

# ERA ENERGY RESEARCH ACCELERATOR

Accelerating real-world energy innovation



## ERA Conference 2024

# A Race Against Time – Energy Innovation for Net-Zero

Thursday 25 Jan 2024

Professor Chris Fogwill

Pro-Vice-Chancellor – School of Water, Energy and Environment

[www.era.ac.uk](http://www.era.ac.uk)



# Housekeeping

## Fire Alarm

Fire Exits and Assembly Point

## Bathrooms

## Mobile phones

Please put on silent, if you need to take or make a call, please leave the room.

## Questions

You will have the opportunity to ask questions after each presentation and there will be a dedicated Q&A before we close.





# Welcome to Cranfield University



Water, Energy and Environment



Aerospace transport and manufacturing



Cranfield Defense and Security



Cranfield School of Management

Cranfield University

SUSTAINABLE DEVELOPMENT GOALS

Ranked **32nd** in the world for SDG17 - Partnerships for the Goals

17 PARTNERSHIPS FOR THE GOALS

THE IMPACT RANKINGS 2023

**Our Vision: To be valued globally for tackling the real-world issues of today to deliver a sustainable future.**



# Blueprint for Zero Emission Flight and Infrastructure



HYDROGEN ENERGY  
INNOVATION



HYDROGEN SYSTEMS  
INTEGRATION



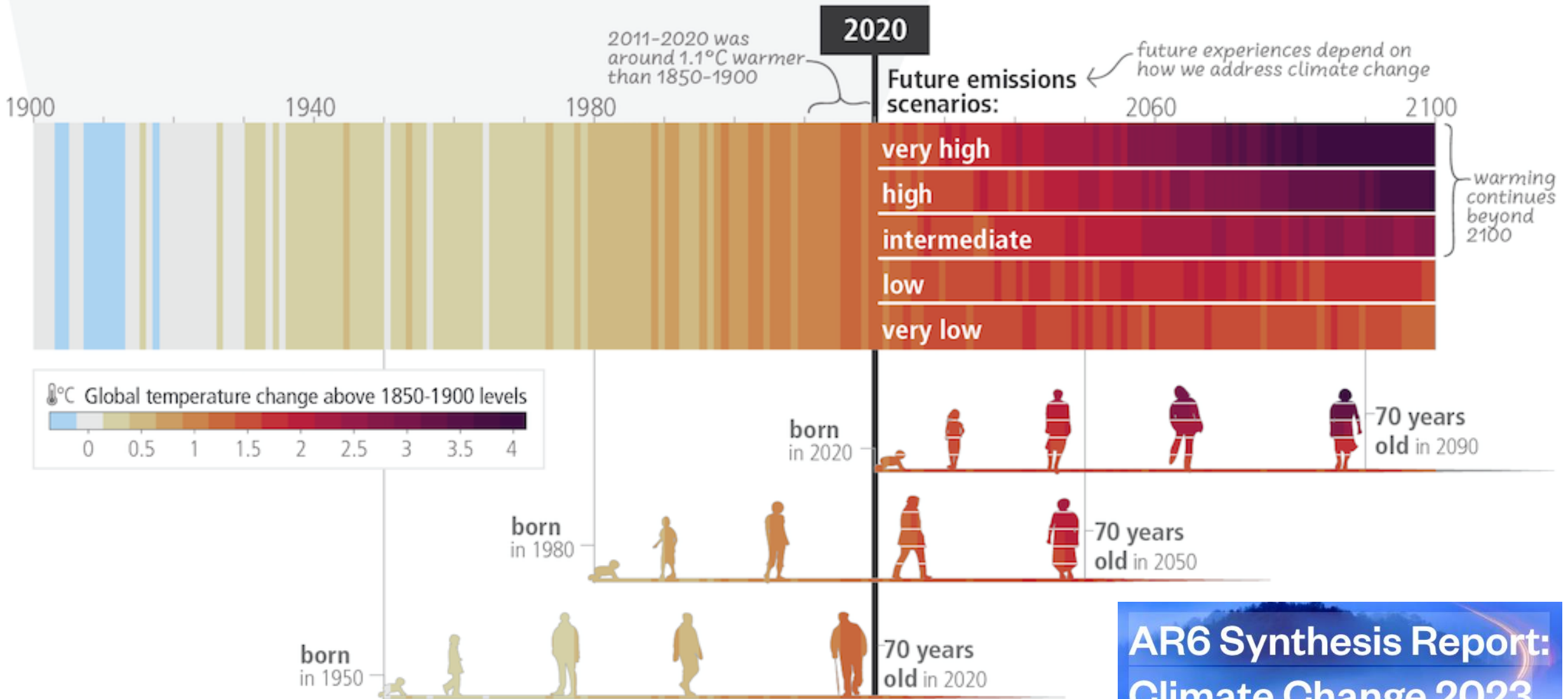
ENABLING JET  
ZERO





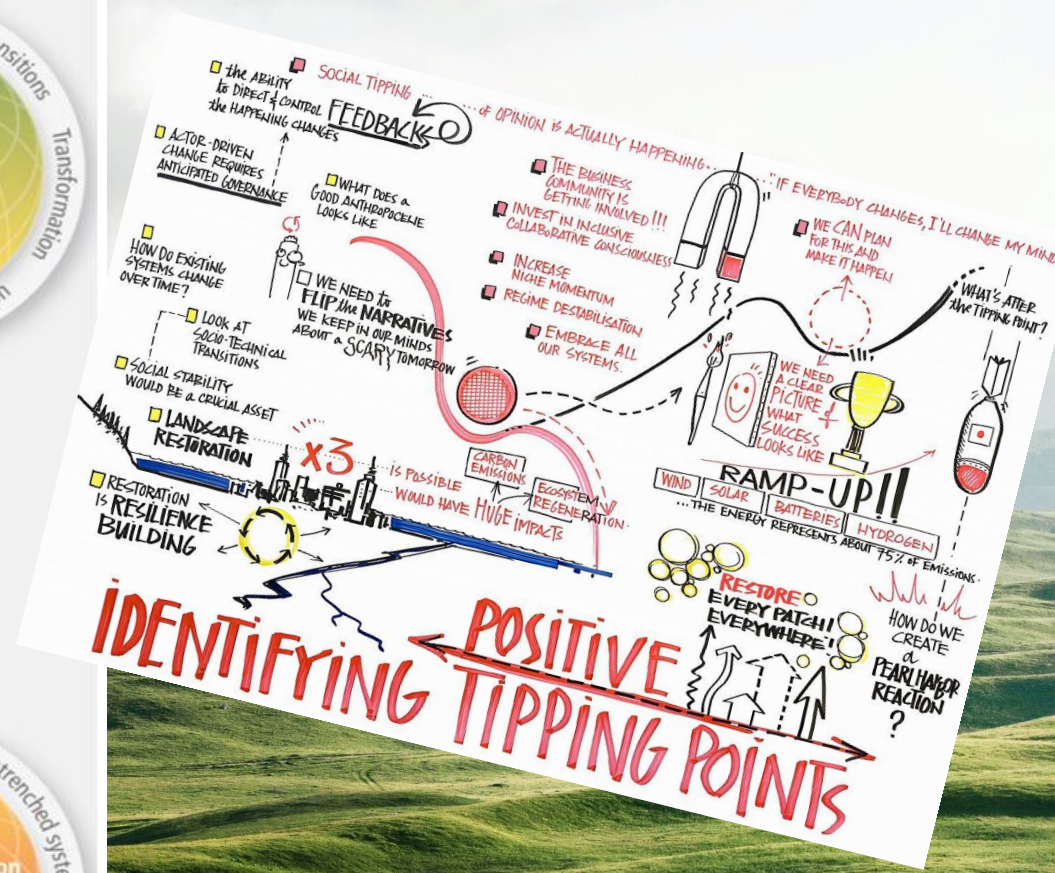
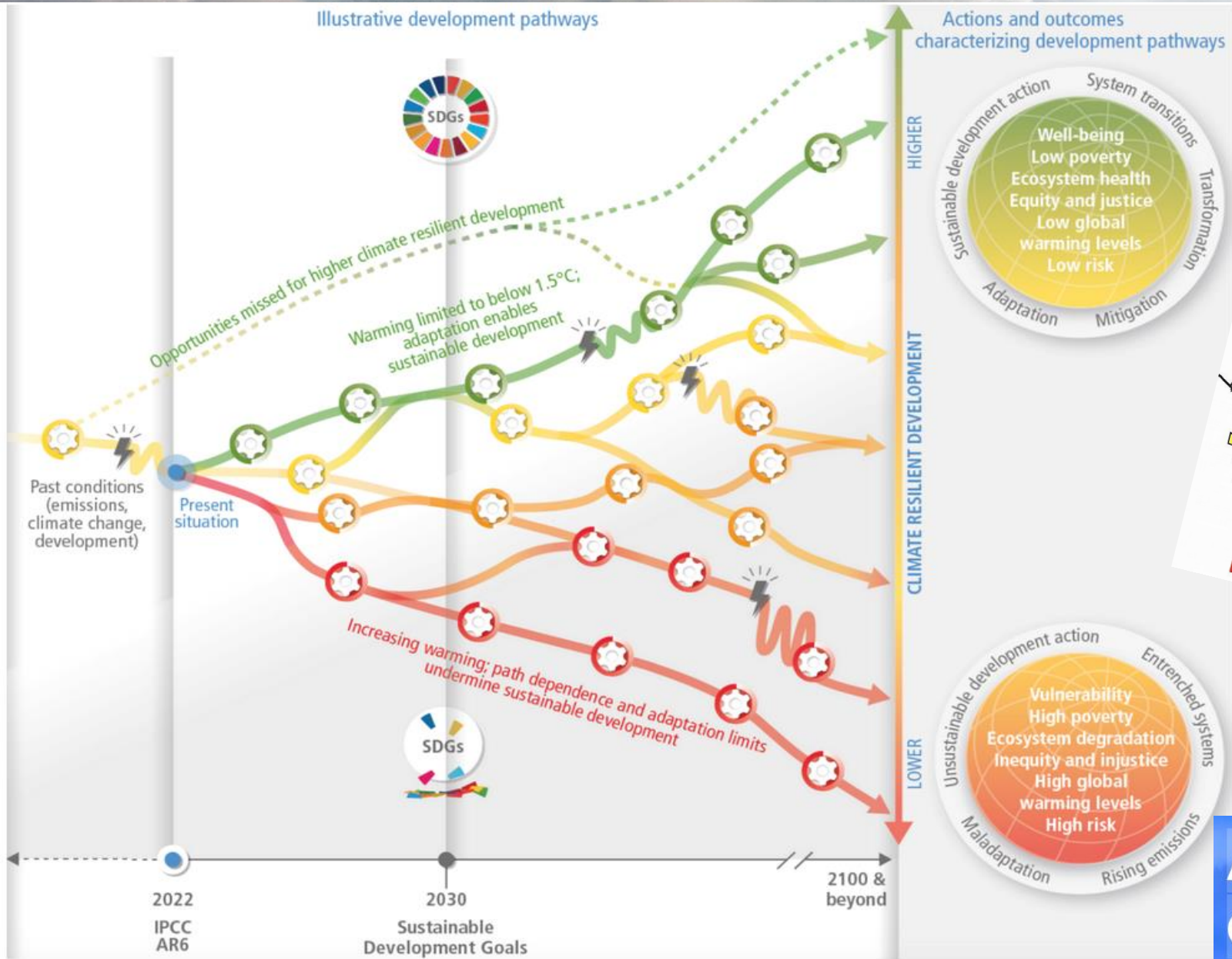
# A Race Against Time - Energy Innovation for Net-Zero

