



What does the future of energy look like.

Adam Baker

29.02.24

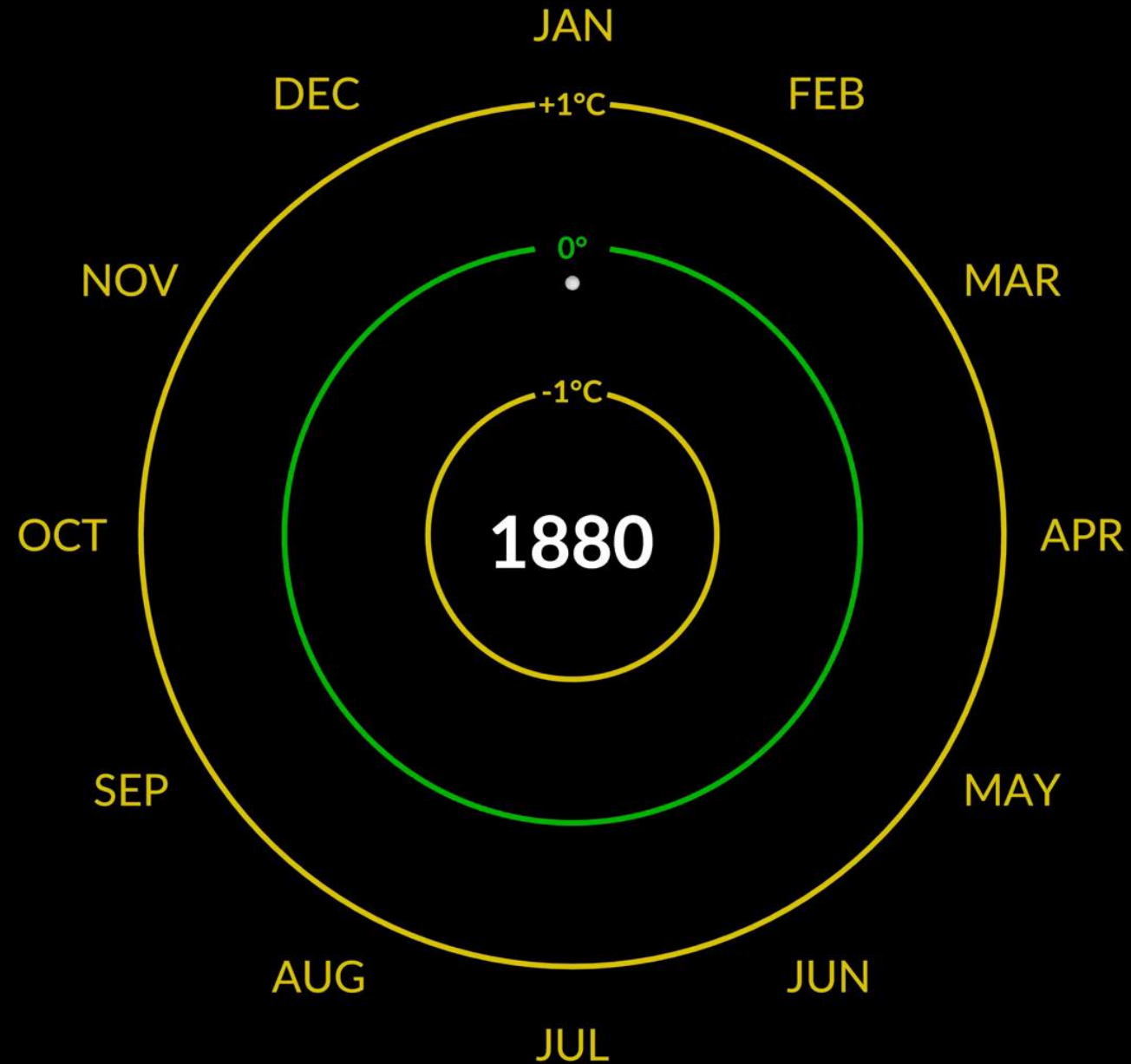


30 of UK Public and Private
sector energy is
% **wasted.**

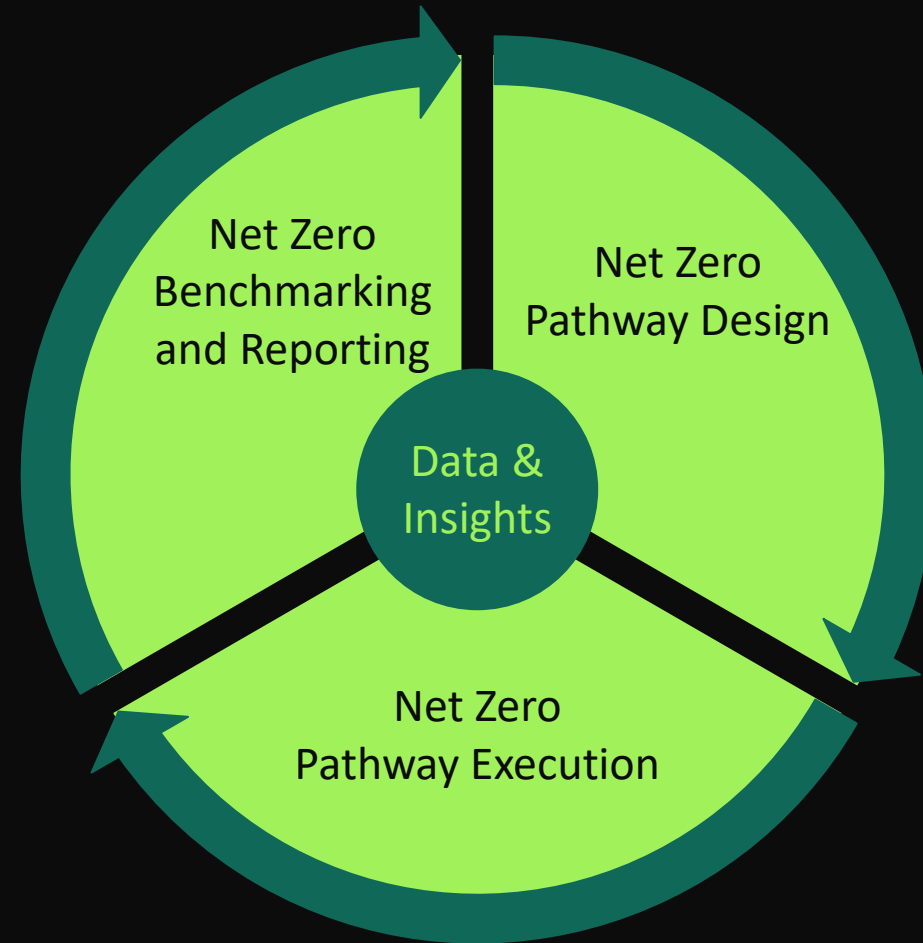
The planet is changing.

