to about 1900 MW**.

Based on these assumptions, we need to plan to:

- **increase solar capacity** by more than six-fold
- manage that solar capacity across the day and across the year through the **development of a local energy market** and significant new **investment in storage technologies**
- transform a highly-constrained electricity grid into a **lean, smart, fit-for-purpose support for local energy trading** -
- - and ensure that this grid accommodates and benefits from a significant penetration of **EVs into the local transport system** and significant **change over from gas to electric heating**
- decarbonise the gas grid and develop a hydrogen infrastructure.

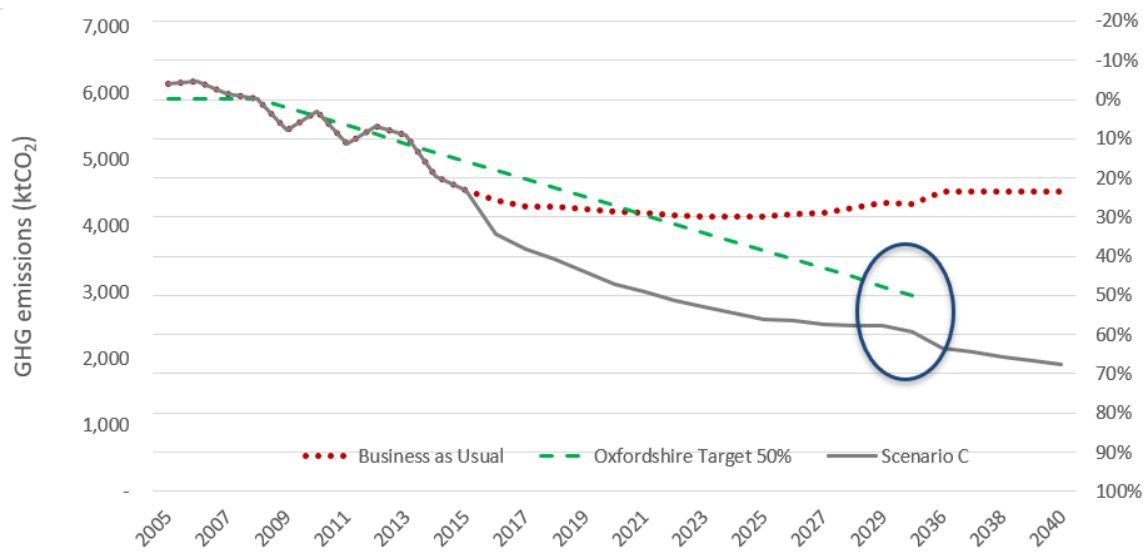
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<sup>3</sup> This target is in line with latest recommendations made by the Climate Change Committee in May 2019 but we have also committed to consider this target in light of recent Climate Emergency motions agreed by Oxfordshire County Council, Oxford City Council, South Oxfordshire District Council and Vale of White Horse District Council (section 3.1).

<sup>4</sup> University of Oxford Environmental Change Institute and Low Carbon Oxford, 2014. Oxfordshire's Low Carbon Economy. <http://lowcarbonoxford.org/reports/oxfordshires-low-carbon-economy/>

## Delivering the Oxfordshire Energy Strategy

### BOX 3 Oxfordshire Greenhouse Gas Emissions Trajectory



Scenario	% reduction to 2030	% Reduction to 2040
Business as usual based on national modelling	27%	24%
With national and local measures	42%	40%
Additional measures - Scenario C	59 %	68%

Source: Aether, 2018. Oxfordshire Greenhouse Gas Projections: 2018 Update

## Delivering the Oxfordshire Energy Strategy

### 4.2 Monitoring and Review

Whilst we recognise that the emissions model sets out just one route to 2030, we will use the assumptions above as the basis to monitor progress toward the headline target.

We will report annually on countywide emissions using local authority level data published by BEIS. A wider set of indicators is set out in Annex B to track implementation against each workstream in the delivery plan. These will be reviewed and refined over the first year as necessary. Our annual review will include progress against the expected outcomes for that year.

A more detailed review of progress against the emission reduction target will be undertaken at regular intervals (expected to be every three years dependent on data availability and update frequency). This will allow us to review emission reductions across the sectors and where necessary adjust the work programme to realign delivery against the trajectory.

A refresh of data in the Oxfordshire Low Carbon Economy Report will monitor growth of the county's low carbon sector.

## 5 DRIVING DELIVERY – Governance

At the start of this delivery plan we highlighted the scale of the challenge, the transformational change needed to deliver clean growth and place Oxfordshire at the forefront of energy innovation. But we also highlighted the drive - and breadth of expertise – of the Oxfordshire energy community, and our successful nationally recognised collaborative approach.

