

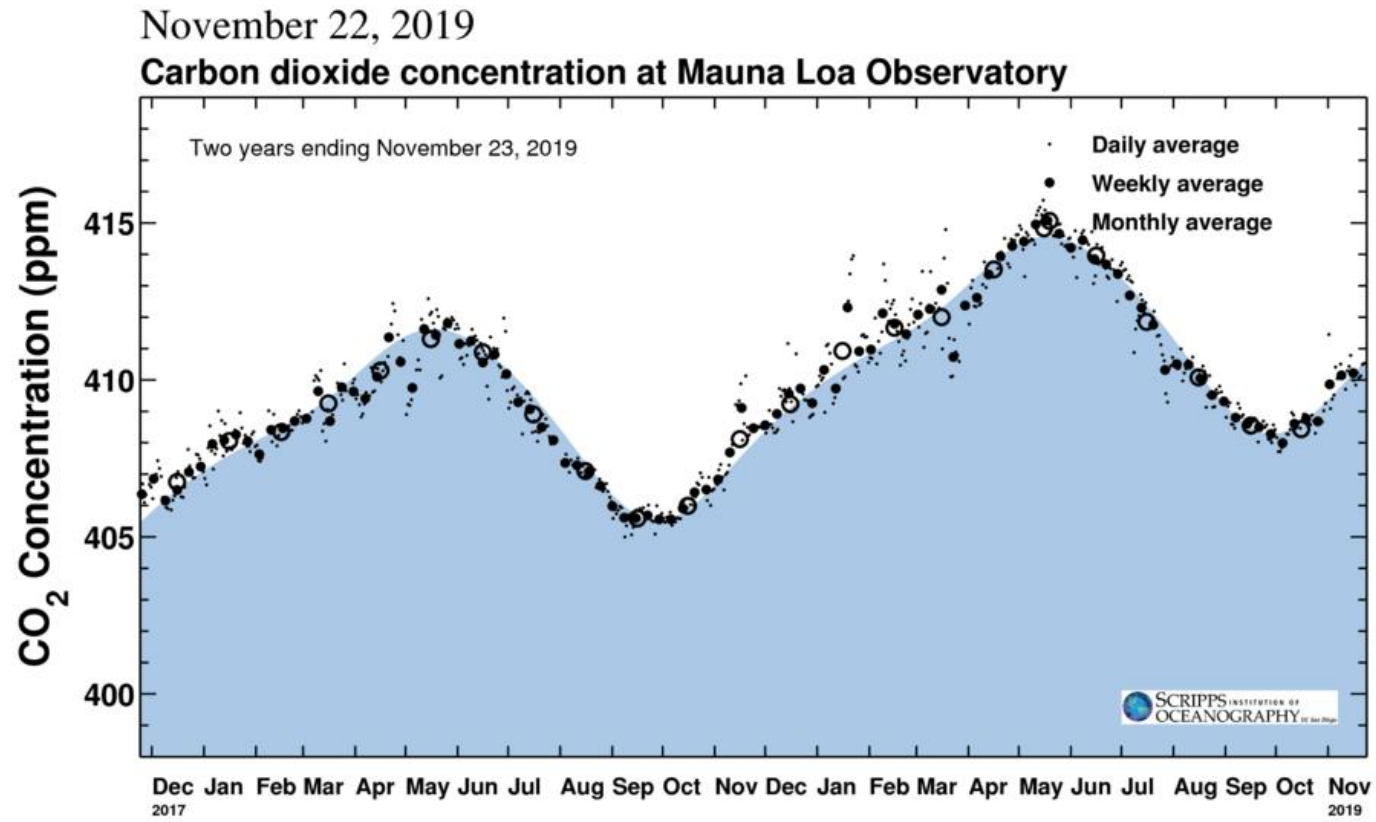
06 December 2019

Natural Capital Roundtable

Chris Stark
Committee on Climate Change

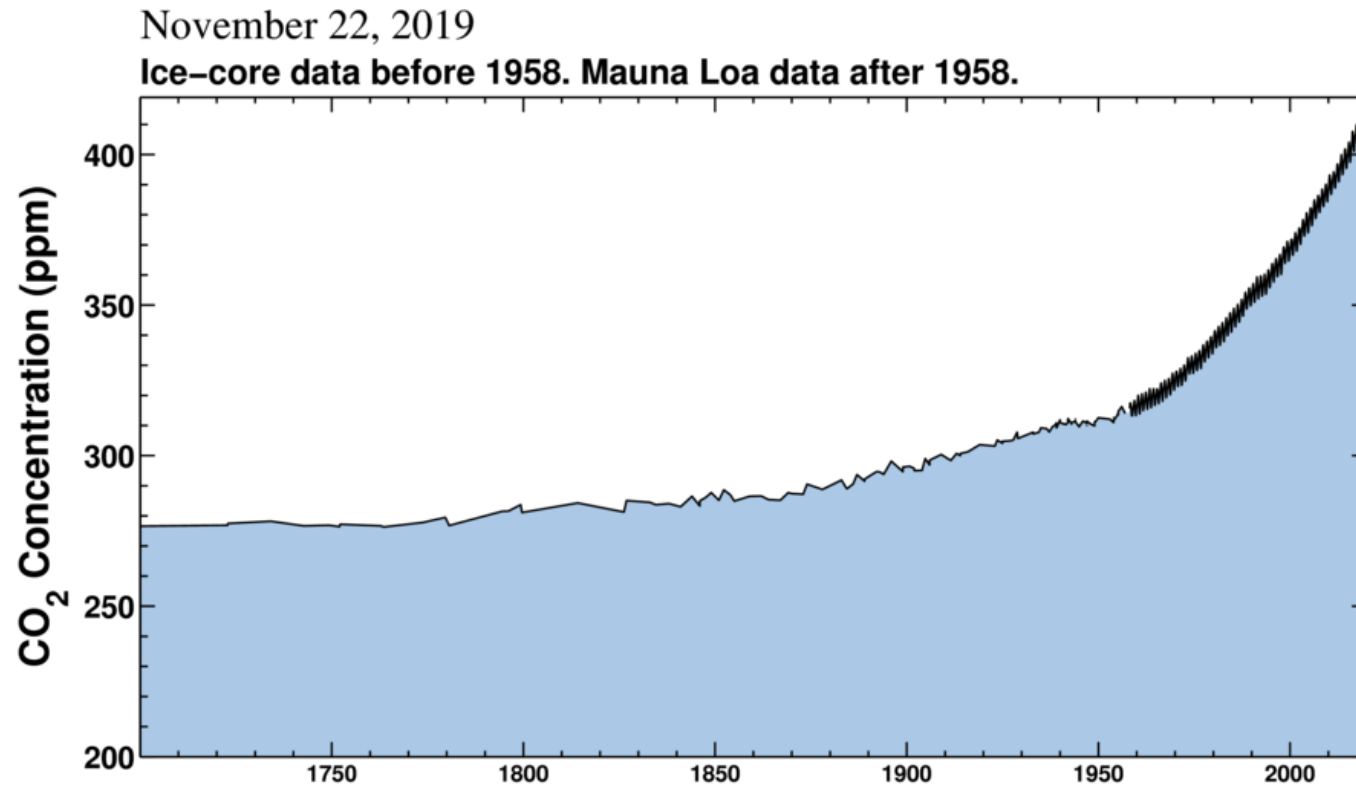
