West Oxfordshire Climate Change Strategy 2025-2030

Foreword

By working together to cut carbon emissions, we can achieve districtwide net zero by 2050 – through sharing knowledge and collaborating on climate projects and policies. This is not a challenge any one person or organisation can tackle alone. Everyone has a role to play – at the local, regional, national, and global level.

In West Oxfordshire, we are already experiencing the effects of climate change - from heatwaves and drought to flash flooding and severe storms – along with the socio-economic and environmental impacts from these extreme weather events. The most vulnerable in our communities at greatest risk. We must act now to reduce these impacts through climate mitigation and adaptation, so our communities are better protected, and future generations can enjoy the wonderful natural world we live in. How we respond to the climate and ecological emergency today will define our legacy.

~~*By working together to cut carbon emissions, we can achieve net zero by 2050 – through sharing knowledge and collaborating on climate projects and policies. This is not a challenge any one person or organisation can tackle alone. Everyone has a role to play – at the local, regional, national, and global level.*~~

~~*At the same time, o*~~*Our communities must build resilience to the impacts of climate change by adapting to the changes we can no longer avoid. This is through developing community resilience plans, implementing natural flood management, or fitting awnings and shading to keep buildings cooler during extreme heat. Every action, big or small, contributes to a stronger, more prepared community.*

Embracing change is essential – and change can bring real benefits. Responding to climate change presents opportunities to create warmer, more energy efficient homes, generate green jobs, and create greener, more vibrant spaces. These changes not only help the environment but also enhance quality of life and can drive sustainable economic growth.

By setting a clear course for action, this strategy reaffirms that Oxfordshire is at the forefront of climate leadership.

Councillor Andy Graham, Leader, and Councillor Prosser, Executive Member for Climate Action, and Nature Recovery

1 Introduction

1.1 This Strategy sets out actions over the next five years in progressing towards districtwide net zero before 2050 and for our communities in West Oxfordshire to become more resilient to climate impacts through collaboration and partnership working. The Strategy includes a climate context, carbon baseline, pathways, and priority actions.

1.2 It is vital that collective climate action continues, whereby climate insights and best practice are shared to foster a culture of learning and to accelerate progress.

1.3 Each priority action includes measures which enable monitoring and reporting. A project tracker will be updated regularly, and progress will be reviewed and reported on annually by the Council. The Strategy is a live document and actions may be added, reprioritised, and refocused as part of an annual review process. This will take account of the changing legislative and regulatory environment, as well as local government reorganisation and devolution. The projects will either be completed or be at an appropriate stage by 2028 to handover to the new unitary and strategic authorities.

1.4 The Strategy updates and supersedes the Climate Change Strategy 2021-25.

2 Definitions

Carbon neutral: Refers to the use of offsets (not specifically GGRs) to balance out residual emissions.

Embodied carbon: Refers to the GHG emissions associated with the manufacturing, transportation, use and disposal of building materials used in construction. Embodied carbon is therefore an upstream emissions consideration and is categorised as Scope 3.

Net zero: Reducing emissions as close to zero as possible, with any residual being removed from the atmosphere with Greenhouse Gas Removals (GGRs). Net zero can refer both to all greenhouse gases (GHGs) or carbon dioxide (CO2) alone.

3 Vision

3.1 The Strategy supports achievement of the following vision:

- Clean and local renewable energy is commonplace, providing communities with energy independence and resilience.
- Retrofit is a continuous programme of activity and is helping to reduce energy consumption, addressing fuel poverty, and improving health.
- Growth and new development are designed to the highest standards of energy performance and environmental sustainability.
- Active forms of travel including cycling and walking are widely adopted, and ultra-low emission transport infrastructure is equipped to meet rising demand.
- Nature recovery solutions play a crucial role in mitigating climate change and enhancing reliance from its impacts.
- Grassroots activities by local organisations and communities are supported, with everyone feeling they can work collectively to make a difference, taking climate action at home, at work and as part of their local community.
- Partnership working accelerates climate action.

4 UK

4.1 The Paris Agreement is a legally binding international treaty on climate change which pledges to keep temperatures "well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C".