Our governance structure (Box 4) reflects these strengths, drawing together a dynamic, high level partnership with representatives from our local authorities, universities, businesses and energy professionals in the distribution and supply sectors to coordinate the delivery of the energy strategy.

The **Energy Strategy Group** includes a small number of influential decision makers to guide priorities and oversee the alignment and integration of local, national and international policies and initiatives which will drive the clean growth and low carbon agenda across Oxfordshire.

Membership includes senior representatives from our Local Authorities, OxLEP, Low Carbon Hub, the University of Oxford and the local energy network operators.

The Energy Strategy Group oversees and supports the work of the Energy Strategy Operational Group.

**The Energy Strategy Operational Group** builds on existing collaborative working across the Oxfordshire energy ecosystem, to

- manage delivery of the work programme set out in this Delivery Plan
- support an innovation ecosystem by matching ideas to resources and identifying opportunities to focus funding bids towards Energy Strategy priorities

## **Delivering the Oxfordshire Energy Strategy**

- develop a delivery support infrastructure bringing together stakeholders across the delivery chain to commission and support analysis, identify and spread best practice, and
- drive, manage and track progress in delivering the Energy Strategy objectives.

Membership of the Operational Group is based on the Steering Group which oversaw development of the Strategy and includes organisational representation as above along with industry experts. The Group works flexibly, drawing on additional workstream representation as needed. Members are actively involved in project delivery.

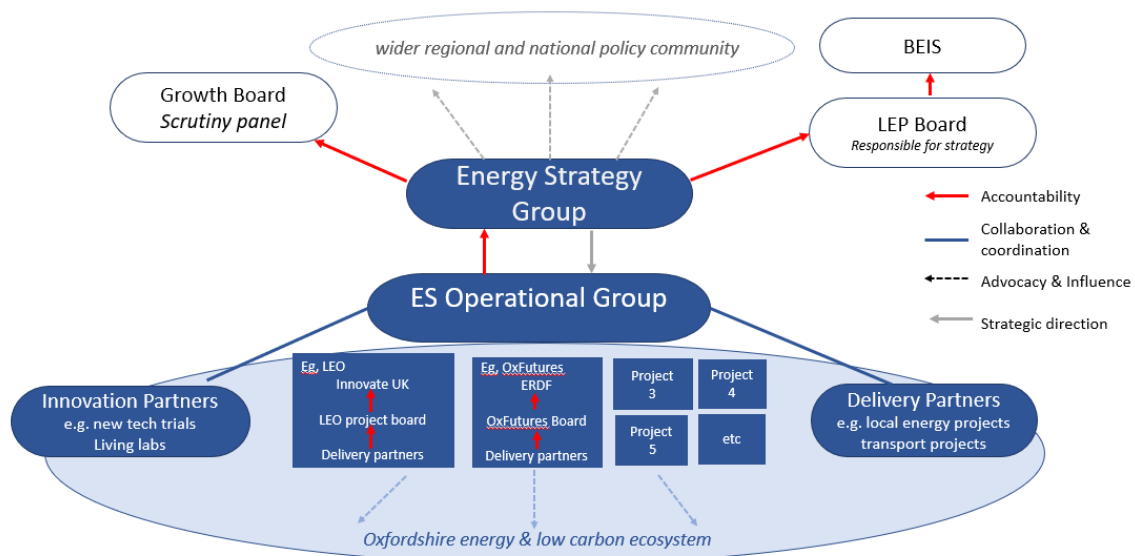
The Operational Group will meet quarterly or more frequently if activities require.

The delivery structure will be appropriately supported, with an early action included to agree the mechanism to deliver this.



# Delivering the Oxfordshire Energy Strategy

## Box 4 Energy Strategy Governance – Structure and functions



### Energy Strategy Group

1. **Strategic direction** – priorities
2. **Oversight, challenge and support** - of “Operational/ Working Group”, including periodic review of strategy
3. **Upward accountability** for Energy Strategy delivery (to Growth Board and LEP Board)
4. **Advocacy and influencing** - acting to promote ES priorities at county-wide, regional and national level

### Energy Strategy Operational Group

1. **Delivery Plan and work programme development**
2. **Delivery management** – of day to day progress on Delivery Plan workstreams
3. **Upward accountability** for Energy Strategy delivery to “Delivery Group”
4. **Promotion of collaboration and sharing of expertise** - on innovation and delivery
5. **Horizon scanning / identify opportunities** - including for further collaboration and funding bids

## Delivering the Oxfordshire Energy Strategy

### ANNEX A – Delivery Plan – actions by workstream

These tables form the basis of ongoing monitoring and prioritisation. We will use it to flag early actions, plan for medium term delivery and highlight areas where further work may be required.