Where do we stand?

CO₂ Concentration – 2017 to 2019



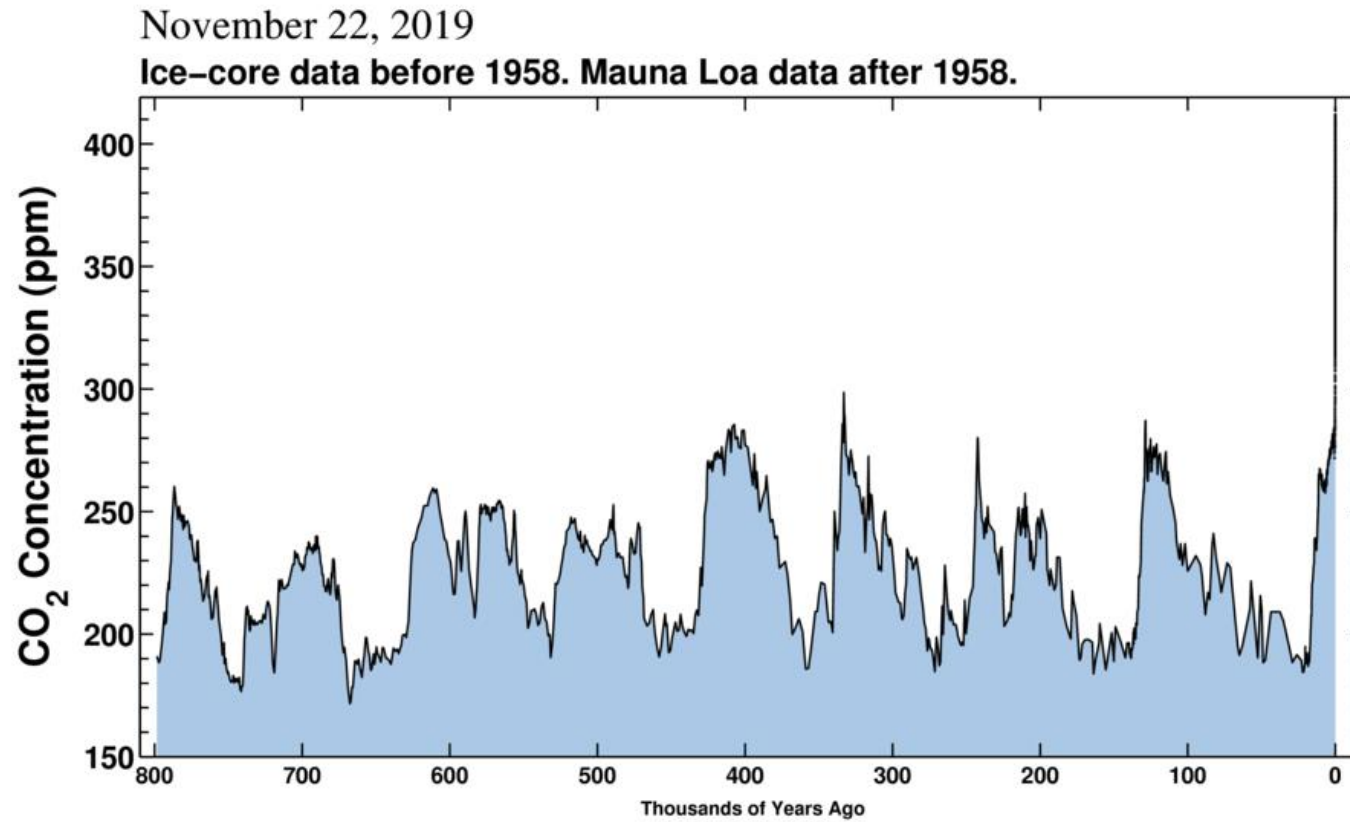
Source: Scripps Institution of Oceanography