2023 was the warmest year on record and the UN has stated that we are likely to miss the 2030 target of reducing emissions by 45%*.

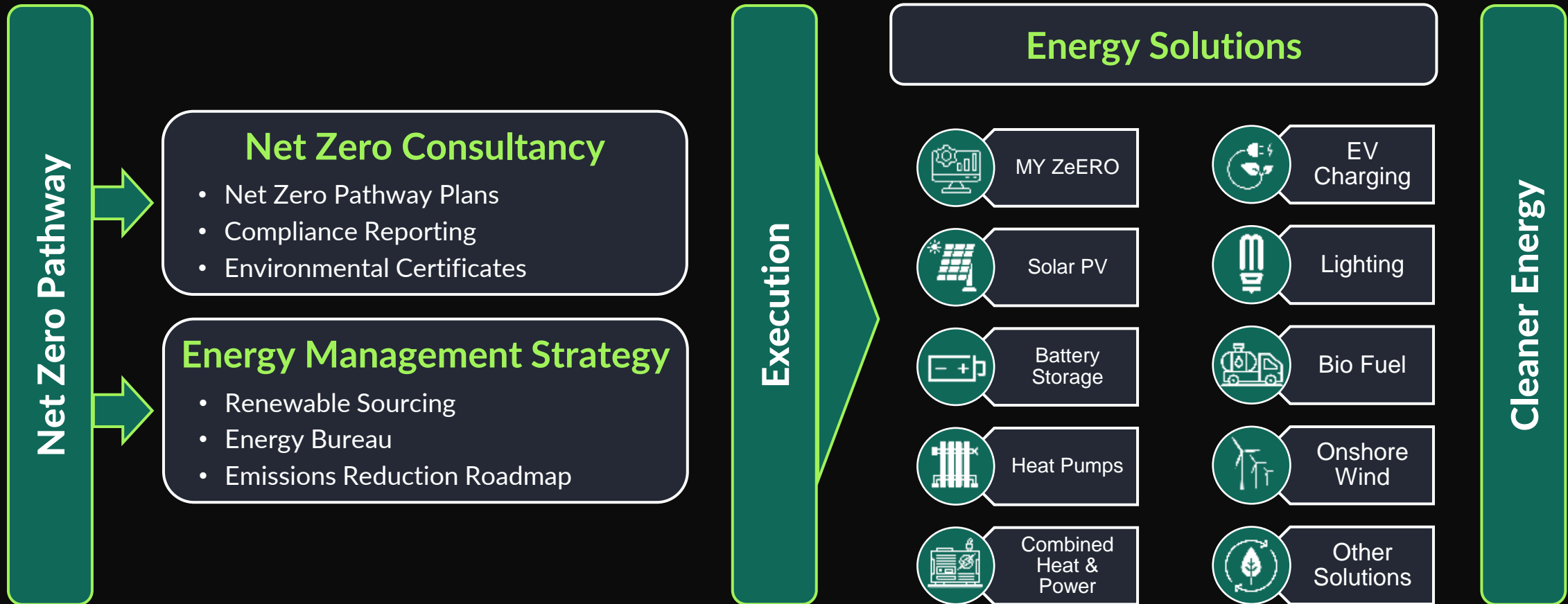
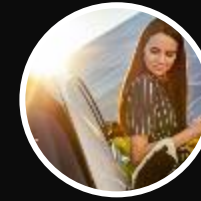
*compared to 2010 levels.



Route to Net Zero.



Guiding you on your path to Net Zero?

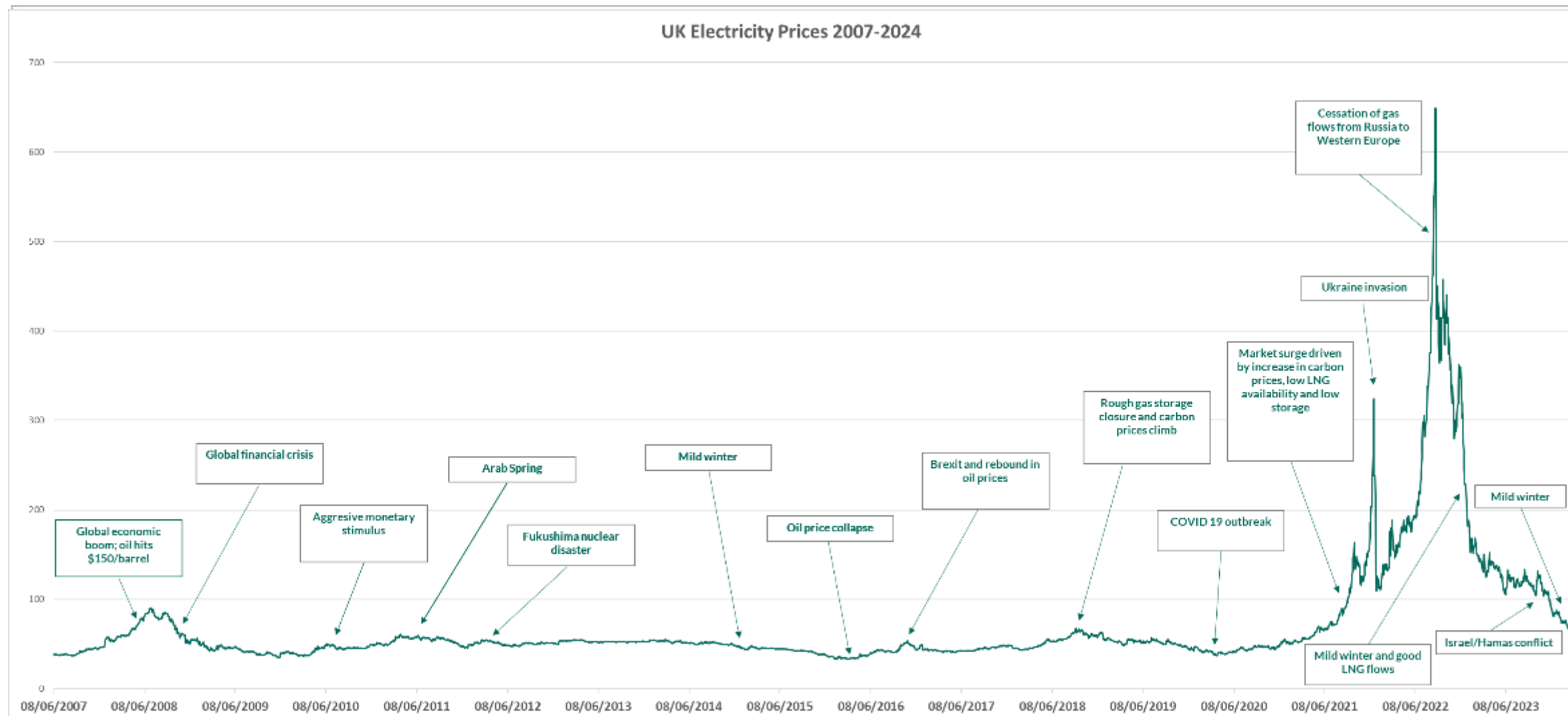


Energy Markets

What impact do they have on Net Zero?