Theme	1.1 NEW DEVELOPMENTS
Summary	Setting policy for energy efficient, low carbon developments

Work-stream	Energy strategy commitment	Actions	Lead organisation / partner	Milestones	Timeframe			
					in progress	short term (1 to 2 years)	medium term 3- 5 years)	long term 5 yrs +
1.1.1 Planning policy standards for new developments								
1.1.1.1	Set criteria through the planning process to ensure high standards and best practice in energy efficiency of new developments [ES46] <sup>5</sup>		Oxfordshire Plan Team, LA Planning & Energy Officers	Oxon Plan adopted	x	x		
	Task and finish group established to: - develop policy proposal for low carbon standards to exceed current building regulations for new development; - compile common evidence base to support policy standards		LA Energy and Planning Officers	Oxon Plan includes ambition to deliver low carbon developments	x	x		
	Embed Energy Strategy principles (low carbon energy, energy efficiency) in plans for all strategic developments.		LA Planning & Energy Strategy Officers	Energy masterplanning carried out for West Oxfordshire Garden village		x	x	
	Embed Energy Strategy principles (low carbon energy, energy efficiency) for all new development and refurbishments.		LA Planning & Energy Strategy Officers			x	x	
	Work with strategic science parks to incorporate low carbon energy solutions to new commercial development sites as part of commitments under the Local Industrial Strategy		OxLEP / Planning Policy Officers		x	x	x	

<sup>5</sup> [ES..] Energy Strategy page reference

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1.1.1.2	Establish mechanisms to ensure mandated high energy efficiency standards are delivered [ES46]						
	Compile countywide evidence base to demonstrate energy efficiency performance in new build development against Oxfordshire and national energy efficiency requirements.	LA Building Control & Energy Strategy Officers	Energy performance delivery monitoring scheme agreed			x	
	Adopt a recognised quality regime for strategic residential development following completion to ensure the 'as built' performance matches the calculated design performance over the occupancy of the buildings for a set period of time.	LA Building Control & Energy Strategy Officers				x	
	Agree a framework to monitor delivery against planning requirements	LA Planning Officers / ESG			x		
	Request national policy support to enforce required building standards	Energy Strategy Group			x		
	Explore the concept of a carbon offset fund to be operated across the county to fund carbon offsets where development is unable to secure efficiencies on site.	Energy Strategy Operational Group					
1.1.2 Sustainable construction							
1.1.2.1	Explore best practice on low energy and energy efficient new development to ensure Oxfordshire at forefront of best practice [ES46]						
	Develop evidence base and share best practice on current development in Oxfordshire and elsewhere	LA Planning and energy officers	Evidence base developed in line with Oxfordshire plan timetable			x	
	Establish a programme of events to promote innovation and best practice in sustainable construction to raise ambition within the development industry of the opportunities across Oxfordshire to incorporate low carbon solutions as part of planned growth	OxLEP, Oxford Brookes, Construction Excellence Oxford	OXLIS 2019			x	x
1.1.3 New land ownership and development models							
1.1.3.1	Improved coordinated public sector approach to development and capturing land value uplift to fund low carbon infrastructure [ES43]						
	Explore options to influence building standards on land owned by public sector	LA lead / wider public sector, landowners				x	x

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1.1.3.2	Explore voluntary deals with landowners on structuring planning and economics to deliver low carbon development. [ES46]						
	Publicise Bicester approach more widely	LA lead, wider public sector, landowners			x	x	
	Investigate approach taken by other local authorities, eg Norwich City Council achievement of PassivHaus standards on ALMO developments	Energy Strategy Operational Group			x	x	

## Delivering the Oxfordshire Energy Strategy

Theme	1.1 GRID CAPACITY
Summary	Ensure the local energy network, in particular the electricity grid, can support clean growth and changing demand

Workstream	Energy strategy commitment	Actions	Lead organisation / partner	Milestones	Timeline			
					in progress	short term (1 to 2 years)	medium term (3- 5 years)	long term (5 yrs +)
1.2.1	1.2.1 Planning for new developments and low carbon generation							
1.2.1.1	Develop new partnership with DNO/DSO & OFGEM to align grid and new development and support low carbon generation [ES25,36]	Deliver Project LEO: Partners work together to demonstrate smart flexible local market place	SSEN	Project LEO delivered	x	x	x	
1.2.1.2	Grid to accommodate non-linear changes [ES30]	Distribution network operators develop future energy scenarios.  LA energy & planning officers engage with SSEN to further develop local energy planning	SSEN / WPD / Local Authority planning and energy officers	Future Energy Scenarios published (complete)  Project LEO system mapping commenced	x	x	x	
1.2.1.3	DNO complete strategic full system planning study to identify overload risks and plan for flexible services	Overload risks assessed and plan developed for flexible services (noting link and partial delivery through Project LEO)	SSEN / WPD					
1.2.1.4	Oxfordshire Plan process gives consideration to how local and national agencies can join up to support growth [ES28, ES36]	Engage with Ofgem / respond to consultations to secure better alignment between regulatory framework (including financial mechanisms) and need to plan for new developments	ESG			x	x	x