c) The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near-term





# A Race Against Time - Energy Innovation for Net-Zero



**AR6 Synthesis Report: Climate Change 2023**

Source: The Intergovernmental Panel on Climate Change



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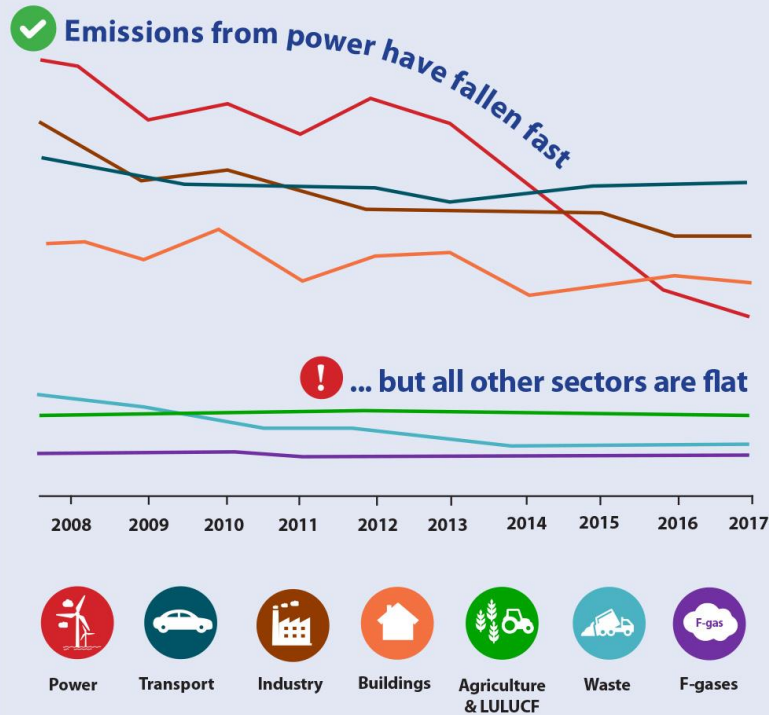