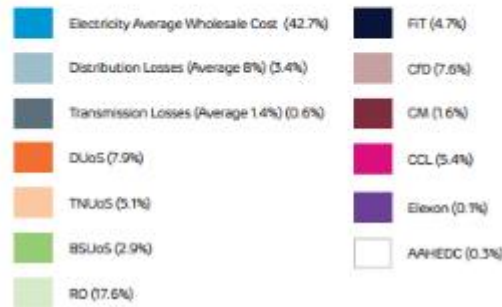
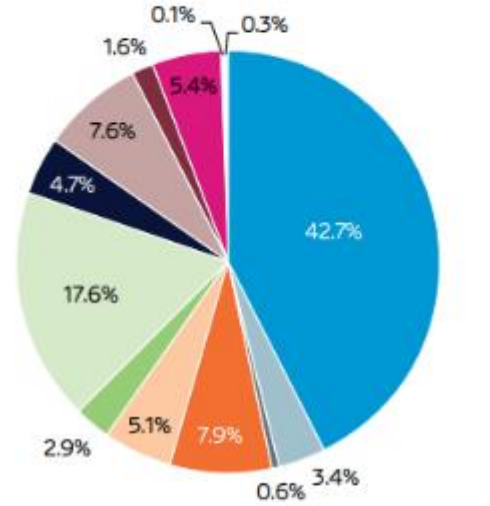


Long-term price history 2007-2024.

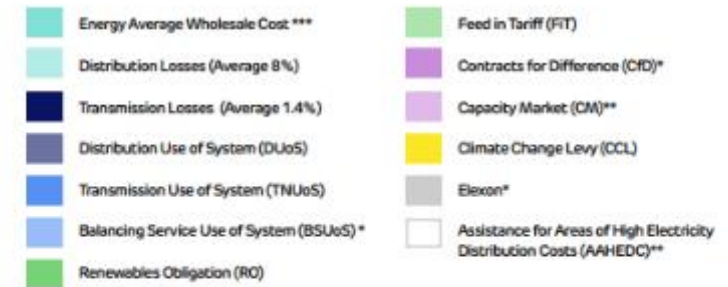
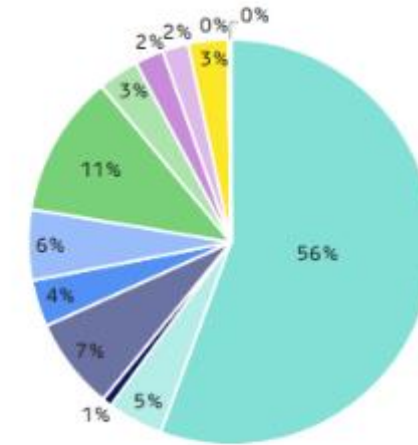


Autum 2023 – Invoice Breakdown

Cost Breakdown, 2021/22



Cost breakdown, 2023/24



The future of energy?

What will shape the markets in the medium term?



Energy procurement.

4.6TWh under management.



Outperforming the market by up to 5%.

Reverse tender.
Our eAuction online marketplace enables access to the lowest cost cleaner energy.

Fixed, Flexible, Baskets and PPA services.

Fixed

Fixed Procurement.

Delivery of a competitive fixed price energy using reverse auction via DPS framework.

PWP

Basket - Purchase within period.

Tracking the wholesale energy markets, but minimises market risk premiums.

Flex

Flexible Procurement.

Best fit tender product and price, matching a clients specific needs via DPS Framework.

PPA

Power Purchase Agreement.

Execution of long term cleaner electricity contracts with renewable developers.

PIA

Basket - Purchase in advance.

Tracking the wholesale energy markets, whilst providing cost certainty.

How to breakdown the energy challenge.

Save energy and reduce your carbon footprint by improving four fundamental areas.

Let's embark on your journey to Net Zero.



Access cleaner energy.

Access cleaner energy at the lowest cost from our online marketplace and deploy capital free onsite solar generation.



Measure your waste.

Capture real-time actionable energy data and insights, eliminating waste, unnecessary costs and carbon emissions.



Reduce carbon and costs.

Switch to energy efficient technologies with zero upfront cost, saving energy and reducing carbon.