## Delivering the Oxfordshire Energy Strategy

1.2.2 Smart Grid								
Workstream	Energy strategy commitment	Actions	Lead organisation / partner	Milestones	in progress	short term	medium term	long term
1.2.2.1	Position Oxfordshire at forefront of Smart Grid technology, explore new ways of working & innovative projects [ES30]	Deliver Project LEO to demonstrate local smart grid and market trading platform	SSEN / Low Carbon Hub		x	x	x	
		Initiate Drayton Social Constraint Management Zone	SSEN			x	x	
1.2.2.3	Support development of strategic storage and potential private wire / local grids [ES34]	Deliver Energy Superhub Oxford to demonstrate storage at scale and integration with EV charging infrastructure	Pivot Power / University of Oxford / Oxford City Council	Battery storage installed, cabling to other sites for EV	x	x		
		Lead nationally to develop innovative battery storage solutions	Faraday Institute					
1.2.2.5	Network smart chargers for EV charging demand management [ES34]	Deliver Electra project: Develop smart chargepoints using latest and anticipated standards and technologies. Use work to develop strategy and policy direction.	OCC iHub		x	x		
1.2.2.6	Mobile - Vehicle to grid - vehicle battery assets [ES34]	Deliver V2GO project: V2GO is designed to assess the economic, environmental & energy impacts of widescale vehicle to grid (V2G) adoption, using data from real world trials and a specifically commissioned geospatial model to understand how local policy and regulatory framework can influence and maximise the benefits.	OCC iHub	Phase 2 - current fleet data collection. Phase 3 - real world V2G trails due to commence April 2020.	x		x	

## Delivering the Oxfordshire Energy Strategy

Theme	2.1 ENABLING EXPANSION OF LOW CARBON GENERATION							
Summary	By 2030, at least 56% of our electricity demand – an additional 2,050 GWh – and 40% of our heat requirement needs to be met by renewables if we are to achieve our carbon reduction targets							
Workstream	Energy strategy commitment	Actions	Lead organisation / partner	milestones	Timeframe			
					in progress	short term (1 to 2 years)	medium term 3- 5 years)	long term 5 yrs +
2.1.1 Increasing Low Carbon Generation in New Developments								
2.1.1.2	Include renewables on new developments {ES39}	Require new developments to incorporate (or connect to existing) low carbon or renewable energy generation (subject to viability constraints).	LA planning teams	Policies incorporated in Local Plans		x	x	
	LA planning policy for new developments set to drive increase in renewables and energy efficiency [ES44-5]	Develop plan to ensure new developments meet requirement for no new homes to be connected to the gas grid by 2025	LA planning and energy officers / Energy Strategy Operational Group	Alternative heating options identified			x	
2.1.2. Strategic sites for low carbon generation								
2.1.2.1	Identify strategic locations for new generation capacity [ES 38]	Deliver Project LEO work package 4 to create an energy mapping tool to better identify appropriate locations (and capacity) for strategic low carbon generation developments	Oxon CC + Oxford Brookes University	Mapping tool available Planners identify suitable sites for large scale renewables		x	x	

## Delivering the Oxfordshire Energy Strategy

2.1.3 Community energy									
2.1.3.1	Support & develop models that deliver local revenue and community benefits from low carbon generation [ES39]	Identify pathways to build on LCH model to scale up delivery of community energy schemes	LCH / Energy Strategy Operational Group				x	x	
		Continue to develop business models that support delivery of local community energy					x	x	
2.1.4 Household [building] level renewables									
2.1.4.1	Include renewables on existing buildings [ES39]	Through Project LEO, develop communication tool to enable householders to access information on options and registered installers. Note link with energy efficiency programmes and installations	Oxon CC + Oxford Brookes University LCH						
		Consider options for heat decarbonisation, including use of heat networks / smart heat systems	Energy Strategy Operational Group						
2.1.4.2	Develop model for delivering on-building generation at scale, building on LCH work [ES50]	Develop model for delivering on-building generation at scale	Low Carbon Hub/ Energy Strategy Operational Group	Project LEO WP4 informs engagement				x	



## Delivering the Oxfordshire Energy Strategy

2.1.5 Decarbonising heat								
2.1.5.1	Decarbonise gas network [ES39]	Explore and develop low carbon options for use in gas network	SGN			x	x	
2.1.5.2	Support development of new & existing technology (eg hydrogen) into local infrastructure [ES39]	Explore options to integrate hydrogen into existing gas grid  ESO project includes ground source heating: identify 300 installs (residential and commercial)	Energy Strategy Operational Group  Pivot Power, Oxford City Council	Installed ground source heat pumps	x	x	x	