4.2 The UK Climate Change Act 2008 was amended in 2019 to include a legally binding net-zero target by 2050. The Act requires at least a 100% reduction in greenhouse gas emissions by 2050 compared to 1990 levels and sets carbon budgets for five-year periods. The Climate Change Committee advises the government on these budgets and monitors' progress.

4.3 The UK Government's approach is underpinned by the Net Zero Strategy 2021 alongside sector specific strategies, for example the Heat and Buildings Strategy 2021 and Clean Power Action Plan 2030.

4.4 Over 300 local authorities have declared a climate emergency and nearly two thirds of councils in England aim to be carbon neutral by 2030.

5 Oxfordshire

5.1 The Pathways to a Zero Carbon Oxfordshire (PAZCO) report, commissioned by the Oxfordshire Enterprise, outlines an ambitious net zero pathway, 'Oxfordshire Leading the Way'. It relies on widespread culture and behavioural changes combined with high deployment of new local electricity generation using solar PV.

5.2 The Oxfordshire Net Zero Route Map and Action Plan outlines a pathway for the county to achieve net zero by 2050 and identifies net zero actions that should be taken forward collaboratively by Oxfordshire authorities, partner organisations and stakeholders. The actions were grouped by sector and these included road transport, energy supply, domestic, and industrial and commerce.

5.3 The Oxfordshire Climate Change Adaptation Route Map puts forward actions to better manage, prepare for and respond to severe weather events and increasing likelihood and severity of these in the future. It aims to build climate resilience in our natural environment, people, infrastructure, buildings, and businesses to minimise the impacts of climate change.

6 West Oxfordshire

6.1 West Oxfordshire District Council declared a Climate Change and Ecological Emergency in 2019 and approved a Climate Change Strategy in 2021.

6.2 Addressing climate change and accelerating nature recovery are key priorities in the Council Plan 2023-27.

6.3 There remains strong local support for climate action. The most recent Youth Needs Assessment and Local Plan consultation had climate change as a top concern that needs addressing.

6.4 The Council has committed to achieving carbon neutrality by 2030. The Carbon Action 2024-2030 includes the carbon baseline, pathways, and actions to achieve this target.

6.5 The West Oxfordshire Nature Recovery Plan 2024-2030 sets out nature recovery actions, and aims to “radically enhance nature, its positive impact on our climate and the priority it’s given, helping to make West Oxfordshire a place where people and nature thrive”.

7 Achievements and Challenges

7.1 Good progress has been made on carbon reduction over the last five years in West Oxfordshire and beyond. West Oxfordshire District Council was ranked the highest performing rural district council in the UK in the 2025 UK Council Climate Action Scorecards. These are the highlights:

Energy planning

- Oxfordshire Local Area Energy Planning countywide energy modelling.
- Community Action Plan for Zero Carbon Energy assessments and retrofits.

Decarbonisation

- Better Housing and Better Heath energy advice service.
- Home Upgrade Grant 2 and Sustainable Warmth Grant funding for energy efficiency upgrades and low carbon heating for low-income households.
- Cost of living support programme to assist the most vulnerable with energy.
- Carbon training for small and medium businesses and the Climate Action Fund grants which led to carbon reduction of over 46tCO2e.
- Council's carbon emissions have significantly declined.
- Waste Environmental Services Programme to transform waste services across Oxfordshire.
- West Oxfordshire Food Strategy includes actions to build a healthy, fair, and sustainable food system.
- Witney LCWIP, and plans underway for Carterton and Eynsham, to identify and improve cycling and walking routes.
- EV car clubs in Eynsham and Witney.
- Park and Charge Oxfordshire installed electric vehicle charging points in five car parks and additional chargers are in Woodford Way with 76 in total.

Planning

- Local Plan Preferred Options include energy and water efficiency policies.
- Salt Cross Area Action Plan exemplary net zero policy.
- Net Zero Carbon Toolkit provides a practical, easy to follow guide to help plan a net zero housing project.
- Sustainability Standards Checklist requires planning applications to include climate change considerations.