CO₂ Concentration – 1700 to Present



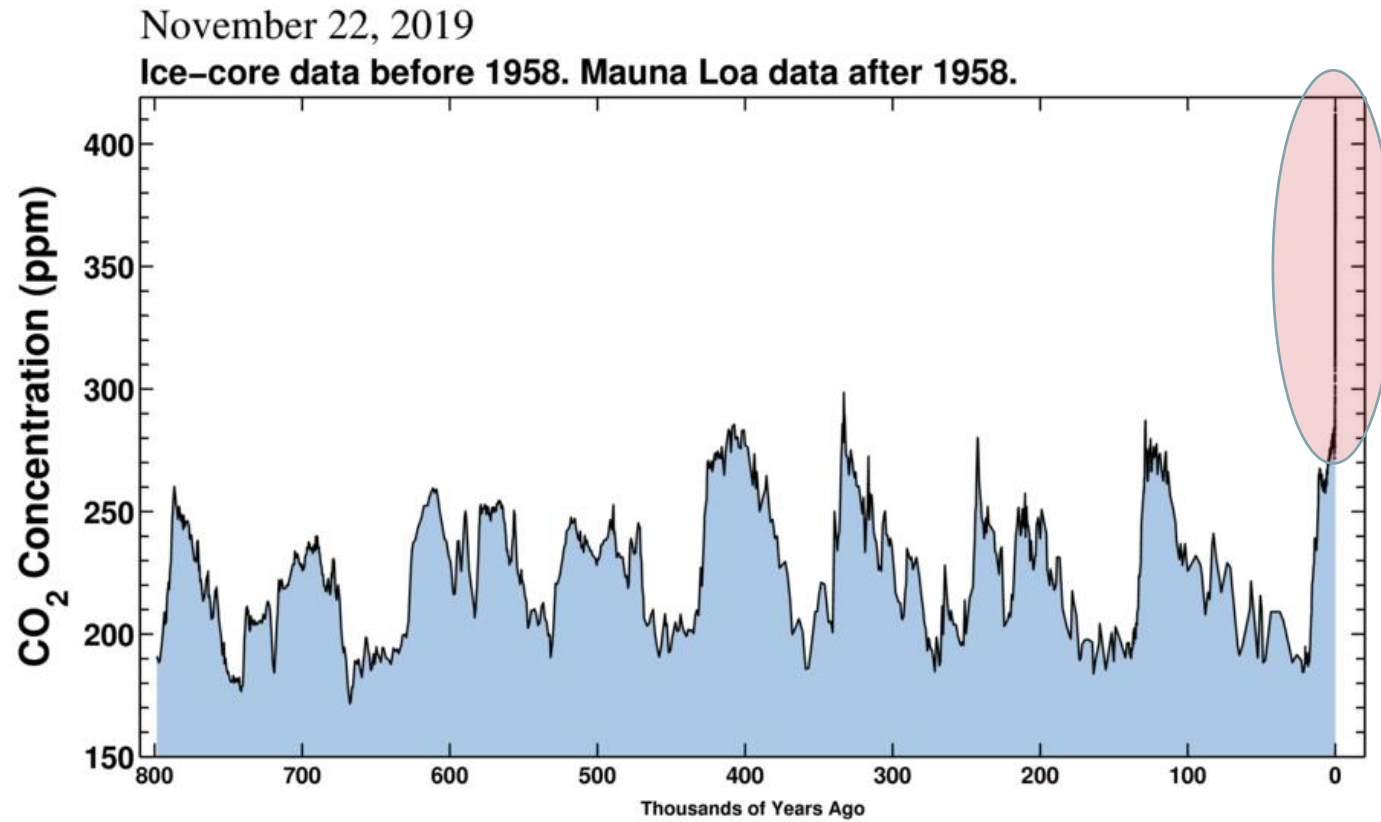
Source: Scripps Institution of Oceanography