Theme	2.2 DEMAND REDUCTION				Timeframe			
Workstream	Energy strategy commitment	Actions	Lead organisation / partner	milestones	in progress	short term	medium term	long term
						(1 to 2 years)	3- 5 years)	5 yrs +

### 2.2.1 Housing energy efficiency

2.2.1.1	Coherent retrofit programme to bring all homes up to minimum EPC band C by 2035 in line with Clean Growth Strategy ambitions [ES47]	Deliver Cosy Homes (RetrofitWorks) programme to demonstrate model for able to pay householders  Establish working group to explore model and funding options for delivery of retrofit at scale  Through Project LEO deliver communication programme to signpost able to pay market to retrofit  Request Central Government to require household energy efficiency programme to meet commitment in Clean Growth Strategy	LCH + NEF + Retrofit Works  LCH / Energy Strategy operational group Oxon CC + Oxford Brookes Uni  Energy Strategy Group		x	x	x	
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## Delivering the Oxfordshire Energy Strategy

Workstream	Energy strategy commitment	Actions	Lead organisation / partner	milestones	Timeframe			
					in progress	short term	medium term	long term
2.2.1.2	Deliver energy efficiency improvements	Continue to deliver energy efficiency improvements for fuel poor households	Local Authority Affordable Warmth Network (Better Housing, better health programme)			(1 to 2 years)	3- 5 years)	5 yrs +
		Deliver BEIS funded Minimum Energy Efficiency Standards (MEES) pilot project to identify and improve F and G rated private rented properties (residential and commercial) via legal enforcement powers	Oxford City Council	start enforcing against landlords of non-compliant properties	x	x	x	x
		Explore options to extend Oxford City BEIS-programme to engage with RSLs	Oxford City Council + ESOG			x	x	
2.2.1.3	Explore options for funding and incentives needed to support large scale retrofit, eg loans, energy bonds [ES48]	Establish working group to explore funding mechanisms to support delivery of large scale retrofit	Energy Strategy operational group			x		
2.2.1.5	Sponsor and support community level work on behaviour change / culture change in households to increase energy efficiency [ES52]	Explore options to deliver community level campaign and support to increase household energy efficiency [note link to low carbon generation and Project LEO]	Bioregional, CAG Network and Oxford Brookes University. Energy Strategy operational group			x		

## Delivering the Oxfordshire Energy Strategy

Workstream	Energy strategy commitment	Actions	Lead organisation / partner	milestones	Timeframe			
					in progress	short term (1 to 2 years)	medium term 3- 5 years)	long term 5 yrs +
<b>2.2.2 Business energy efficiency</b>								
2.2.2.1	Encourage innovation & sharing best practice between large energy users, and with SMEs on energy efficiency [ES 38]	Support the extension of the <i>Growing Oxfordshire Low Carbon Economy</i> programme to increase the energy efficiency of SMEs across Oxfordshire through the take up of energy audits and the implementation of actions through the use of local suppliers (see also 'Growing low carbon economy')	Oxfordshire Greentech, BioRegional, Oxford Brookes University, OxLEP		x			
2.2.3.1		Continue to deliver energy reduction activities across public sector estates	Local Authorities	ongoing carbon emission reductions across public sector estates	x	x	x	x
		Deliver street lighting upgrade programme (including commissioning of central management system and smart-enabled lampposts)	Oxfordshire County Council	Four year programme to upgrade street lighting delivered	x	x	x	

## Delivering the Oxfordshire Energy Strategy

Theme	2.3 GROWING THE LOW CARBON ECONOMY							
Summary	Realise the economic benefits of transition to low carbon economy							
Workstream	Energy strategy commitment	Actions	Lead organisation / partner	milestones	Timeframe			
					in progress	short term	medium term	long term
<b>2.3.1 Skills</b>								
2.3.1.1	Build up expertise of installers on renewables [ES39]	Through the emerging Skills Advisory Panel we will review provision of low carbon skills and seek to influence greater availability where gaps exist and aggregate demand amongst current and future workforce - including working with schools	OxLEP			x	x	
2.3.1.2	Develop high skills workforce for the renewable energy sectors and for sustainable construction [ES50]	We will continue to support the Oxfordshire Advanced Skills centre at Culham to support skills development for low carbon sector businesses including higher level apprenticeships	OxLEP		x	x		
<b>2.3.2 Business innovation and growth</b>								
2.3.2.1	Develop retrofit business supply chains and skills base [ES49]	<b>build a local retrofit coalition</b> supply chain by engaging developers, service commissioners and procurement leads, and aligning skills support.	Energy Strategy Operational Group with Project LEO, ESO and OxFutures2					
		Work alongside the Faraday Institution and stakeholders to better understand supply chain challenges. Explore potential for apprenticeship levy transfer mechanism to support SMEs	OxLEP					

