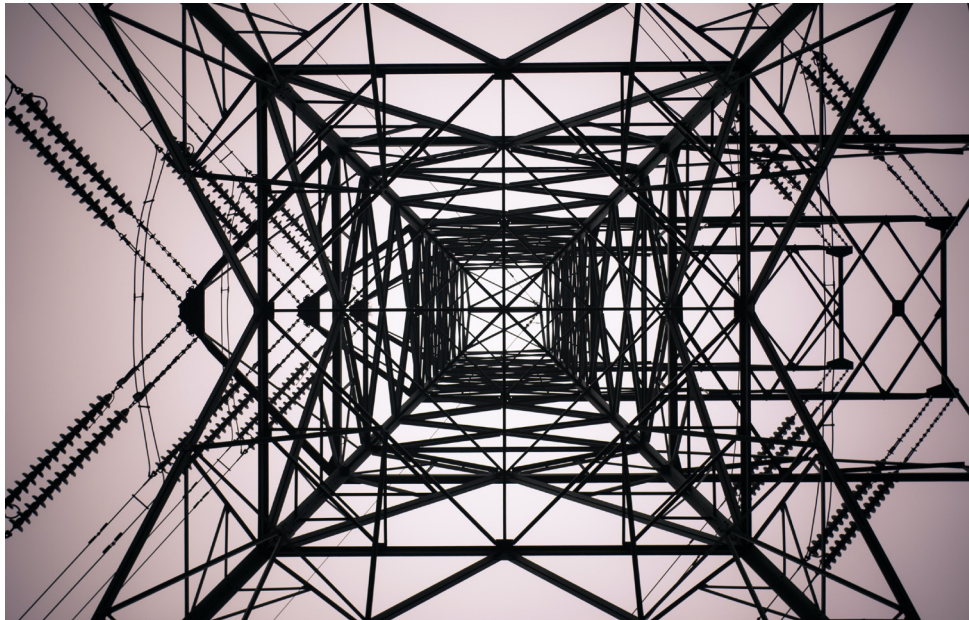


**DNZ** | DELIVERING  
NET ZERO

**INFORMING CLIMATE CHANGE  
DECISION MAKING WITH  
ACADEMIC RESEARCH**

## WHAT IS THE PROJECT?

The Delivering Net Zero project will work with a number of stakeholders from academia and industry to produce a shared vision on what is required to deliver a UK net zero future in the short-term (the next ten years) and the long-term (from 2030 onwards).



It will utilise the best academic research available to produce clarity on the net zero options available to the UK whilst also identifying areas of research where consensus cannot be reached, meaning that wider engagement or political interventions are required.

It will also identify and clarify what further research is needed to help underpin a net zero future.

## WHAT IS THE NET ZERO CHALLENGE?

In June 2019, the UK Government amended its Climate Change Act to become the first major economy in the world to make a legally binding commitment to net zero emissions by 2050.

To meet this target of net zero requires large-scale and extensive innovation across the UK energy system. This will require change within all sectors and industries, fast paced technological advancement and substantive social engagement alongside changes in practices and behaviour.

Given the scale of change and investment required it is therefore vital that decisions are taken based on the best available scientific evidence.



## WHY DO WE NEED THIS PROJECT?

To achieve net zero by 2050, the UK needs to act now to accelerate its path to decarbonisation. We are not fortunate to have the luxury of time; we need to act now. Immediate action is required, and the coming decade will be critical to the delivery of net zero.

As a country, the UK needs to achieve rapid emissions reductions in the short-term to avoid a climate crisis. An aspiration to achieve a position of net zero by 2050 should not deflect from the effort the country needs to make in the next decade to avoid irreversible climate damage.

As such, managing total cumulative emissions becomes as important as achieving the net zero target. It is the total cumulative emissions that influences the impact on the climate and the resultant acceleration of climate risks such as the destruction of habitat, loss of life and economic and social disruption. This makes it vital to reduce greenhouse gas emissions in the short-term to avoid the problem of higher cumulative emissions in the long-term.