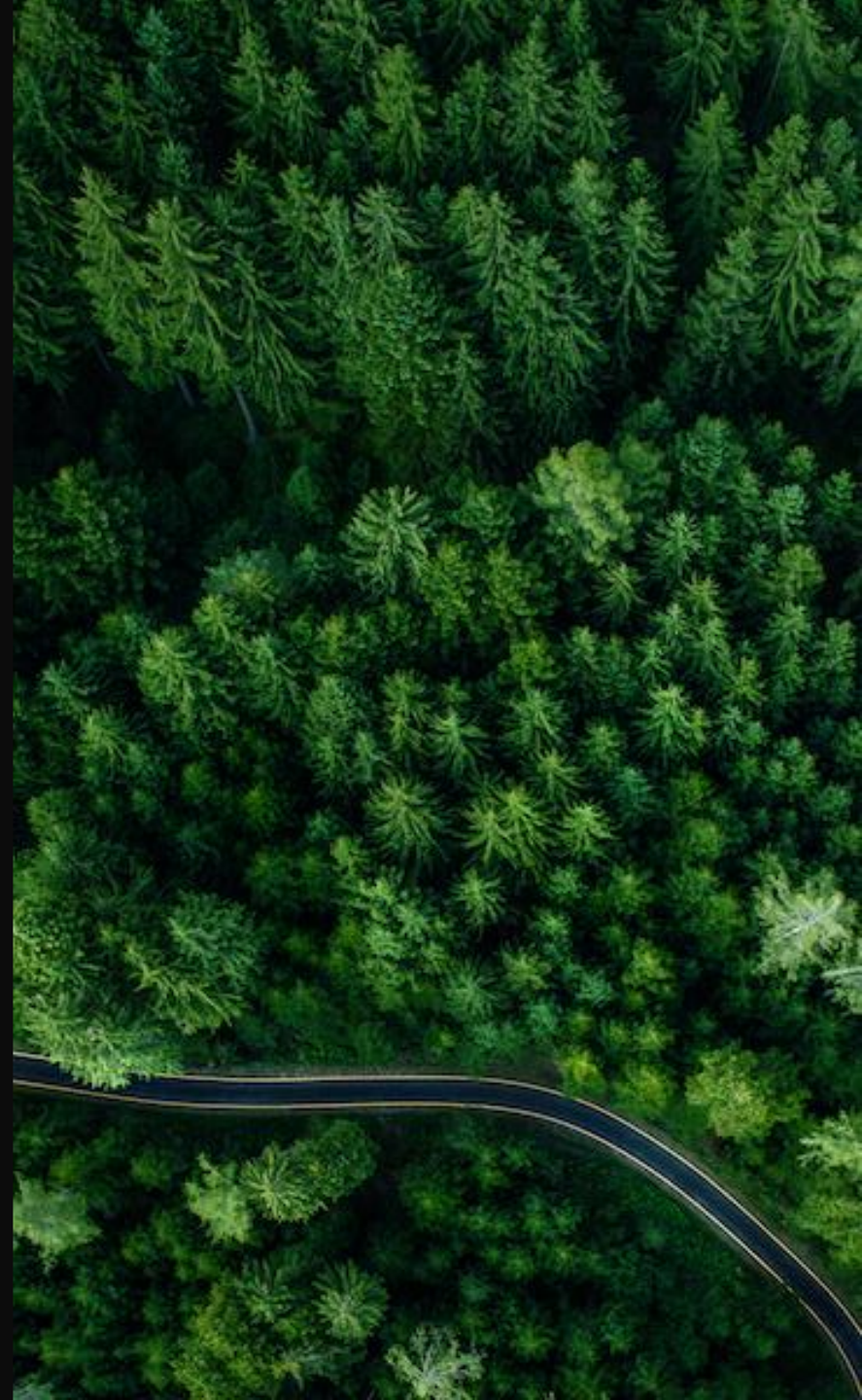


Connect sustainably.

Deploy capital free fast and rapid EV charging points, and onsite solar generation for a sustainable future.

Thank you.

eEnergy





Department for
Energy Security
& Net Zero

The Big Energy Summit 2024

Local solutions for a global problem

An illustration depicting a sustainable community. In the foreground, a white electric car is being charged at a station. A person is riding a bicycle with a yellow backpack. In the middle ground, a yellow electric bus is labeled "Powered by electric" and has a recycling symbol. A person is running on the left, and another is riding a cargo bike. In the background, a worker in a yellow hard hat and safety vest is installing a solar panel on a house. A street lamp with a solar panel is also visible. The scene is set against a light blue sky with a white cloud.