CO₂ Concentration – 800,000 years



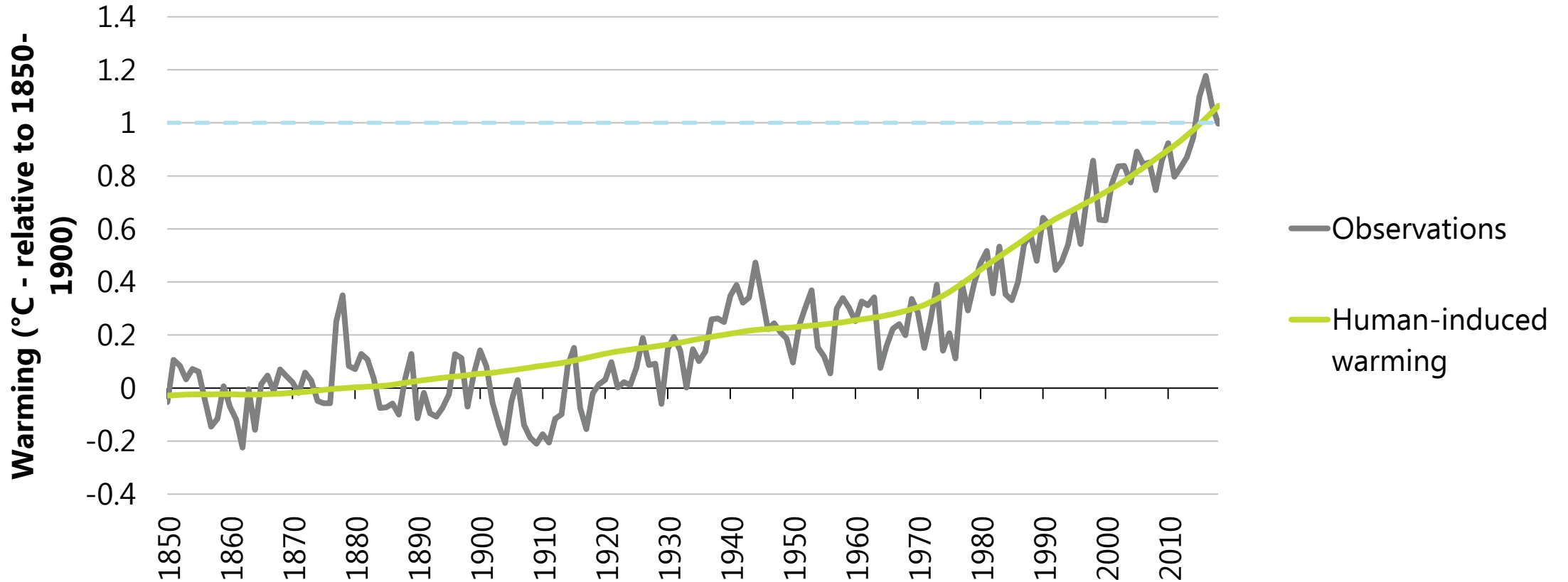
Source: Scripps Institution of Oceanography

CO₂ Concentration – 800,000 years



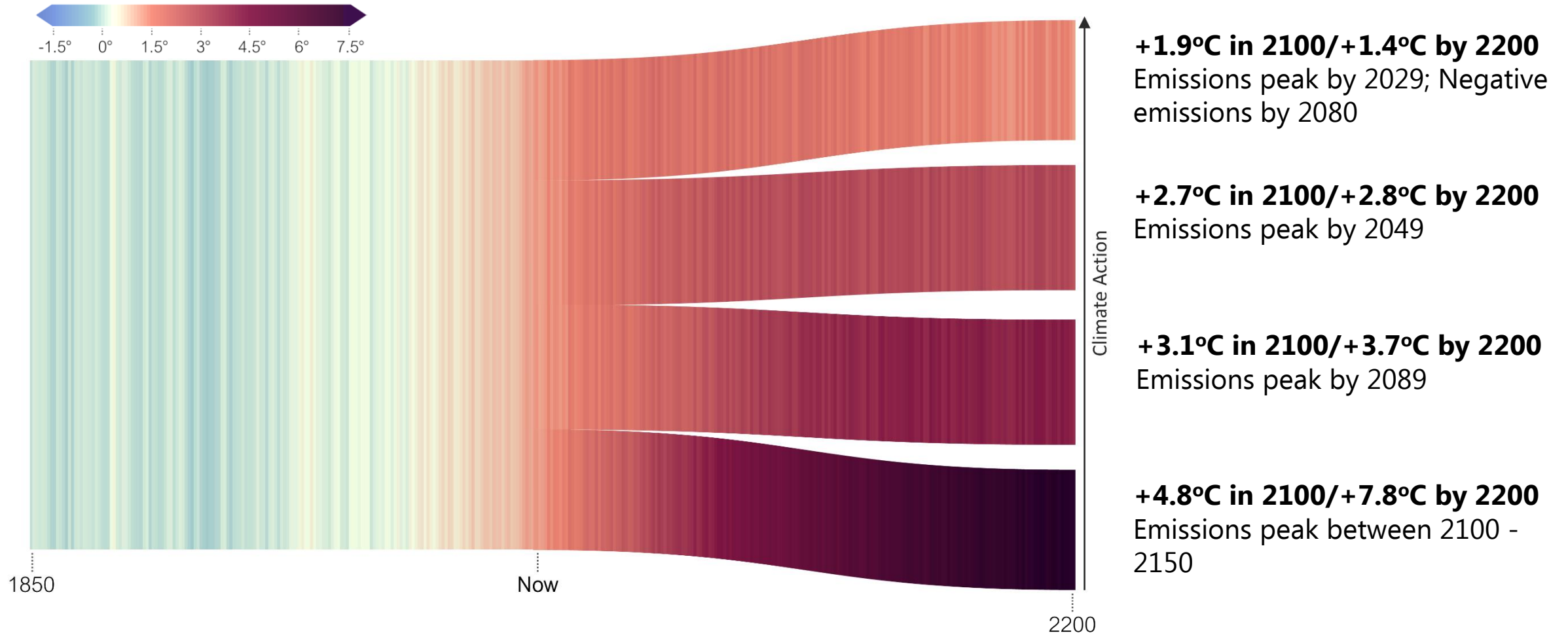
Source: Scripps Institution of Oceanography