Climate resilience

- Climate Change Adaptation Route Map for Oxfordshire to minimise the impact of climate change on Oxfordshire..

Other

- ~~Sustainability Impact Assessment Tool to embed climate considerations in Council decisions.~~
- Zero Carbon Oxfordshire Partnership (ZCOP) has been expanded to include West Oxfordshire large businesses and increase collaboration in carbon reduction and climate resilience.

- Oxfordshire Local Nature Recovery Strategy to accelerate nature recovery to help wildlife to flourish, improve the quality of our air and water, and mitigate the impacts of climate change.
- Coronation Community Orchards Scheme to facilitate community food growing.
- Sustainability Impact Assessment Tool to embed climate considerations in Council decisions.

7.2 There have been many challenges that have been overcome. These include:

- Changing behaviour through leading with co-benefits, for example warmer homes
- External grant funding and public-private partnerships to fund capital projects.
- Technological innovation through working with experts
- More renewable energy generation through locally owned solar arrays and rooftop

8 West Oxfordshire's Emissions

8.1 The data used to produce the baseline emissions profile originated from the UK Local Authority Greenhouse Gas Emissions Statistics (2005 – 2022).[1] This dataset provides emissions data from the UK national greenhouse gas inventory that has been disaggregated at the local authority level. The chart below shows current sources of GHG emissions in West Oxfordshire.

8.2 As of 2022, total emissions were 596 $ktCO_2e$. Transport (193 $ktCO_2e$) was the highest emitting sector in West Oxfordshire in 2022, making up 32% of total emissions. The A40 and A420 are major commuting and freight routes, contributing to vehicle-related emissions.

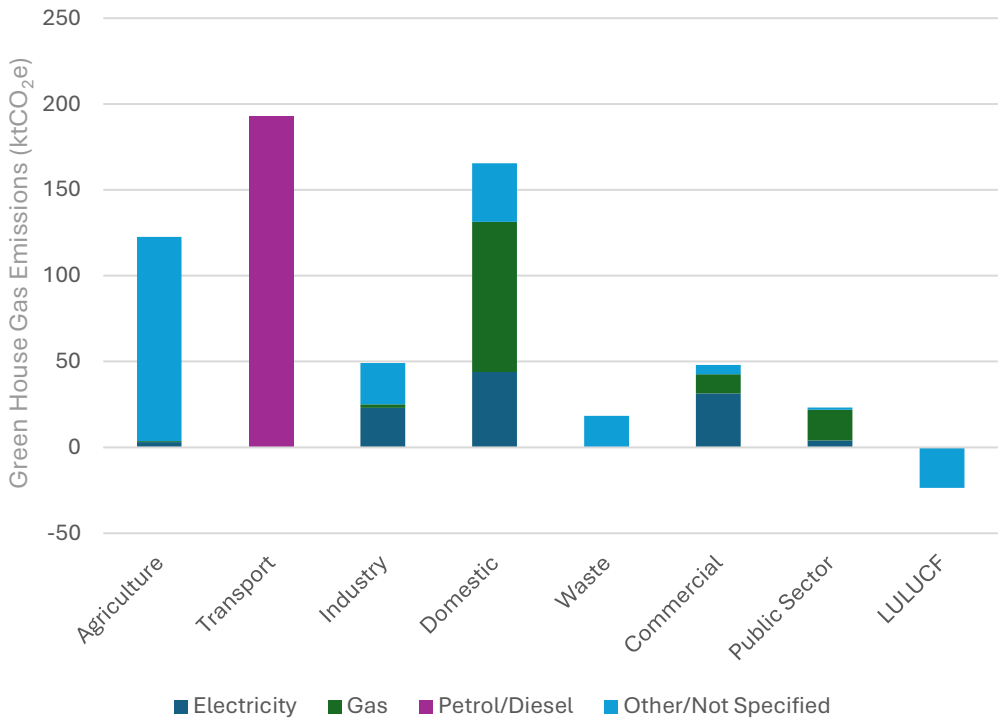
8.3 The domestic sector (165 $ktCO_2e$, 27% of total emissions) is also a significant contributor, with emissions resulting from energy consumption for heating, lighting, and appliances. The third highest emitting sector is agriculture where emissions relating to livestock, fertiliser use and energy consumption for running buildings and machinery make up 21% of total emissions (122 $ktCO_2e$). Industrial emissions (49 $ktCO_2e$) make up 8% of the total and the commercial sector also makes up 8% (47.98 $ktCO_2e$) with heating, lighting and operational energy use contributing to carbon output.

