

# #SCOTLANDISNOW



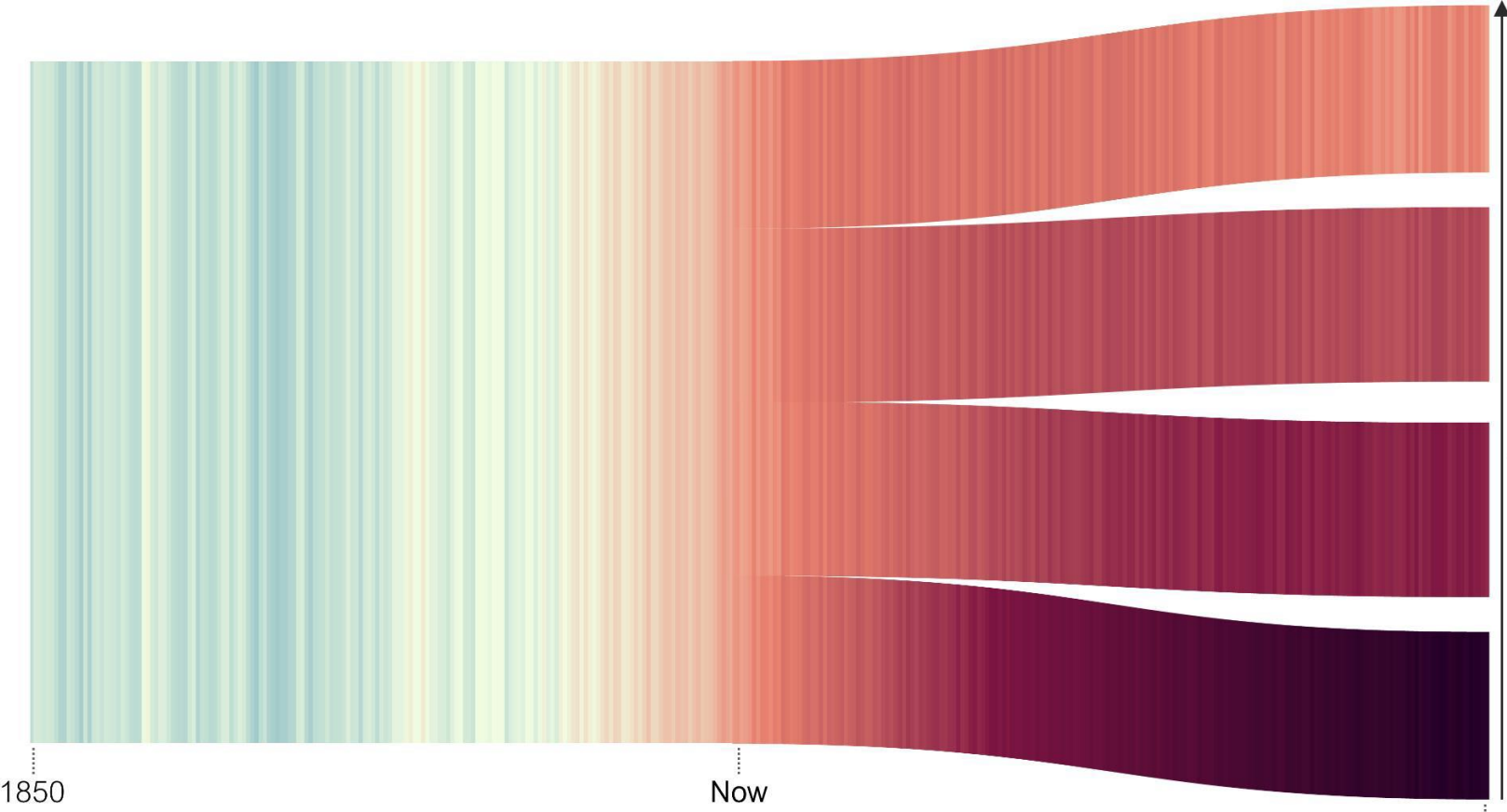
**ANDY MCDONALD**  
HEAD OF LOW CARBON TRANSITION  
**SCOTTISH ENTERPRISE**

NASA – 1<sup>st</sup> Earth Day 22 April 1970





# The Climate Choice?



**+1.9°C in 2100/+1.4°C by 2200**  
Emissions peak by 2029;  
Negative emissions by 2080

**+2.7°C in 2100/+2.8°C by 2200**  
Emissions peak by 2049

**+3.1°C in 2100/+3.7°C by 2200**  
Emissions peak by 2089

**+4.8°C in 2100/+7.8°C by 2200**  
Emissions peak between 2100 -  
2150

# A net zero emissions target is a game-changer

- It will require fundamental societal change, deployment of new technologies, and significant integration between sectors.
- The heat and transport sectors are where the most significant decarbonisation challenges lie. Significant innovation focus is expected in these areas.
- Improving air quality is becoming increasingly important – the challenge is therefore not just about reducing GHGs.
- None of this is easy – inaction is not an option, and investment decisions made now will have a legacy beyond 2045.

**The Scottish Parliament's 2030 target to reduce emissions by 75% will be extremely challenging to meet. It must be backed up by steps to drive meaningful emissions reductions, immediately.** Committee on Climate Change.

- Energy intensive industries are an important part of the Scottish Economy. Recognising this, it is critical that the Scottish and Local Governments work with these industries to develop comprehensive decarbonisation delivery plans, with a particular focus on those technologies likely to require incentives or other forms of intervention (e.g. heat networks and Carbon Capture networks).
- Scotland's Economic Strategy sets out the ambition to create a more cohesive and resilient economy that improves the opportunities, life chances, and wellbeing of every citizen in our country, and the Climate Change Bill commits us to ending our contribution to climate change by 2045 at the latest.
- The Climate Change Bill was introduced to the Scottish Parliament as a direct response to the Paris Agreement. The Paris Agreement requires parties to increase action to reduce greenhouse gas emissions while taking into account “the imperatives of a just transition of the workforce and the creation of decent work and quality jobs”



## JOBS, SKILLS AND OPPORTUNITIES FOR SCOTLAND: THE NUMBERS...

A third of the UK's gas comes ashore in Scotland.

Today there are 14,000 full time onshore jobs in Scottish petro-chemical industry and supply chain.

Scotland could easily secure 40% of the CO2 storage element of a carbon capture utilisation and storage programme. By 2030 this would create up to 45,000 UK jobs.

This would mean up to 100,000 new UK jobs being created by 2050.

# There is a growing awareness about what will be needed to deliver a net-zero future

- Significant focus on resource and energy efficiency to reduce demand
- Societal choices to reduce demand for carbon-intensive activities
- Extensive electrification (especially transport & heating)
- A major expansion of renewable and other low carbon generation
- Changes in farming / land management practice with an emphasis on carbon sequestration and sustainable biomass production
- Development of a hydrogen economy to service demands for some industrial processes, long distance heavy goods vehicles, shipping, heating and electricity peak demand management
- Large-scale rollout of carbon capture & storage
- Increasing re-use and recycling of waste to achieve zero landfill
- Increased interaction and integration between different parts of the energy system (i.e. multi-vector)
- New services and integrated (cross sector) control approaches driven by digitalisation, coupled with new cyber security protocols