When approaching the challenge of achieving net zero, there is a need for a whole systems perspective and approach. In the UK, energy sources are inter-dependent and no one sector, or vector can work in isolation to achieve the change required to become net zero. There is a need to understand the costs and benefits of different technologies, systems design and decarbonisation pathways alongside a need to understand how the constituent parts of the energy system might interact and collaborate to transition to net zero.

With the scale of the challenge ahead of us it is important that academic research provides the best available scientific evidence, independent analysis and clearly articulates the options available to inform policy makers as they address the challenge of moving towards a net zero future.

But the academic community has never spoken with a coordinated voice on this issue. There is a lot of specialist knowledge and the UK is home to some of the leading thinkers on climate change, but this research has never been pulled together into one collective narrative. Clarity and articulation of this evidence base is important because some external shareholders have struggled to access and exploit academic research that is available.

The Delivering Net Zero project will seek to address this issue.

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## THE FUNDERS

This project has been commissioned by the UK Research and Innovation (UKRI) Energy Strategic Advisory Council to maximise the impact of its research programme on key decision-making processes to secure a net zero future. The aim is to ensure that the research funded by the UKRI Energy and Decarbonisation Programme has the maximum opportunity to inform and guide the response of UK decision makers to climate change.

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## WHO IS INVOLVED?

### THE UNIVERSITY OF LEEDS

The University of Leeds is one of the largest higher education institutions in the UK, renowned globally for the quality of its teaching and research. The University strives to achieve academic excellence within an ethical framework informed by its values of integrity, equality and inclusion, community and professionalism.

The University's Sustainability Research Institute explores a wide range of issues including climate change, energy, transport, water, resource use, land-use, conservation, cities and communities, business and lifestyles – specialising in participatory, action-orientated research that brings together government, business, non-governmental organisations and local communities to enhance the relevance, quality and practical influence of their research. The academic lead for Leeds in this project is Professor John Barrett, Professor in Energy and Climate Policy at the Sustainability Research Institute.

### CARDIFF UNIVERSITY

Cardiff University is an ambitious and innovative university with a bold and strategic vision located in the capital city of Wales. The University excels in education, research and innovation building strong international relationships whilst delivering



significant economic and social impact in Wales and the UK as a whole. The School of Psychology is one of the UK's largest centres for psychology and neuroscience. In the 2014 Research Excellence Framework, the schools research quality was ranked 2nd in the UK for Psychology, Psychiatry and Neuroscience.

The Understanding Risk Research Group at Cardiff School of Psychology conducts leading edge research into public and stakeholder engagement with a range of energy technology and environmental issues on both the supply and demand side. They are core members of the UK Energy Research Centre (UKERC) and also lead the social science work-stream of the Flexible Integrated Energy Systems (FLEXIS) project, a £24 million research collaboration between South Wales Universities partnering with industry and local authorities to develop demonstrator projects in local communities to model future decarbonised and decentralised energy systems. The academic lead for Cardiff in this project is Professor Nick Pidgeon, Professor of Environmental Psychology and Director of the Understanding Risk Research Group.

### CULTIVATE INNOVATION LTD

Cultivate Innovation is an energy focussed innovation research consultancy that connects people and empowers them to build high quality relationships that deliver lasting impact. It specialises in working with organisations who are delivering innovative low-carbon energy solutions.



Built upon experience of working at a senior level with both the private and public sectors, Cultivate is recognised by its clients as an organisation that can bridge the gap between academia, industry and consumers by understanding that engineers and investors speak very different languages and that these conversations take place in a context framed by policy regulations and broader societal needs.

### OUR ADVISORY GROUP

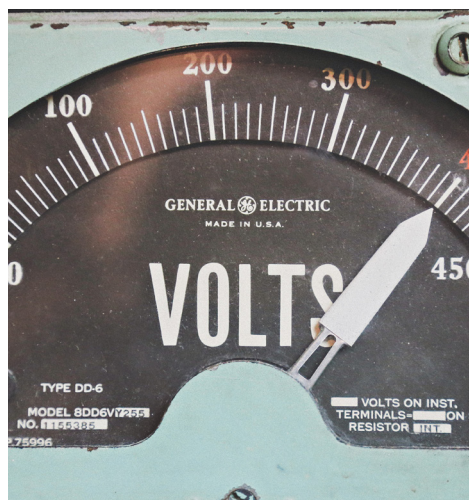
An advisory group chaired by Professor Jim Watson of University College London will provide a review of activities throughout the project and act as a governance body. Membership of the group includes representatives from The Climate Change Committee, the Tyndall Centre for Climate Change Research and the Department for Business, Energy & Industrial Strategy.