8.4 Waste emissions (18 $ktCO_2e$, 3% of the total) result from the processing of waste produced in West Oxfordshire, including methane emissions from landfill and emissions associated with wastewater processing. The land use, land use change and forestry (LULUCF) sector (-24 $ktCO_2e$) acts as a small carbon sink, equivalent to a circa 4% reduction in total emissions.

[1] UK local authority and regional greenhouse gas emissions statistics - GOV.UK

8.5 Official statistics on regional renewable electricity data show that the total renewable energy capacity in West Oxfordshire was 82MW in 2023, and that this generated about 78GWh of electricity. For context, total electricity consumption in the district was significantly higher in 2022 at almost 500GWh.[2] Installed renewable capacity in West Oxfordshire is dominated by photovoltaics which provided 97% of the total capacity in 2023, with the rest being provided by landfill gas.[3]

Figure 1 Baseline GHG inventory for West Oxfordshire, 2022



9 Net Zero Pathway

9.1 The emissions pathways have been developed to show a Business as Usual (BAU) and net zero pathway.

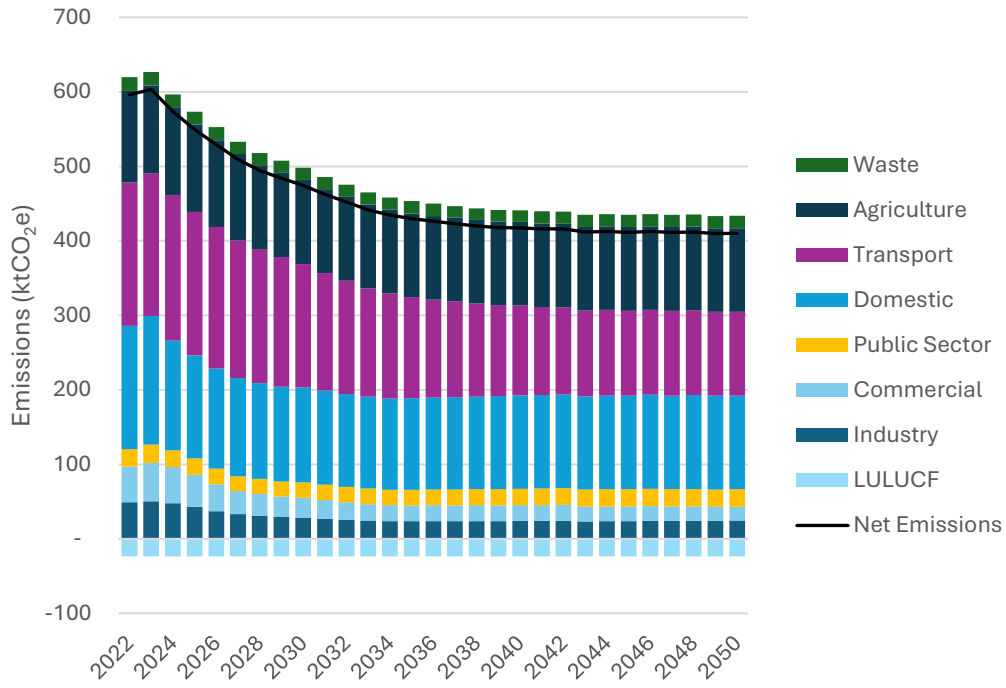
9.2 The BAU scenario is a forward trajectory of emissions from each source and sub-sector in the baseline, based on the DESNZ Energy and Emissions Projections (EEP) from November

[2] Total final energy consumption at regional and local authority level: 2005 to 2022 - GOV.UK
[3] Regional Renewable Statistics - GOV.UK

2023, which accounts for variables such as population and GDP growth, energy use, fuel prices and committed government policies.