Engagement for a just transition



**OXFORDSHIRE
COUNTY COUNCIL**

The Just Transition

Climate action + tackling inequality = the just transition

Maximising the benefits of climate action

Minimising the negative impacts for workers and their communities

Meaningful engagement and involvement in transition



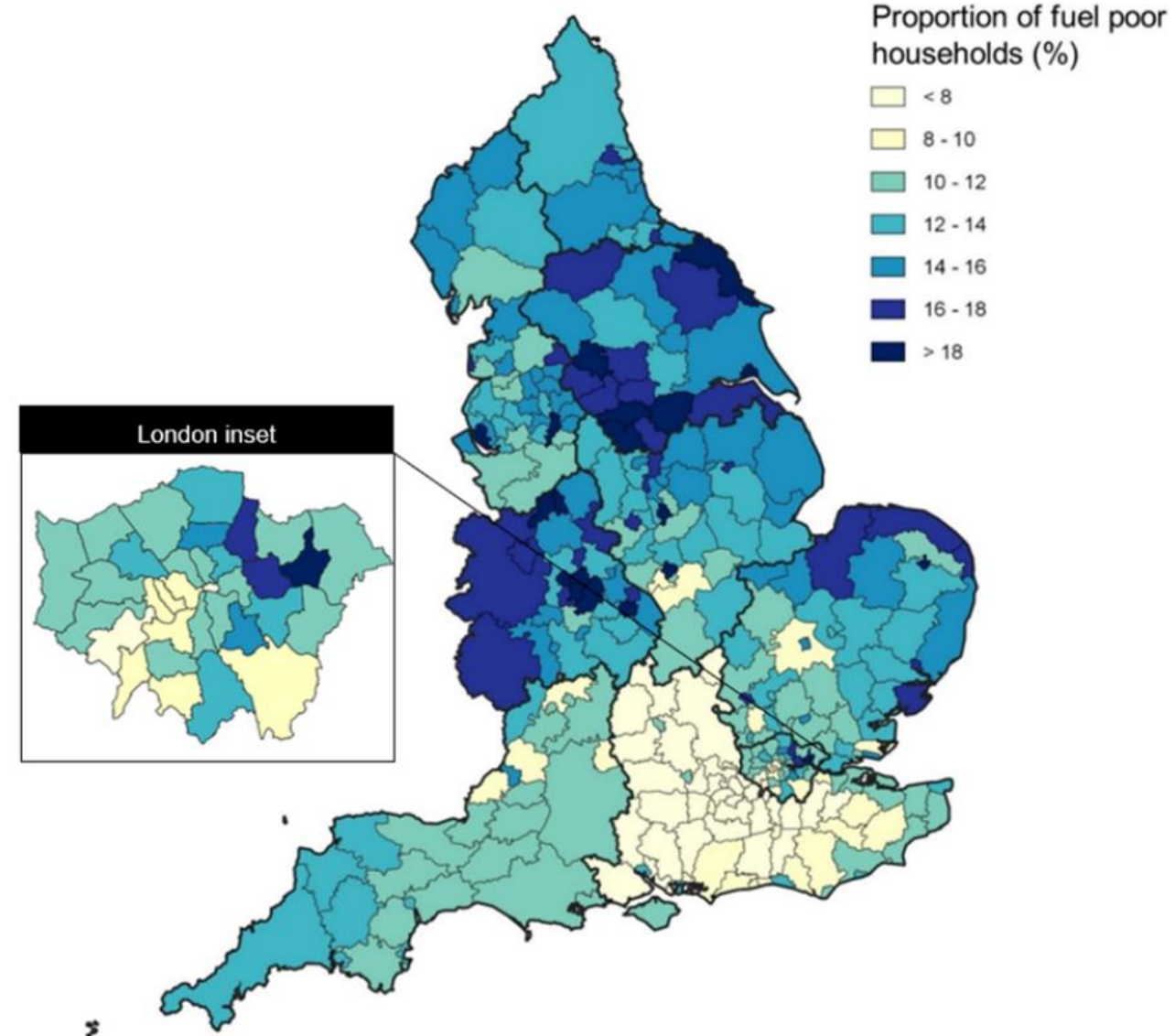
**OXFORDSHIRE
COUNTY COUNCIL**

Current position

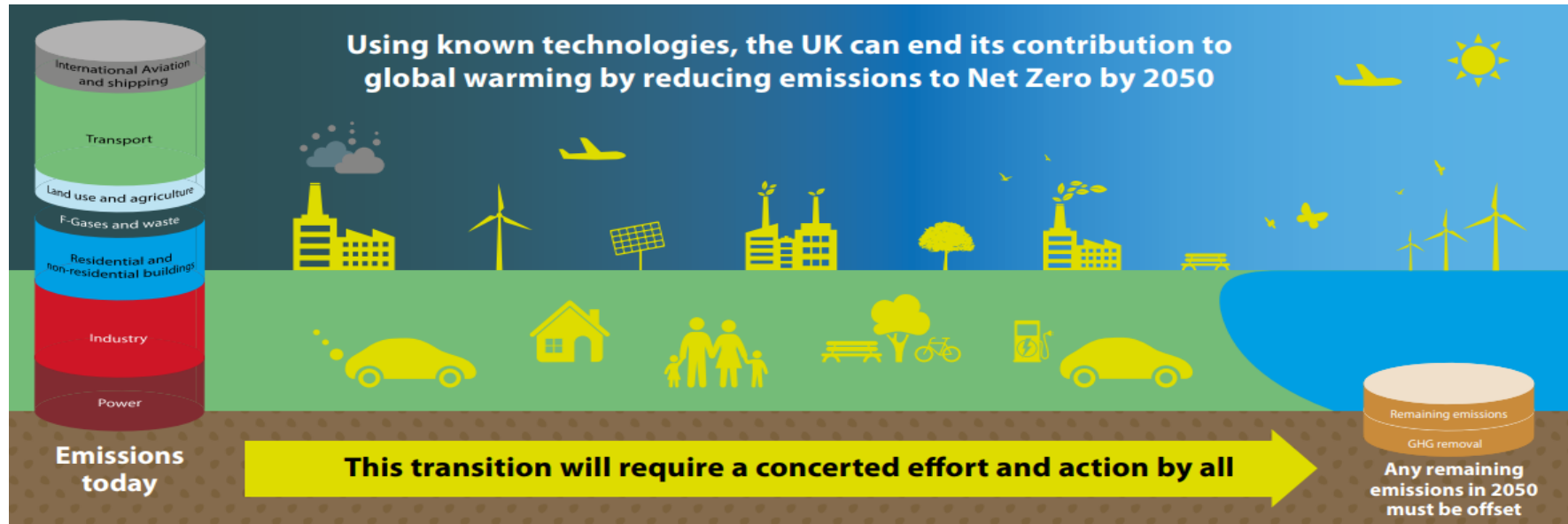
Facing a climate and ecological emergency

Cost of living crisis (fuel poverty increasing)

- 2019 7.4% in Oxfordshire (20,746 properties)
 - 2020 8.2% in Oxfordshire (22,861 properties)
 - 2021 8.4% in Oxfordshire (23,109 properties)
-
- Two thirds of which live in rural areas...
 - ... However, Oxford City remains significantly worse than the regional average



The Just Transition



62% of the UK's net zero target requires some form of individual action

Disconnect in concern about climate change (high) and awareness of what it means for their lives and how people can participate (low), and the benefits



**OXFORDSHIRE
COUNTY COUNCIL**

- 73% of workers globally believe that climate change and climate policy will have a major impact on their jobs in the next decade²
- 74% of people more likely to support policy addressing climate change and social justice¹
- 86% globally believe a just transition to a zero-carbon economy is possible³



**OXFORDSHIRE
COUNTY COUNCIL**

1 Climate Outreach Information Network

2 International Labour Organisation

3 World Economic Forum

What can we learn from successful social shifts



- Public understanding and awareness of issue.
- Social norms already heading in that direction.
- Public consultation and comms.
- Demonstrate some immediate benefits.

When not everyone agrees



- Balancing multiple interests
- Interests from outside the locality
- Nature of funding

Oxfordshire



- Affluence with pockets of significant deprivation
- High levels of house building
- Urban and rural divide on pace of climate action
- Strong community capacity
- High cost of living
- £3.5bn investment in net zero by 2030



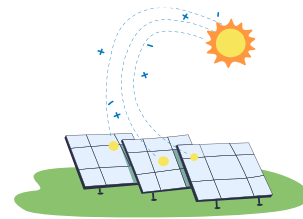
A role for everyone

- We support all our communities and businesses to participate.
- We build partnerships to tackle systemic challenges.



Inclusive transition

- Seek costs and benefits fairly shared.
- We seek to design out energy inequality.



Maximise Oxfordshire benefits

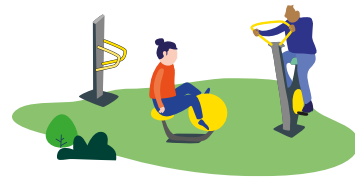
- We support communities to own energy projects and retain the benefits locally



Continuous improvement Living lab



Evidenced-based decisions



Healthy Place Shaping



OXFORDSHIRE COUNTY COUNCIL

Growing community-led action – CAG Oxfordshire



- Community Action Group (CAG) network
- Over 100 groups – waste, transport, food, energy, biodiversity and social justice
- 100K person reach
- Collaborate groups – share skills, common goals
- Projects – Community Wealth Building/ Repair Cafes / Library of things / Communities and Nature
- Council – CAG Liaison



**OXFORDSHIRE
COUNTY COUNCIL**

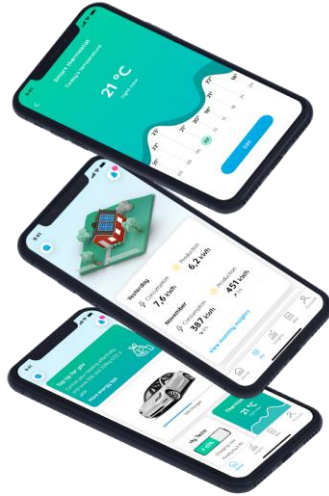
Growing community-led action – CAG Oxfordshire

- Locally-owned plans for climate action
- Driven by local interests / issues
- Demonstrates community mandate for climate action
- Trusted and independent voice
- Network to partner in wider council programmes / bids
- Inspiring and energising