## WHAT ARE WE TRYING TO ACHIEVE?

This project focuses on the role of research in the challenge to transition the UK to net zero.

We passionately believe that academic support and frameworks are essential to provide the best available scientific evidence to provide independent analysis, articulate available options and to base investment decisions upon.

This project will produce a shared vision outlining a narrative for net zero in the short-term - the next decade and the longer-term - from 2030 onwards. This narrative will provide clarity on net zero options whilst also identifying the areas of research where consensus cannot be achieved and wider engagement or political interventions will be required. It will also identify and clarify what further research is needed. The project will articulate a consensus which identifies the urgent initial steps for the next ten years alongside a longer-term strategy for delivering net zero by focussing on the areas of decarbonisation, energy demand, carbon capture and removal, and the social and economic implications of net zero.



The project will apply a whole systems perspective, because for successful energy planning sectors and their infrastructure cannot be developed in isolation. From a stakeholder perspective the project seeks to build a more trusting relationship between industry, academia and government because this is a collective challenge and collaboration is essential for net zero to be achieved.

Ultimately, the project wants to inform decision makers involved in net zero with the best academic evidence available, allowing for decisions to be taken on merit, building on existing mechanisms and learning from experience.

## WHAT WILL THE PROJECT DO?

### DEVELOP

an understanding of the needs of decision makers and the requirements that they have for the types of evidence that then informs their decision making

### RECOGNISE

the wider systems impact of any decisions targeted at net zero, gaining an understanding of whether “decision-makers” have agency over decisions – providing insights into the complexity of formulating policy

### BEGIN

the process of more structured engagement to build a more trusting relationship between industry, academia and government

### COLLABORATE

through a deliberative process by running a series of workshops with leading UK academics and key stakeholders from the public, private and third sectors

## PROJECT WORKSHOPS

- Round 1 – February 2021 - “Framing the Vision” – will focus on gathering and structuring knowledge and consensus building within the academic community
- Round 2 – May 2021 - “Building the Vision” – will seek to understand stakeholder perspectives of the net zero challenge, future visions, and the constraints and opportunities with stakeholders from the public sector, private sector, boundary organisations and UKRI

## WHAT WILL THE PROJECT DO? (CONTINUED)

- Round 3 – August 2021 - “Comparing the Vision” – will reflect upon the vision and consensus thinking derived from the stakeholder groups participating in Round 2 and share that for debate with the original academic participants in Round 1
- Round 4 – October 2021 - “Sharing the Vision” – the final workshop will bring together academics and representatives from the stakeholder groups to agree the outputs of the project which will inform the production of a narrative on what is required to deliver a net zero future in the short-term (the next 10 years) and the longer-term (from 2030) guided and underpinned by the best academic evidence

The desired outcome of the project is to create an environment whereby rapid but above all robust decisions made in the UK about net zero are informed by the most advanced research on climate mitigation.



## KEEP UP TO DATE ON THE PROJECT

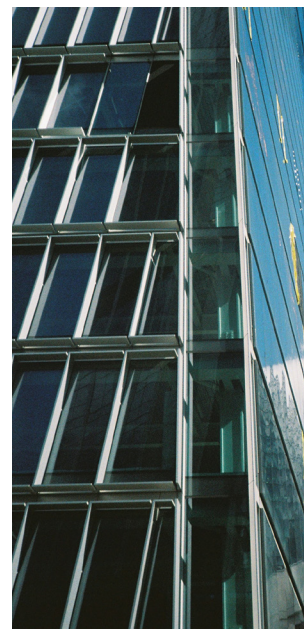
For the latest news on the project please visit our website:

[www.deliveringnetzero.org](https://www.deliveringnetzero.org)

or connect with our social media channels



@delivernetzero



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