## Delivering the Oxfordshire Energy Strategy

	Build capacity within the low carbon business economy to innovate and develop new ideas and services	Support the extension to the <i>Innovation Support for Business</i> programme providing proof of concept grants, advisory support and collaboration with leading R&D institutions to facilitate technology transfer and new products to market	OxLEP						
	Position Oxfordshire as a world leader for investment in Clean Growth technologies	Promote Culham and Harwell as key investment locations for new clean growth R&D Hubs for fusion technology and battery technology	OxLEP, UKAEA, Harwell EnergyTec Cluster						
2.3.2.2	Develop energy sector business supply chain	Support the extension of the <i>Growing Oxfordshire Low Carbon Economy</i> programme to increase the energy efficiency of SMEs across Oxfordshire through the take up of energy audits and the implementation of actions through the use of local suppliers	Low Carbon Hub, Oxford Brookes						
2.2.2.1	Encourage innovation & sharing best practice between large energy users, and with SMEs on energy efficiency [ES 38]	Support Ecobusiness Centre							
		Support establishment of Oxfordshire Greentech and the development of a low carbon business network for the region to facilitate B2B collaboration, best practice exchange and commercial opportunities	Oxfordshire Greentech, BioRegional, OxLEP						

## Delivering the Oxfordshire Energy Strategy

Theme	2.4 SUSTAINABLE TRANSPORT
Summary	Support the transition to ultralow emission vehicles; reduce the number of journeys made by car and provide for alternative modes of travel.

Workstream	Energy strategy commitment	Actions	Lead organisation / partner	milestones	Timeframe			
					in progress	short term	medium term	long term
2.4.1	Modal shift							
2.4.1.1	Reduce the number of journeys provide for alternative modes of travel	Embed policies to deliver low carbon transport options in Local Transport Plan	Oxfordshire County Council			x		
		Deliver Active & Healthy Travel Strategy	Oxfordshire County Council		x	x		
		Cities 4 People project considers “New approaches for community-driven mobility innovations at neighbourhood level” with a Barton and Black Bird Leys (Eastern Ark) focus.	OCC iHub					
		Deliver a multi-disciplinary feasibility study that will examine the integration between CAVs and Mobility as a Service (MaaS). Consider the combined business models in investing to develop and procure enabling infrastructure.	OCC iHub					

## Delivering the Oxfordshire Energy Strategy

		Deliver MultiCAV: The first ever CAV demonstrator led by a public transport provider (First Group) will transform Oxfordshire to a testbed for CAVs. In this ambitious project, CAVs will become part of an increasingly complex MaaS offer.	OCC iHub					
		Zip2 multi modal Journey planner developed, enabling informed travel choices & providing base platform for MaaS	OCC iHub	finish testing & launch	x	x		
	Shift more freight to rail & low carbon shipping from bulkheads (explore options BMW Mini, logistics coys) [ES33-4]	Explore lower carbon options for freight transport with local business (eg BMW Mini, logistics companies)	Energy Strategy Operational Group			x	x	
		Develop first and last mile delivery options	OCC iHub			x	x	
		Zip2 multi modal Journey planner developed, enabling informed travel choices & providing base platform for MaaS	OCC iHub	finish testing & launch	x	x		

### 2.4.2 Transport infrastructure, including vehicles

2.4.2.1	Charging infrastructure supports shift to electric vehicles [ES34]	Deliver charging infrastructure demonstrator projects (including Go Ultralow Oxford, installation of around 100 EV charging stations in Oxford's residential streets)	GULO lead delivery partner Oxford City Council	GULO trial stage to be completed June 2019. Stage 2 commences July 2019	x	x		
		Develop EV charging and parking strategy to support transition, working with all district and the city council.	OCC iHub		X	x		
		Electra: develop smart chargepoint using latest and anticipated standards and technologies. Work is being used to develop strategy and policy direction.	OCC iHub		x	x		