9.3 Under the BAU scenario, over 400ktCO_2e emissions would remain in 2050.

Figure 2 BAU emissions pathway



9.4 Using currently available technologies, if funding and practicalities were no obstacles, approximately 70-80% reduction in area wide emissions could be achieved. The timescales for when this would be achievable are based on how fast measures can be implemented.

9.5 The remaining 20-30% of emissions will rely on a combination of technological improvements, most notably carbon capture, and significant changes in agricultural

practices and land management, which would need to be supported by a large-scale shift in dietary habits.

9.6 It is theoretically possible to achieve higher levels of demand reduction, but this just means that the impact of fuel switching and supplying renewable energy will reduce, so the residual emissions will remain roughly the same.

9.7 The scale of impact is due both to the impact of the individual measure on a given sector, and the proportion of baseline emissions that sector originally accounted for. So, for example, domestic buildings currently account for around 28% of total emissions, which places a limit on the overall % reduction you can get from measures in the buildings sector.

9.8 Residual emissions in 2050 are expected to include approximately:

- 20-30 ktCO2e from industry, which will mostly be due to high temperature applications where it is currently unclear whether these can be electrified. Potentially this could be reduced through use of green hydrogen or another zero-emission energy source.
- 10-20 ktCO2e from waste, which will need to be mitigated through some sort of carbon capture and storage (CCS) technology being fitted to waste incinerators.
- 80-100 ktCO2e from agriculture – uncertain as it will rely on adoption of major changes in agricultural practices and dietary changes.
- 15-25 ktCO2e from transport, mostly comprising HGV fuel use, unless this can be replaced with EVs, green hydrogen, fuel cell technology, etc.

9.9 Those emissions add up to around 140 ktCO2e but the net amount is slightly lower due to carbon sequestration from the Land Use, Land-Use Change, and Forestry (LULUCF) sector.

10 Climate Actions

10.1 The Strategy presents a set of priority actions over the next five years to achieve carbon reduction and greater climate resilience. There are also many cross-cutting principles to create an enabling environment for climate action. These include:

Climate awareness, accounting, and plan making

- Increase awareness of climate mitigation, climate impacts and adaptation.
- Residents, businesses, and organisations to understand their carbon footprint and how to build their resilience to a changing climate.
- Take action to reduce carbon emissions and adapt to climate change.

Community empowerment and stewardship

- Community-led initiatives deliver climate action by leveraging local knowledge, upscaling, and shared ownership of renewable resources.

- Involvement of local communities in decision-making related to climate mitigation and adaptation to ensure solutions are tailored to specific needs and contexts.

Partnership working

- Strong partnerships between stakeholders can accelerate change and drive climate action.
- Work collectively to be effective, taking climate action at home, at work and as a community.

Sharing knowledge

- Local case studies and best practice is shared on how climate action can be taken to address climate change.
- Use good examples in preparing and implementing climate plans.
- Learn from specialists and local environmental groups on how to increase biodiversity, accelerate nature recovery and build natural capital.
- Climate Action Network continues as a channel to disseminate information on climate action, local projects, and initiatives. A quarterly bulletin on climate news, community projects and way to get involved in climate work is circulated by the Council.

Low carbon choices

- Residents, communities, and businesses to make low carbon choices through considering green travel, local food etc. to drive carbon reduction and build climate resilience.