Observed and human-induced warming



Source: HadCRUT4, NOAA, NASA and Cowtan & Way datasets; IPCC (2018) Chapter 1 - Framing and Context.

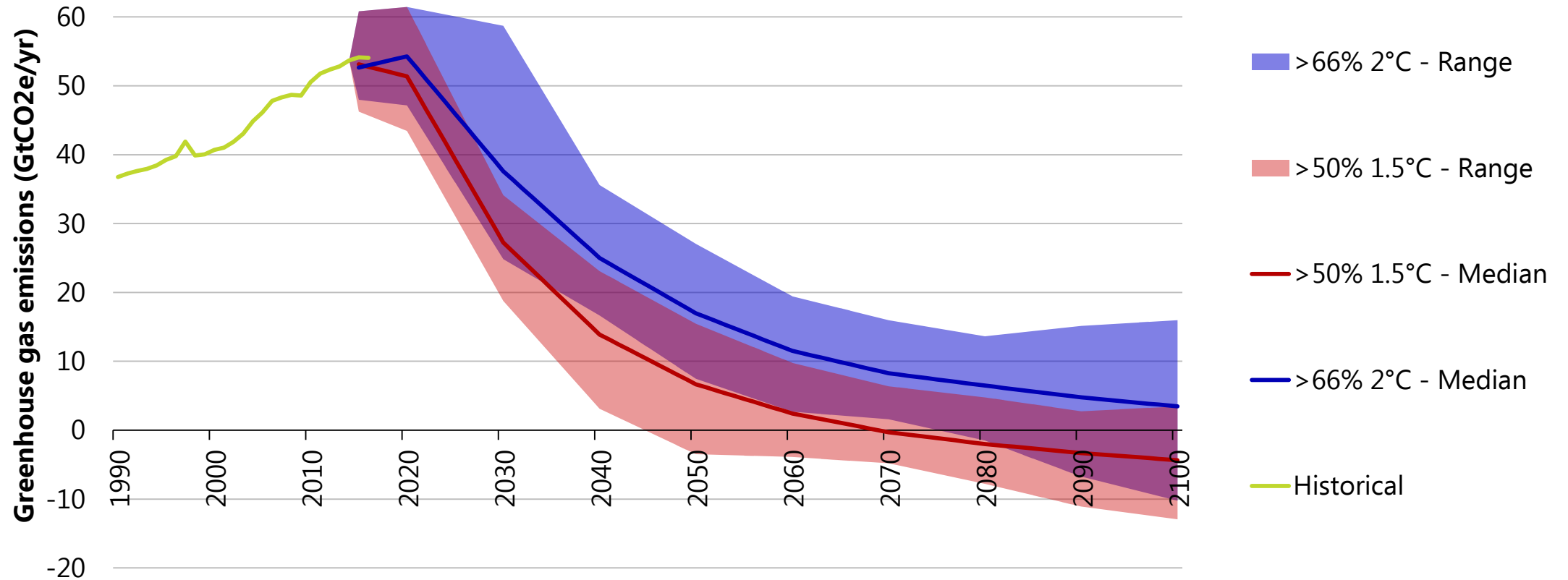
The climate choice



Source: Projections based on CMIP5 RCP scenarios, from warningstripes.com