**OXFORDSHIRE
COUNTY COUNCIL**

Barriers to scaling retrofit delivery



Financial

Consumer engagement across all audiences

Capacity, capability and skills

Material supply issues



**LEVELLING
UP
UK:SPF**



Smart and Fair Neighbourhoods

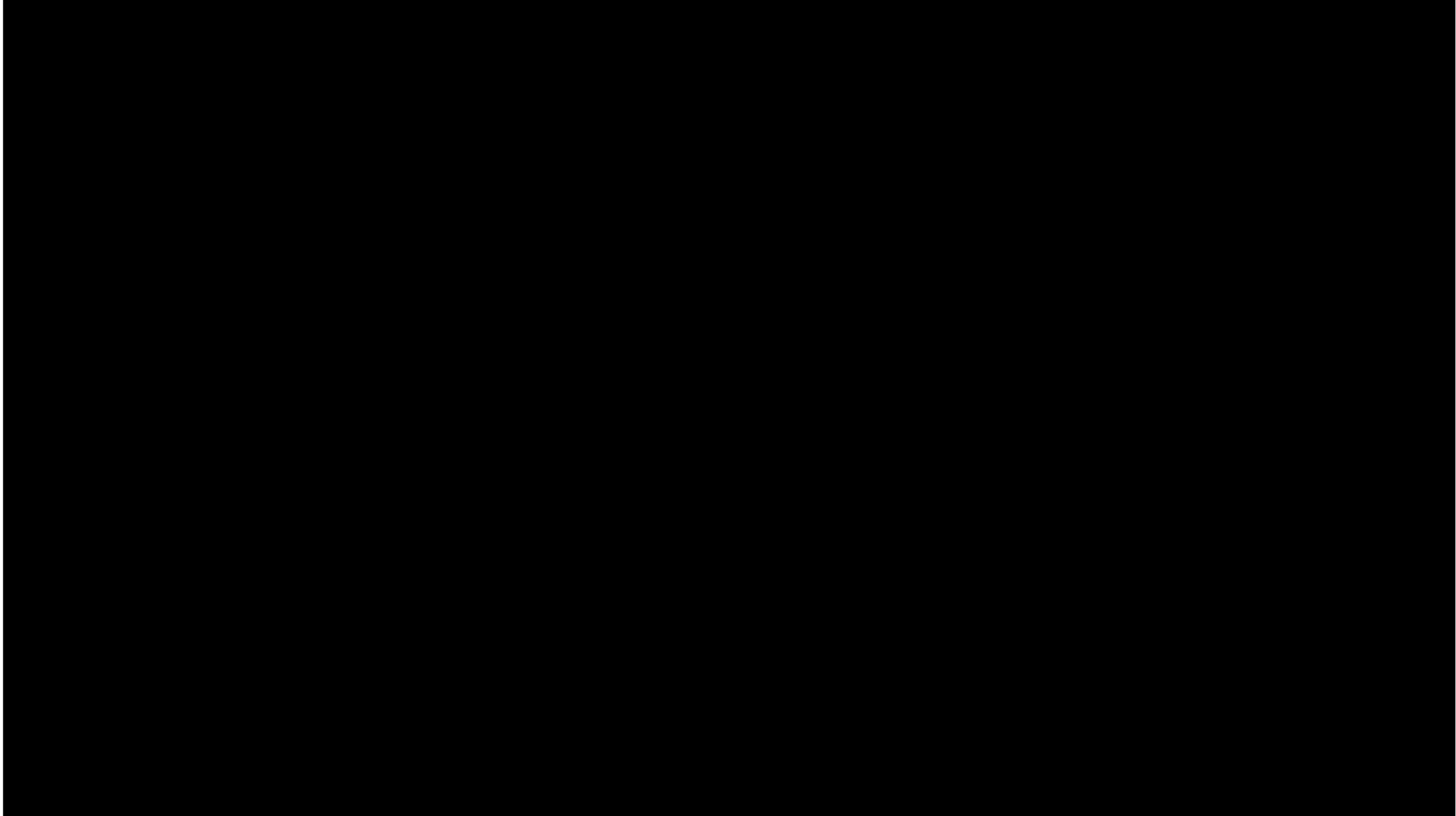
Understanding how the energy system of the future will work to benefit people.

What is a 'Smart and Fair' Neighbourhood:

- zero carbon
- putting people and communities at its core
- designed to meet everybody's needs, leaving no one behind.

Eynsham, Deddington, Rose Hill, Osney, Westmill and Springfield Meadow.





Smart and Fair Neighbourhoods

- **A new energy system can support a just transition:**

Residents – reduced energy bills, increased usability and control, climate action

Communities – new opportunities for community run energy services

- **Agreeing a set of principles on community engagement in energy projects helps maintain focus**

- **Community scale LAEPs could help create a local mandate for climate action.**

Principle	Description
Collaborative design	We will design service offerings in partnership with the community in which they are to be delivered, so everyone potentially impacted by the service can influence its design.
Inclusive offering	When we design a service offering we will seek ways to minimise the barriers to individuals benefiting from the offering.
Fair distribution of benefits and costs	The success of a service offering will depend on the efforts of many stakeholders. The value created by the service, and costs that arise should be fairly distributed amongst these stakeholders.
Minimise risk	No one should be materially worse off as a result of the service. This does not preclude individuals being exposed to some level of risk through their involvement in the trial (e.g. financial), as long as it is with full information regarding the risk, participation is their own free will, and should it arise, the risk does not cause significant or lasting harm.
Informed consent	We will ensure potential service users have adequate information, presented in a clear and accessible way, about the benefits, costs, and risks associated with using the service to make an informed decision about participation, including influencing decisions around the wider infrastructure.
Respect	We will treat all those affected by the service with respect and sensitivity.
Data fairness	We will be open and transparent about the data we are collecting through use of a service, how it will be used, managed, owned and shared, and seek informed consent from service users.



Thank you

Dale Hoyland & Ariane Crampton

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<https://www.oxfordshire.gov.uk/climateaction>