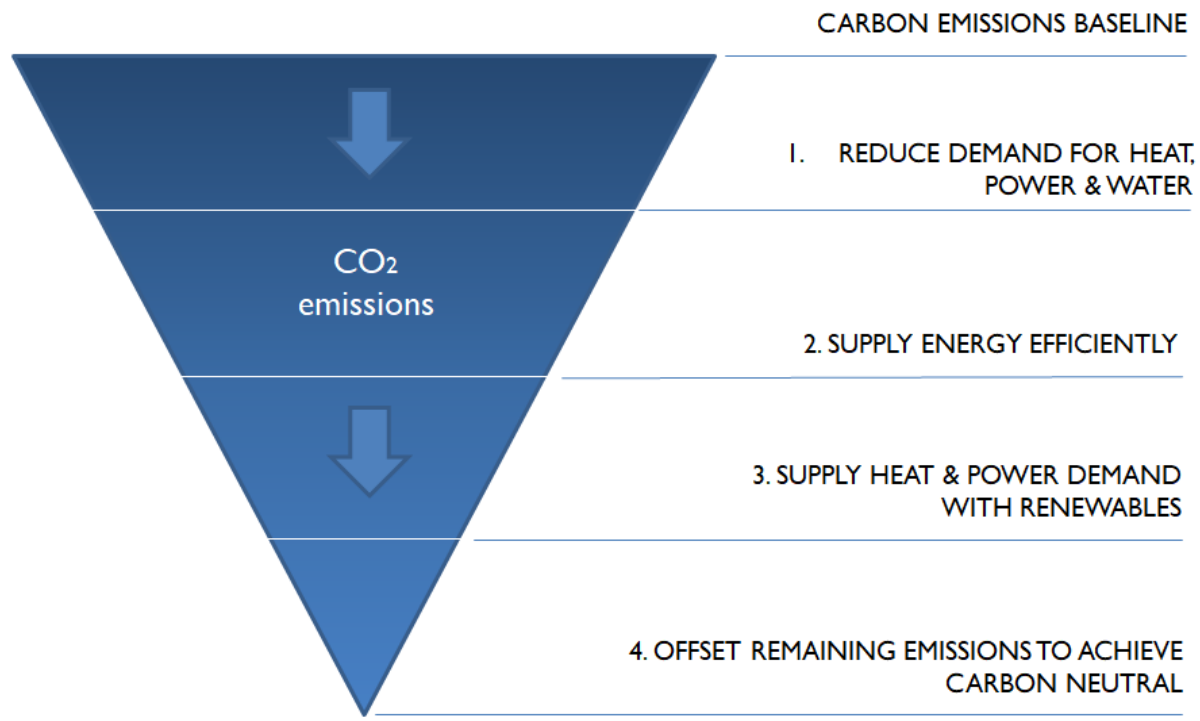
Support the most vulnerable

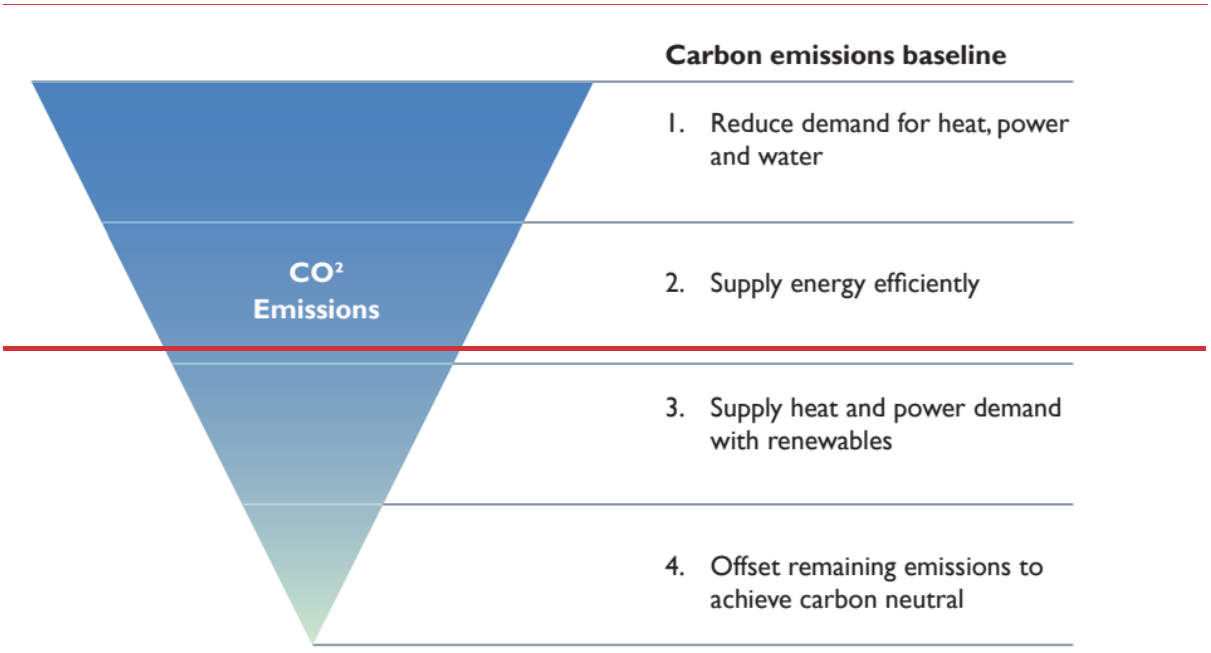
- Fuel poor households to use support services like Better Housing Better Health to increase energy efficiency, thermal comfort and improve health outcomes.
- Using the Healthy place shaping approach to empower communities through community groups, schools, and businesses to adopt a healthier lifestyle.