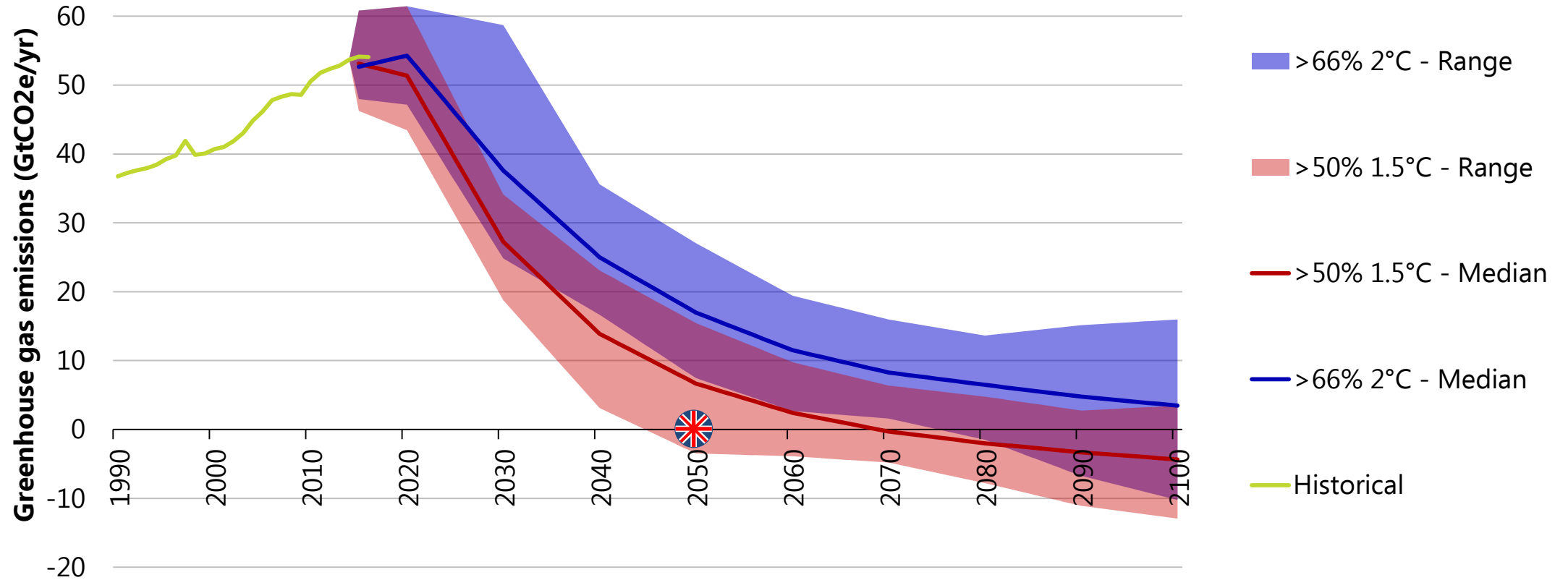
What do we do about this?

Global emissions pathways – the need for net zero



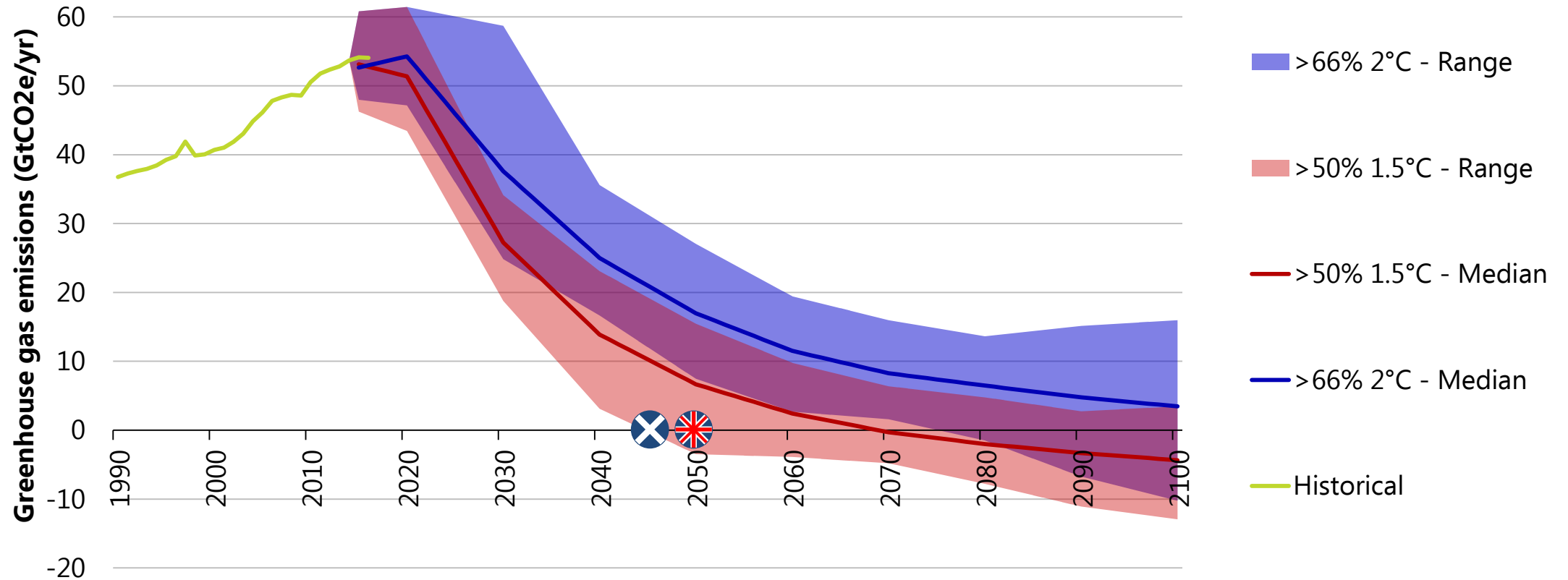
Source: Huppmann, D. et al. (2018) A new scenario resource for integrated 1.5°C research.