www.climateactionoxfordshire.org.uk



Department for
Energy Security
& Net Zero

The Big Energy Summit 2024

Local solutions for a global problem



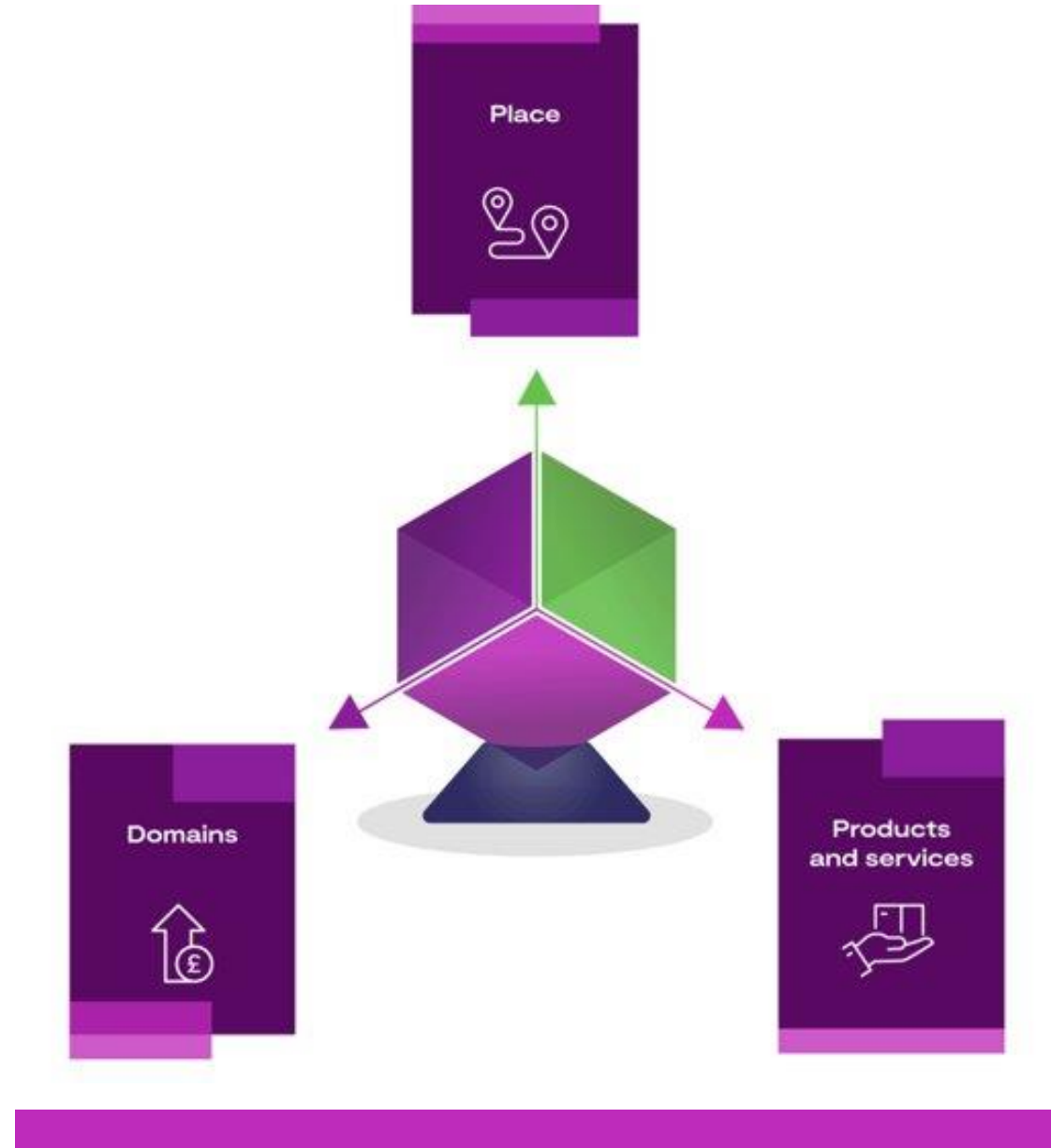
Net Zero Living & the help it will give you

Rob Saunders
Challenge Director



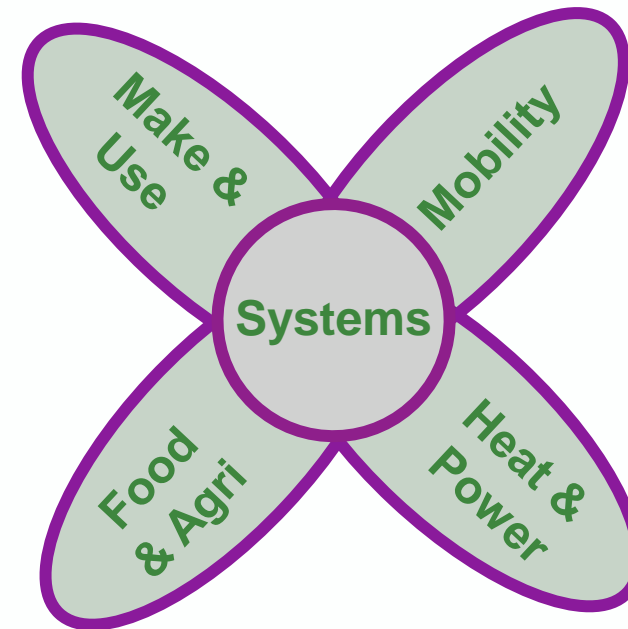
Innovate UK:

The UK's national innovation agency



Net Zero at Innovate UK

Our vision is for the UK to prosper from being the **economy that transitions fastest to net zero.**



Net Zero Places: Our journey

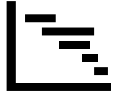







Prospering from the Energy Revolution

2018-23

£200m programme showing potential of
'Energy-smart places'



-  Local NZ Plans & LAEPs
-  Regulation
-  Partnerships
-  Digitalisation
-  Finance
-  Skills & Capability



Net Zero Living 2022 - 25

Targeting net zero delivery progress
Non-technical barrier focus
Knowledge Exchange

PFER: A wealth of insight & info

Evidence

- Benefits of local delivery
- CBA & business case data
- System costs
- Delivery evidence

Case Studies

- Demonstrators
- Design projects
- Approaches
- Business & Finance models
- Partnerships

Insights

- Finance
- Planning
- Skills
- Digitalisation
- Learnings across projects

Assistance



Demonstrating potential



Designing a net zero city region...



**GREATER
MANCHESTER
LOCAL ENERGY
MARKET**
DOING THINGS DIFFERENTLY FOR THE ENVIRONMENT



- GM LEM has developed Local Area Energy Plans for all 10 of the Combined Authority boroughs and adopted them as the basis for its future net zero strategy
- Onto that is layered a plan for a local energy market which will trade and optimize energy assets, flexibility provision and network capacity at a local level to reduce costs and provide the right services for GM residents.
- Its 'market maker' trading platform MVP puts local and low carbon at the centre of trading decision making.
- By 2038 it could deliver £40mn/year in value to the local energy system by using the existing network more efficiently and avoiding reinforcement costs;
- And stimulate £4.6bn of new low carbon investments locally
- GM LEM is a key part of GMCA's wider decarbonisation plans with backing from Greater Manchester Mayor, Andy Burnham
- It is attracting international interest with joint delegation visits planned between Osaka, Japan and Greater Manchester following showcasing in European cities such as Brussels this summer.

Everything we know from PFER is at <https://iuk.ktn-uk.org/programme/smart-local-energy-systems/>



Innovate
UK

Business
Connect

About

Opportunities

Events

How we help



Enabling smart local energy systems

We live, work and travel in regions, cities, towns and communities, but energy systems are still very centralised. UKRI's Prospering from the Energy Revolution programme explored the potential of smart local energy systems and place-based approaches. Discover learnings and insights from the £104m, five-year programme.