Follow the energy hierarchy

- Residents, businesses, and organisations to follow the energy hierarchy:
- Reduce energy demand.
- Install energy efficiency measures.
- Install low carbon heating systems and solar PV.
- Carbon offset.

Figure 3 Energy hierarchy





Co-benefits

- Maximise climate action co-benefits:
- Environmental – Improved air quality, biodiversity protection, water conservation~~s~~.
- Health – Fewer respiratory and cardiovascular diseases from improved air quality and improved energy efficiency of homes. More active lifestyles from transitioning away from cars to cycling and walking.
- Social – Greater social equity, stronger community resilience and improved quality of life.

- Economic – Job creation in green skills, energy savings from improved buildings.
- Security – Energy security from generating energy through renewables, disaster risk reduction (community prepared, better land use and infrastructure planning).

National lobbying

- Seek to influence national government on climate action.

10.2 The priority actions in the Strategy are split into five themes:

- Energy planning
- Decarbonisation
- Planning
- Carbon sequestration
- Climate resilience

10.3 Further information on the projects can be found on the Council's website.

Table 1 Climate Priority Actions

Actions	Aim	Measure(s)	Partnerships	Potential Funders	Timescale
Energy planning					
1. Oxfordshire Local Area Energy Planning (OxLAEP)	Identify the most appropriate place-based and cost-effective options to deliver net zero, optimising infrastructure investment plans to deliver a net zero carbon energy system, across multiple vectors, that can support the electrification of heat and transport and the upscale of renewable generation. The approach will also enable targeted demand reduction programmes.	Local area energy plans and pipeline of investible projects	Oxfordshire authorities, other stakeholders	Repurposed Homes England funding, Oxfordshire authorities	2025-2030
2. Community Action Plan for Zero-Carbon Energy (CAPZero)	Make progress towards the achievement of a zero-carbon energy system in the Eynsham Primary Substation Area before 2050 and develop a comprehensive model to accelerate CAPZeros in other substation areas.	Carbon reduction and delivery model	WODC, Low Carbon Hub, parish councils, community groups, other stakeholders	WODC, Low Carbon Hub	2025-2030
Decarbonisation					
3. Oxfordshire Retrofit Strategy	Develop and implement a retrofit strategy to accelerate energy efficiency, building decarbonisation across sectors, removal of fossil fuels, and wider carbon reduction.	Carbon reduction	Oxfordshire authorities, other stakeholders	Oxfordshire authorities	2025-2030
4. Energy advice, grant schemes and funding opportunities	Better Housing, Better Health provides energy advice. Secure and distribute energy grant funding to those who need it.	Carbon reduction and thermal comfort	Oxfordshire authorities, National Energy Foundation	Oxfordshire authorities	2025-2030
5. Zero Carbon Oxfordshire	Facilitate commercial collaboration in carbon reduction (and climate resilience).	Carbon reduction	ZCOP partnership	ZCOP partners	2025-2030