Global emissions pathways – the need for net zero



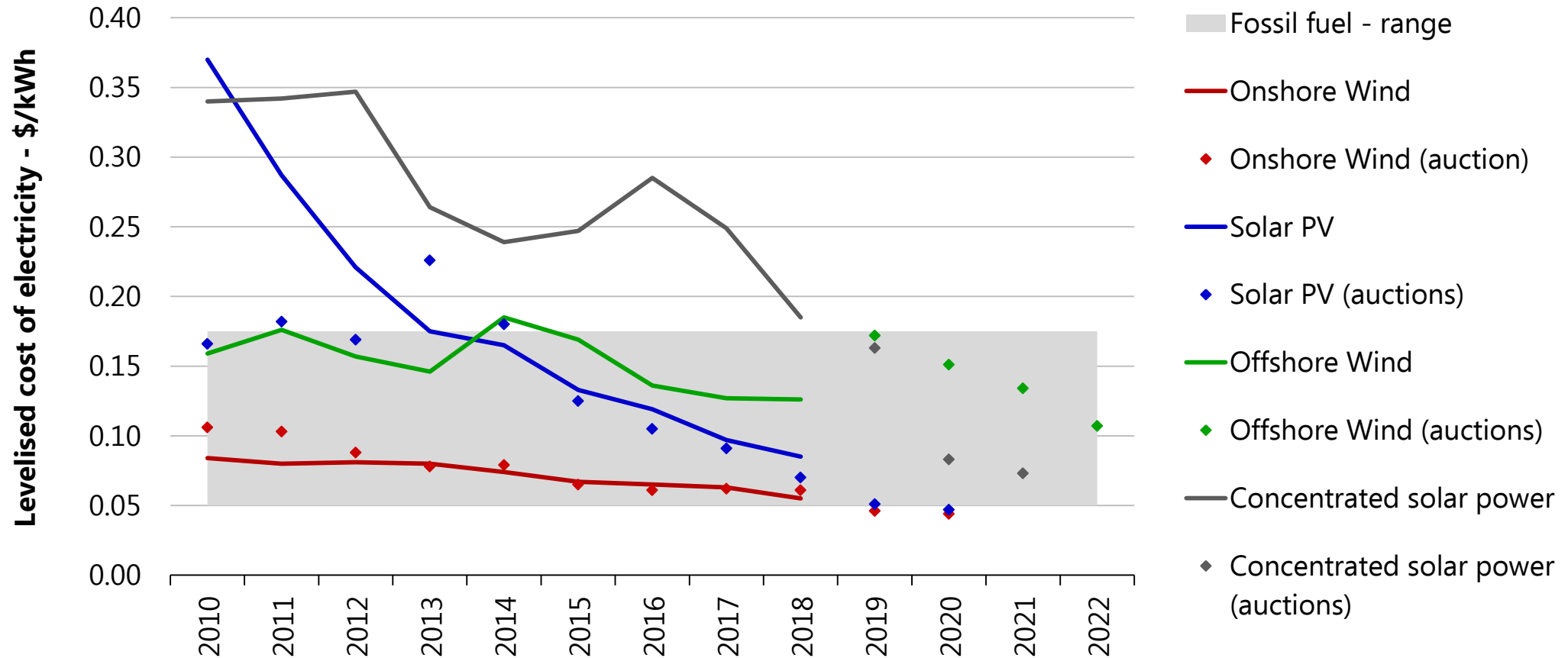
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Global emissions pathways – the need for net zero



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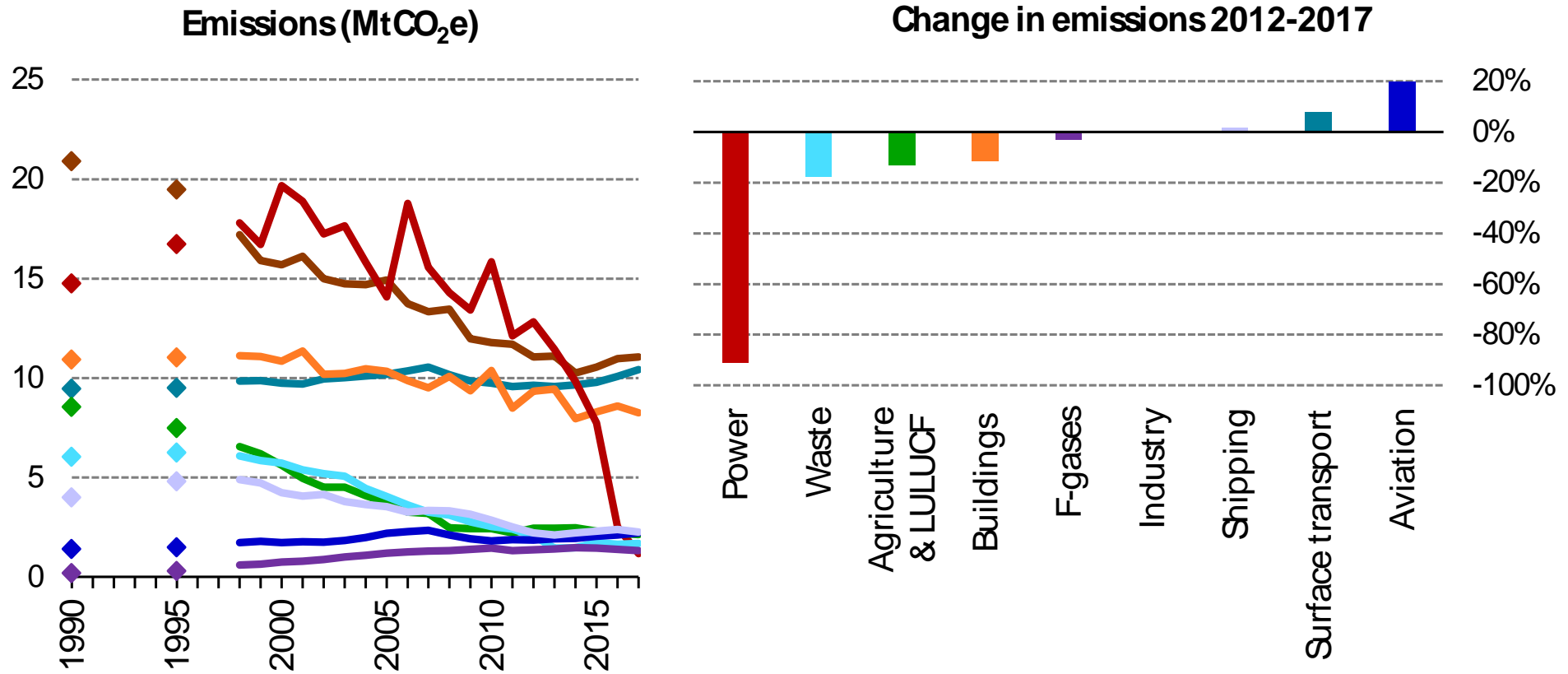
Alternatives to fossil fuels – Renewable Power Generation Costs