Committee on  
Climate Change

## Positive Tipping Points for the U.K.

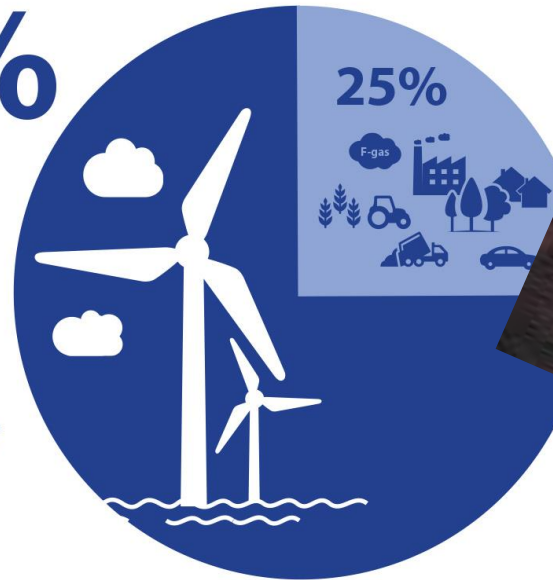
Excellent progress in reducing emissions from electricity generation masks failure in other sectors

The UK's greenhouse gas emissions have reduced by 43% compared to 1990 levels, on the way to a target of at least an 80% reduction by 2050.



# 75%

of emissions reductions since 2012 have come from the power sector



Clear goals, ambitious strategy and well-designed policies have been effective. These lessons must now be applied to other sectors





# A Race Against Time – Energy Innovation for Net-Zero

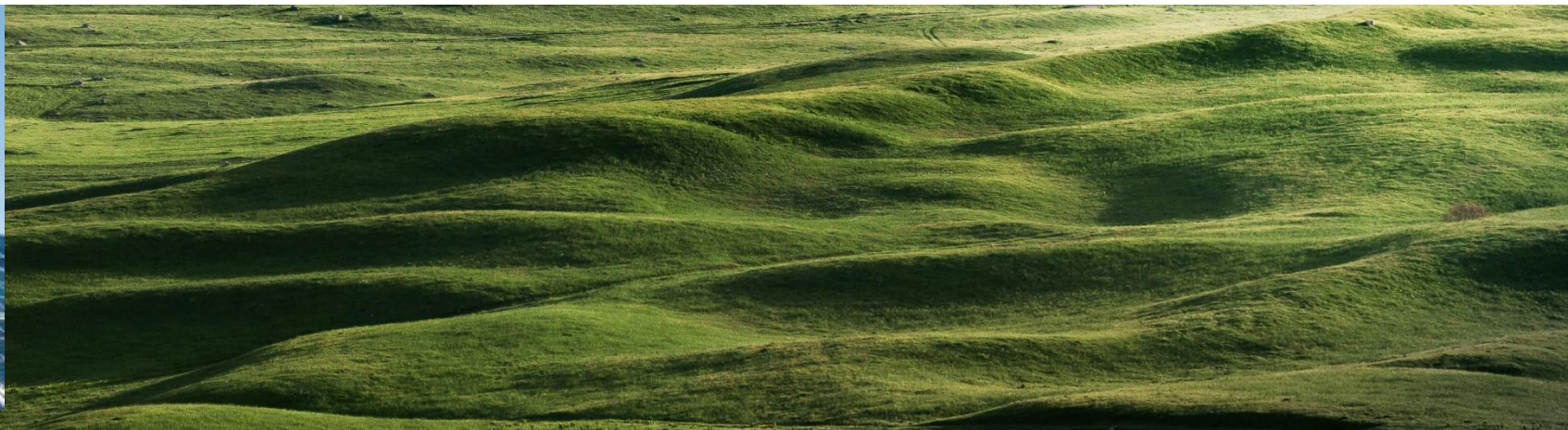
## MISSION ZERO

Independent Review  
of Net Zero

Rt Hon Chris Skidmore MP

### Scale Up and Pace of the energy transition is key to drive Positive Tipping Points

15. The Review's findings are unequivocal: **we must grab this opportunity, there is no future economy but a green economy.** And with the recommendations set out to turbocharge our approach across key industries, catalyse action in homes, community halls, and local and national government across the country, **we can.**







**Thank you all  
Enjoy the day  
& do stay in touch**



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