

OGP Policy Working Group: Energy

What is happening in Oxfordshire now

In June 2019, parliament passed legislation requiring the government to reduce the UK's net emissions of greenhouse gases by 100% relative to 1990 levels by 2050. The government was already required to consider the need for action on climate change, yet has often needed reminding of this duty; and policy changes have often undermined this objective (e.g. short-notice cuts to renewable electricity subsidies), with significant impacts felt within Oxfordshire by small businesses and individuals.

Oxfordshire's Energy Strategy does not reflect the 2019 target or recognise the need for more urgent action in response to the Climate Emergency, which is now acknowledged by all Councils within Oxfordshire. The Oxfordshire Energy Strategy pledges only to reduce emissions by 50% by 2030 (from a 2008 baseline) and achieve 'zero carbon growth' by 2050 (very different from net zero). <https://www.oxfordshirelep.com/energystrategy>.

The Oxfordshire Delivery Plan sets out the workstreams required to deliver against the 50% by 2030 target but is very weak on detail. One year on from the Delivery Plan, the Year 1 milestones already look to be slipping.

What might the effects of climate change be on the UK and Oxfordshire? Some of the potential effects are listed below. Some of these are inter-related, and they might form part of a chain of events.

- One of the clear impacts of climate change is that the usual pattern of weather in the UK will become disrupted. The weather may change to a situation of increased frequency of extremely wet winters, with more intense downpours in the winter months driving a greater risk of flash floods and river flooding, alongside risks from sea-level rise. Increased flood risk, particularly flooding from heavy rain, is one of the key climate threats for the UK, alongside stresses on water resources and threats to biodiversity and natural habitats.
- Extreme flood events will become more frequent and severe, putting homes, businesses and infrastructure at greater risk, and causing up to a tenfold increase in flooding damage. Critical infrastructure, such as water-pumping stations, water treatment works, transport and electricity systems, and schools and hospitals could also be threatened with shutdown and/or contamination from sewer overflow.
- The UK will experience warmer, drier summers, which in extreme cases can lead to droughts and heatwaves. These events increase pressure on healthcare services, particularly when considering our ageing society and those susceptible to respiratory disorders. Infrastructure is vulnerable to extreme heat, as higher summer temperatures bring the threat of rail buckling and associated travel delays. A sustained lack of rainfall can lead to droughts causing restrictions to potable water supplies and also electricity generation.
- The UK is susceptible to the repercussions from climate change impacts abroad (for example the cost and availability of food crops and other products etc. – already food prices are starting to rise). While some species, ecosystems and crops could benefit from climate change, far, far more will be vulnerable to its damaging effects.

Some species may try to migrate to find tolerable conditions, although they might not find suitable alternative habitats. Existing habitats will come under increased pressure and may change in nature and form a different ecosystem. Agricultural practices will also need to change.

What the Green Party needs to do

Whilst applauding the 2019 change in policy (from the earlier target to reduce emissions by 80% within the same timeframe), the Greens point to the need for more urgent action as identified by the climate science. At the last General Election the Greens pledged to go 'net zero' by 2030 and backed this up with a proposal to spend a £100bn a year to achieve this. The County must play its role in delivering the necessary infrastructure, generating capacity and demand management needed to deliver on this ambitious national target.

The Oxfordshire Energy Strategy is wholly inadequate and already out of date in the light of the declared Climate Emergency. The reality is that – because of policy failures of the past – climate change is already with us. We need to mitigate against further emissions as well as adapting to those changes that are inevitable.

Green Councillors will:

- Be a clear voice lobbying central government to take the lead in international climate change treaties to seek a consensus amongst nations and a clear global plan to reduce carbon emissions.
- Seek to ensure that the decisions made at the County-wide level should always be viewed in terms of progress towards reducing the dependence on fossil fuels.
- Consider the likely impact on climate change in all planning considerations, including both the direct and indirect effects of decisions.
- Explore the suggestions that energy system cost reductions – including the transport and construction sectors – could save about £900 million per year for both public and private sectors in Oxfordshire (Ox LCE). We would establish clearly that all new build should be zero emissions and would seek to enforce that within the limits of the law.
- Call for the establishment of annual targets for global and national greenhouse gas emissions reductions in all relevant sectors, and help establish effective enforcement mechanisms.
- Support the sustainable use of land for biofuels throughout the County but only on land that would not normally be used for crops. Initiatives must address and resolve the question of whether additions to greenhouse gas emissions may be avoided or mitigated at source.
- Aim steadily to reduce all Oxfordshire greenhouse gas emissions to net zero by 2030 by a number of joined up initiatives.

Ten steps towards a zero-carbon Oxfordshire

1. Encourage community investment in renewables. Oxfordshire has reasonable solar power potential and is home to commercial PV farms. There is huge scope for developing large and

commercially viable solar plants around the towns and villages of the county, funded by local people who will earn a return on the investment.

2. Local authorities can invest in energy. Other local authorities (e.g. West Berks) are raising money from small investors to invest in solar at very low rates. Oxfordshire councils should do the same, building enough capacity to completely decarbonise electricity use in the public sector.

3. Aim for local self-sufficiency. The path-breaking Project Local Energy Oxfordshire plans to move the county towards self-sufficiency, using energy storage and demand management as well as enhanced renewables investment. Oxfordshire needs to become an active manager of this project, eventually arguing for hugely improved local control over energy infrastructure. NB: Increasing the role of energy storage also needs co-ordination of and investment in local distribution, as well as national regulation. This will also be crucial for the viability of small-scale and community-level renewables projects.

4. Refurbish buildings. Houses and other buildings are now a more important source of emissions than electricity generation. But very little is known about why our buildings are so thermally inefficient. Oxfordshire needs a detailed plan for researching this topic, and should produce a plan for how the county can radically improve insulation standards. This is particularly important as a way of ensuring that the less well-off are net beneficiaries from the move to net zero.

5. Investigate means of electrifying heating. We need to move from gas to electricity to heat the large majority of homes. This means shifting to widespread use of heat pumps across the county. But the installer sector is poorly trained and inefficient. The County needs to invest in a programme of research that enables it to establish a commercially successful heat pump installation business.

6. Encourage the electrification of transport. Central government is moving towards a ban on internal combustion engines within a decade. Oxfordshire can help drive this forward by sponsoring widespread installations of new rapid recharging points on major roads.

7. Build a local biomass industry. Re-establishing a viable forestry business makes real sense across the county. This can be used both for wood products generally and fuel pellets more specifically. These are currently largely imported. Good opportunities for job creation and low carbon heating.

8. Decarbonise food. Following Brexit, we need a new focus on local food production, particularly horticulture. This could provide employment, improved carbon content of soils and better nutrition.

9. Investigate Direct Air Capture. This is a moonshot project. It is now possible to capture CO₂ directly from the air and either store it or use it productively. As a world-class science centre, Oxfordshire should organise the UK's first pilot of direct capture of CO₂, possibly combining it with hydrogen to make synthetic chemicals that would otherwise be made with oil or gas.

10. Experiment with hydrogen. The national government has belatedly woken up to the importance of hydrogen as an energy carrier. Oxfordshire should bid for the early UK research work on developing low-cost hydrogen manufacture to replace the use of fossil fuels in heavy transport, chemicals, aviation fuel and shipping. NB: There are crucial safety and infrastructure questions to be addressed if hydrogen production is to be scaled up to be of practical benefit in the medium term. Investment needs to be directed to research, demonstration and deployment of such technologies, instead of being used to continue to subsidise fossil fuels.