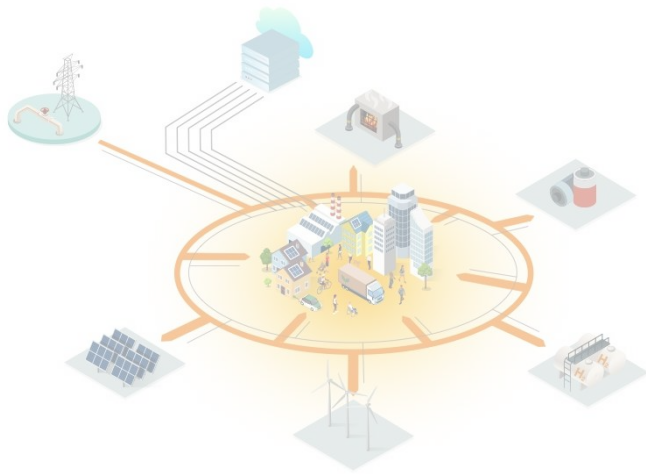


Get in touch



Innovate
UK

Net Zero Places: Our journey









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Net Zero Living 2022 - 25

Targeting net zero delivery progress
Non-technical barrier focus
Knowledge Exchange

Net Zero Living: Thriving Places

Unlocking investment. Accelerating delivery



50+ place cohort
Working together on their
Net Zero journey

Demonstrators

Pathfinders

Fast Followers

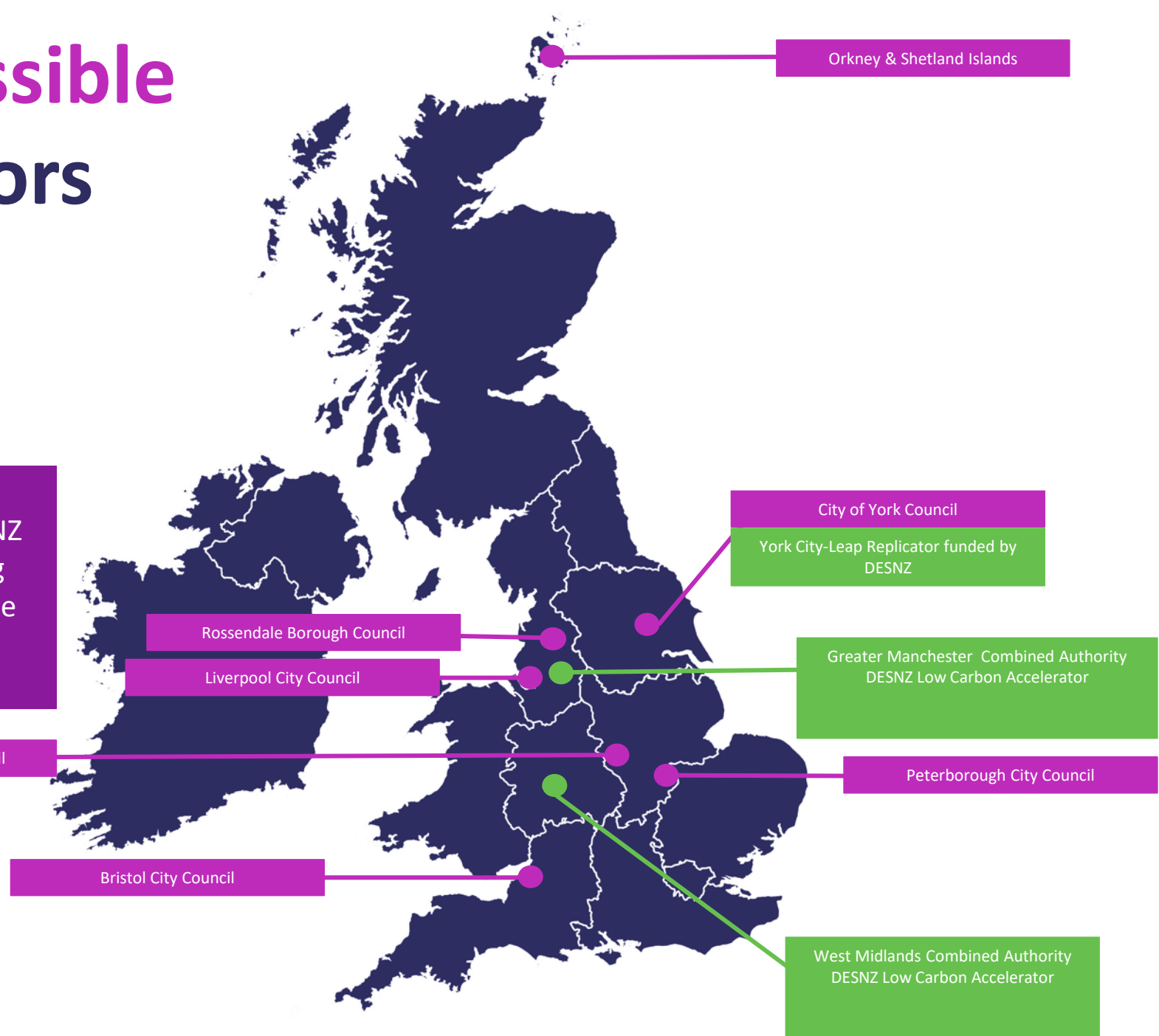
Community of Practice
Enabling knowledge exchange and
shared learning

Future Ready Academy
Capacity building and upskilling

Proving what's possible

7 (+3) Demonstrators

Demonstrators, Pathfinders, Fast Followers and DESNZ Low Carbon Accelerators will together build one big Community of Practice ensuring knowledge exchange and shared learning



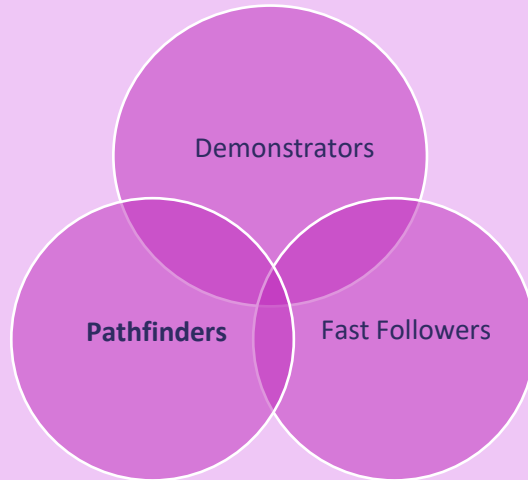
Our 'Future Ready' support package to deliver £8.6m of funded support



Convenor & Insights Capture

LIMINAL

Community Curator



Academy Coordinator



Visioning & Citizen Engagement



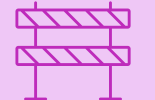
Net Zero Planning



Finance & Investment



Policy and Regulation



Data



Mentoring & Leadership support

Peer to Peer Learning & Knowledge Exchange

Community of Practice

Technical Assistance

to create world-class resources and insights for everyone

- In-flight programme learnings and insights aggregated across the cohort by experts
- Providing world class open access resources to support everyone to get to net zero
- Ensuring no place is left behind



What you can expect from us:

- Rapid dissemination of training packages
- Annual event to explain progress and insight
- Insights, tools & evidence from cohort experience
- Better ecosystem coordination

Find out more:

<https://iuk.ktn-uk.org/programme/net-zero-living/>

Thank You

Feedback & Queries
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& Net Zero

The Big Energy Summit 2024

Local solutions for a global problem