## Delivering the Oxfordshire Energy Strategy

2.4.2.1 (cont)		<p>Deliver VPACH 1 Feasibility study examining extending the use of existing Virgin Media infrastructure to supply energy and data communications to be used for electric vehicle charging for residents with no access to off road charging.</p>	OCC iHub	Feasibility study complete	x	x		
		<p>Deliver VPACH 2 Demonstration phase of VPACH 1 looking to install a significant number of road side charge points across the UK.</p>	OCC iHub	Application to Innovate UK submitted - if successful will start 1/9/19.		x		
		<p>Deliver Park and Charge 1 Feasibility study looking at the deployment of smart chargers to meet the needs of EV users who have to park their vehicle on the highway by using EV charging hubs centred on local authority, park and ride and retail car parks.</p>	OCC iHub	Feasibility study complete				
		<p>Deliver Park and Charge 2 Demonstration phase of Park and Charge 1. Working with all district and the city council to deploy c.250 chargers at 30-35 car parks across Oxfordshire.</p>	OCC iHub	Application to Innovate UK submitted - if successful will start 1/9/19.		x		
		<p>Deliver Electric taxi rapid charging scheme to provide 19 rapid and fast chargers for ULEV taxis</p>	GULO Taxi Scheme lead delivery partner Oxford City Council	Stage 1 pilot - 2 x rapid chargers installed June 2019. Stage 2 commences July 2019	x	x		



## Delivering the Oxfordshire Energy Strategy

2.4.2.1 (cont)		Deliver Bicester On street EV strategy (Report highlighting suitability of On street chargers/ meeting funding requirements. Lacking resource to progress further)					x	x		
		DRIVEN: In this ground-breaking project (led by Oxbotica), a fleet of CAVs, will perform an end-to-end journey from Oxford to London. To achieve this a number of key issues in moving towards an autonomous enabled future are addressed, such as fleet management and insurance models.	with OCC iHub							
		Support SMEs to learn about how EVs and charging infrastructure can help their business to become more energy efficient	Oxfordshire GreenTech					x	x	
		Replace pool cars with EVs and introduce procurement policy for ULEV	Oxfordshire CC	x				x	x	
		Develop a procurement framework for installation of EV charging points. Installation to follow at its office and in car parks (rapid and fast chargers)	West Oxfordshire DC							
2.4.2.2	Transition of public transport fleet to ULEV [ES33]	Support public transport companies to move to ULEV	To be developed							

## Delivering the Oxfordshire Energy Strategy

Theme	3. COLLABORATION AND PARTNERSHIP WORKING							
Workstream	Energy strategy commitment	Actions	Lead organisation / partner	milestones	Timeframe			
					in progress	short term (1 to 2 years)	medium term (3- 5 years)	long term 5 yrs +
<b>3.1 Governance and partnerships</b>								
3.1.1.1	Establish high level coordinating group to oversee multiplicity of energy interests and opportunities across Oxfordshire [ES51]	Agree and implement energy strategy governance	OxLEP	Energy Strategy Group and Operational Groups established	x	x		
3.1.2.1	Work with Greater Southeast Energy Hub to draw on support and expertise for Oxfordshire Energy Strategy	Oxfordshire representative attends GSEEH Board meetings			x			
3.1.3.1	Progress against the energy strategy objectives will be regularly reviewed against a number of performance indicators	Finalise and agree monitoring and review process			x	x		
<b>3.3 Support Innovation Ecosystem</b>								
3.2.1.1	Establish structured support for innovation ecosystem [ES51]	Agree and commit to appropriate resourcing for officer support for energy strategy delivery	OxLEP			x		
3.2.1.2	Match innovative ideas with resources [ES52]	Energy strategy operational group provide overview of funding resources and potential projects				x	x	x
3.2.1.3	Focus innovation funding bids towards strategy objectives [ES52]	Partners collaborate to develop funding bids for energy strategy project delivery				x	x	x
3.2.1.4	Develop Living Lab concept to test new energy technologies	Partners collaborate to establish living labs to test innovative energy solutions				x	x	x

## Delivering the Oxfordshire Energy Strategy

3.3 Support Delivery Ecosystem							
3.3.1.1	Establish structured support for delivery ecosystem [EST51]	Agree and commit to appropriate resourcing for officer support for energy strategy delivery	OxLEP				
3.3.1.2	Bring together existing groups to review, manage, create and plan energy infrastructure capacity for growth and so enable large scale and ambitious investment [ES52]	Establish working group to align infrastructure requirements to support growth, including input to Oxfordshire Infrastructure Strategy update	LA LEP Uni DSO/DNO LCH NGO business SME developers				
3.3.1.3	Seek public funding (alongside private investment) to deliver step change in energy and low carbon solutions for Oxfordshire [ES52]		LA LEP Uni DSO/DNO LCH NGO				