Partnership (ZCOP)					
~~5.~~6. Green skills training	Increase green skills through training courses, for example understanding domestic retrofit, and installation and maintenance of heat pumps.	Number of qualifications	WODC, Enterprise Oxfordshire, Abingdon, and Witney College	Enterprise Oxfordshire, Abingdon, and Witney College	2025-2030
~~6.~~7. Minimum Energy Efficiency Standards	Investigate and enforce reported breaches of Minimum Energy Efficiency Standards (MEES) for privately rented homes.	Number of MEES breaches investigated and enforced	WODC	WODC	2020~~0~~5-2030
~~7.~~8. West Oxfordshire Food Action Plan	Implement the actions in the strategy and action plan that minimise carbon reduction.	Agreed metrics	WODC, Good Food Oxfordshire, other stakeholders	WODC	2025-2030
~~8.~~9. Waste management	Manage waste in line with the waste hierarchy and the circular economy principles through facilitating waste prevention, reuse, recycling, recovery, and disposal.	Waste tonnage	Oxfordshire authorities	Oxfordshire authorities	2025-2030
~~9.~~10. Local Cycling and Walking Infrastructure Plans (LCWIPs)	Develop and implement LCWIPs to support active and sustainable travel.	Number of improvements to cycling and walking routes	WODC, OCC, town and parish councils, other stakeholders	WODC, OCC	2025-2030
~~10.~~11. Oxfordshire Local Electric Vehicle Infrastructure (OxLEVI) project	Install publicly available electric vehicle charge points (EVCPs) to support the uptake of electric vehicles (EV).	Number of EV chargers installed	Oxfordshire authorities, town and parish councils	Office of Zero Emissions Vehicles (OZEV), Oxfordshire authorities	2025-2030

~~11.~~12. EV freight and routes	Consider freight routes, support EV infrastructure, and encourage the EV fleet transition.	Carbon reduction	WODC, OCC	WODC, OCC	2025-2030
~~12.~~13. Electric taxis	Encourage the transition to EV taxis.	Number of EV taxis	WODC	WODC	2025-2030
Planning					
~~13.~~14. Salt Cross Area Action Plan	Exemplary net zero policy in the Salt Cross Area Action Plan.	Adoption of exemplary policy	WODC, other stakeholders	WODC	2025-2030
~~14.~~15. Local Plan	Minimise the carbon impact of spatial strategy. Exemplary energy, climate, agriculture, food, and waste policies in the Local Plan, for example largescale renewables, and green design guidance.	Adoption of exemplary policies and guidance	WODC, other stakeholders	WODC	2025-2030
Carbon sequestration					
~~15.~~16. Oxfordshire carbon market	Continue to explore the development of an Oxfordshire carbon market through researching carbon codes, sequestration potential and offsetting. Consideration of nature-based solutions and negative emissions technologies.	Carbon credits sold in Oxfordshire	Oxfordshire authorities, Oxfordshire Local Nature Partnership, other landowners	Innovate UK, Oxfordshire authorities, Oxfordshire Local Nature Partnership	2025-2030
Climate resilience					
~~16.~~17. Climate Change Adaptation Route Map for Oxfordshire	Deliver priority actions in the route map to build community resilience to climate impacts.	Success measures to be agreed	Oxfordshire authorities, town and parish councils, community groups, other stakeholders	Various	2025-2030
~~17.~~18. West Oxfordshire	Prepare and implement a districtwide climate adaptation plan to build resilience	Number of actions completed	WODC, town and parish councils,	Various	2025-2030

Climate Adaptation Plan	within communities to climate impacts, for example~~e.g.~~ flooding, heatwaves, storms.		community groups, other stakeholders		
~~18.~~19. Community resilience plans	Develop and implement community resilience plans and/or extend community emergency plans.	Number of plans completed	Town and parish councils, community groups	Town and parish councils, community groups	2025-2030
Air quality					
~~19.~~20. Air Quality Strategy	Monitor Air Quality Management Areas. Prepare and implement an Air Quality Strategy in 2026/27 to improve air quality.	Air Quality Index (AQI)	WODC, OCC	WODC, OCC	2025-2030