# Delivering the Oxfordshire Energy Strategy

## Annex B – PROVISIONAL INDICATOR SET

Energy strategy delivery themes and work streams		Indicator		Target (by 2030)	geography	update frequency (data avail)	Data source
		No	Description				
Context	Context	1	Total number of houses by district		County / district	annual	LA housing trajectories
Context	Context	2	Number of new homes completed by district (between 2016 and 2030)	100,000	County / district	annual	LA housing trajectories
<b>Smart, modern clean infrastructure supports growth &amp; changing energy needs</b>	<b>1</b>						
new developments	1.1	3	EPC band of delivered new homes	New homes achieve EPC band A	by county / district	quarterly	Live tables NB5
planning policy sets build standards	1.1.1	4	number of local plans including low carbon standard for new developments	5	district	5 yearly	LAs
land ownership /development models	1.1.3	5	Number of developments delivered via alternative models	to be agreed			
Grid capacity	1.2						
planning for new developments	1.2.1	6	Pipeline applications for new strategic developments (e.g. over 50 houses)				SSEN
planning for generation	1.2.2	7	Pipeline applications for new generation assets				SSEN
smart grid	1.2.2	8	Number of assets offering flexibility to the grid	To be agreed			SSEN
storage	1.2.2	9	Battery storage, installed capacity	To be agreed (identify through Project LEO and ESO)			Project LEO and ESO
<b>Countywide emissions reduced by 50% by 2030</b>	<b>2</b>	10	County wide emissions (ktonnes CO2e) - total and by sector	1312	county / district	annual	
low carbon generation	2.1	11	Renewable heat supply, installed capacity (GWh)	2183	County	quarterly	Renewable energy planning database
	2.1	12	Renewable heat as a percentage of total heat demand	40%	county	quarterly	BEIS regional renewable stats
	2.1	13	Renewable electricity supply, GWh	2052	county	quarterly	BEIS regional renewable stats

## Delivering the Oxfordshire Energy Strategy

Energy strategy delivery themes and work streams		Indicator		Target (by 2030)	geography	update frequency (data avail)	Data source
		No	Description				
	2.1	14	Renewable electricity supply as a percentage of electricity demand	56%	county	quarterly	BEIS regional renewable stats
new developments	2.1.1	15	% energy demand from new developments provided by renewables	To be agreed	county / district	quarterly	
strategic sites	2.1	16	Installed capacity, strategic sites	To be agreed (Project LEO may inform)	county / district	quarterly	BEIS regional renewable stats
community energy	2.1	17	Installed capacity, community energy		county / district	quarterly	LEO / LCH Peoples Power station
household level renewables	2.1	18	installed capacity, household renewables		county / district	quarterly	LEO / LCH Peoples Power station
demand reduction	2.2	19	Total final energy use by sector (and by fuel)		county / district	annual	BEIS statistics
household energy efficiency	2.2.1	20	No. of existing homes renovated per year	4,000	county / district		LCH / other TBC
	2.2.1	21	Energy standard achieved for renovations (kWh/m2 year)	EPC band C	County		
	2.2.1	22	All dwellings, EPC band	All homes EPC band C by 2035	County / district	annual	MHCLG, live tables on EPC
business energy efficiency	2.2.2	23	Business energy efficiency - EPC non-domestic properties	To be agreed	County / district	annual	MHCLG, live tables
Growing the low carbon economy	2.3	24	low carbon sector - GVA contribution	£2.5 bn	County		published GVA tables
	2.3.1	25	Number of jobs in low carbon sector	18800	county	annual	BRES
skills	2.3.2	26	Number of businesses accessing low carbon skills programme				OxLEP
business innovation & growth	2.3.2	27	Number of business accessing low carbon innovation advice				OxLEP
Sustainable transport	2.4	28	Number of new vehicles registered each year	38,133	county		DVLA
	2.4.1	29	annual vehicle miles	Trend	county	annually	DfT statistics
	2.4.1	30	average traffic growth	Trend	county	annually	OCC
	2.4.1	31	number of cycle journeys	Trend	county	annually	OCC
	2.4.1	32	bus passenger journeys	Trend	county	annually	

## Delivering the Oxfordshire Energy Strategy

Energy strategy delivery themes and work streams		Indicator		Target (by 2030)	geography	update frequency (data avail)	Data source
		No	Description				
transport infrastructure	2.4.2	33	Share of EVs in new fleets	25%	county	annually	
	2.4.2	34	Licensed ULEV by LA (as % of total number of vehicle registrations)	Trend	county	annually	DfT licensed and registered vehicles
	2.4.2	35	licensed plug ins by LA (as % of total vehicle registrations)	Trend	county	annually	DfT licensed and registered vehicles
	2.4.2	36	total number of car registrations by LA	Trend	county	annually	DfT licensed and registered vehicles
	2.4.2	37	No. of EV home charging points installed by 2030	30,000	county / district	ongoing	Charge point registry
	2.4.2	38	No. of public DC fast and AC slow charging stations	300	county / district	ongoing	Charge point registry
	2.4.2	39	Mass rapid transit (km)	50	county		
	2.4.2	40	Cycling infrastructure delivered (km)	200	county / district	annually	OCC