Source: International Renewable Energy Agency (2019) Renewable Power Generation Costs in 2018

Reducing emissions in Scotland

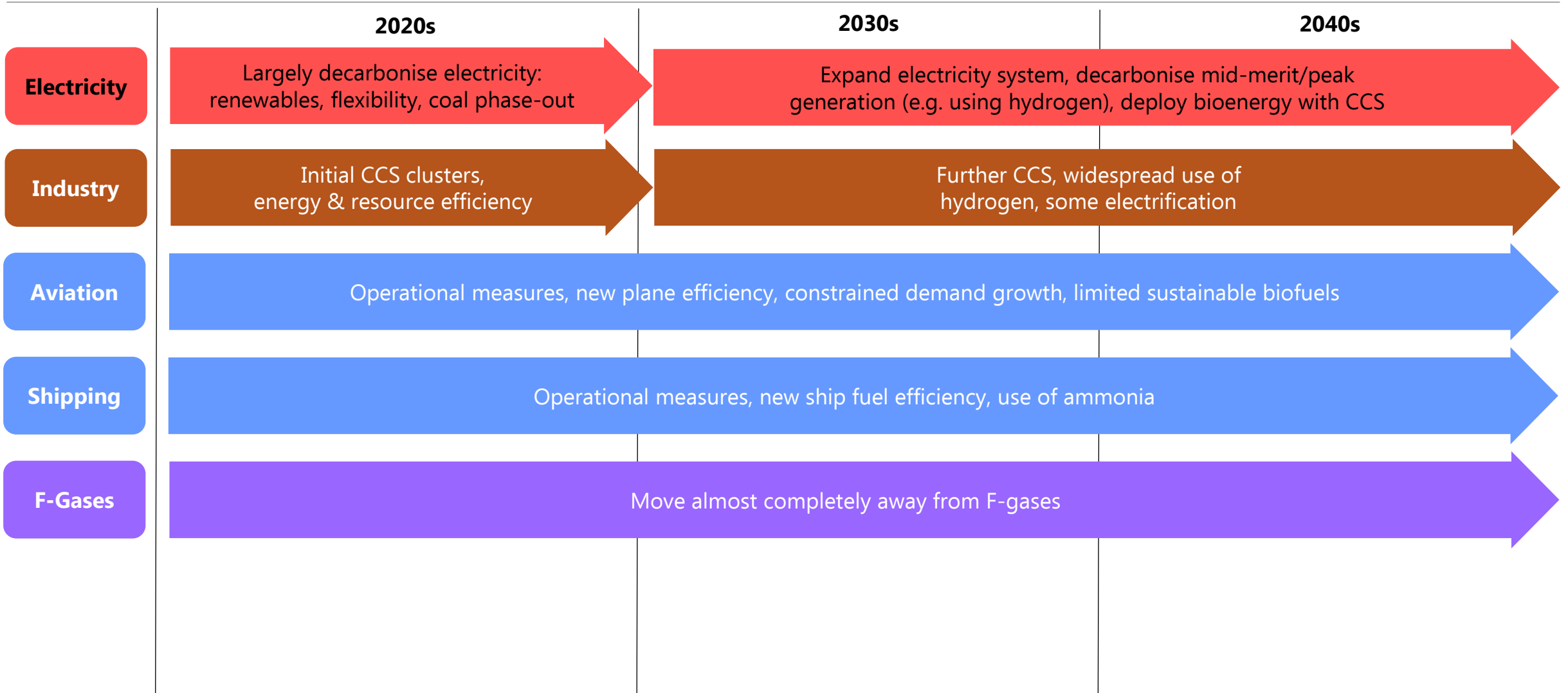
Sectoral changes in Scottish emissions



Source: CCC analysis

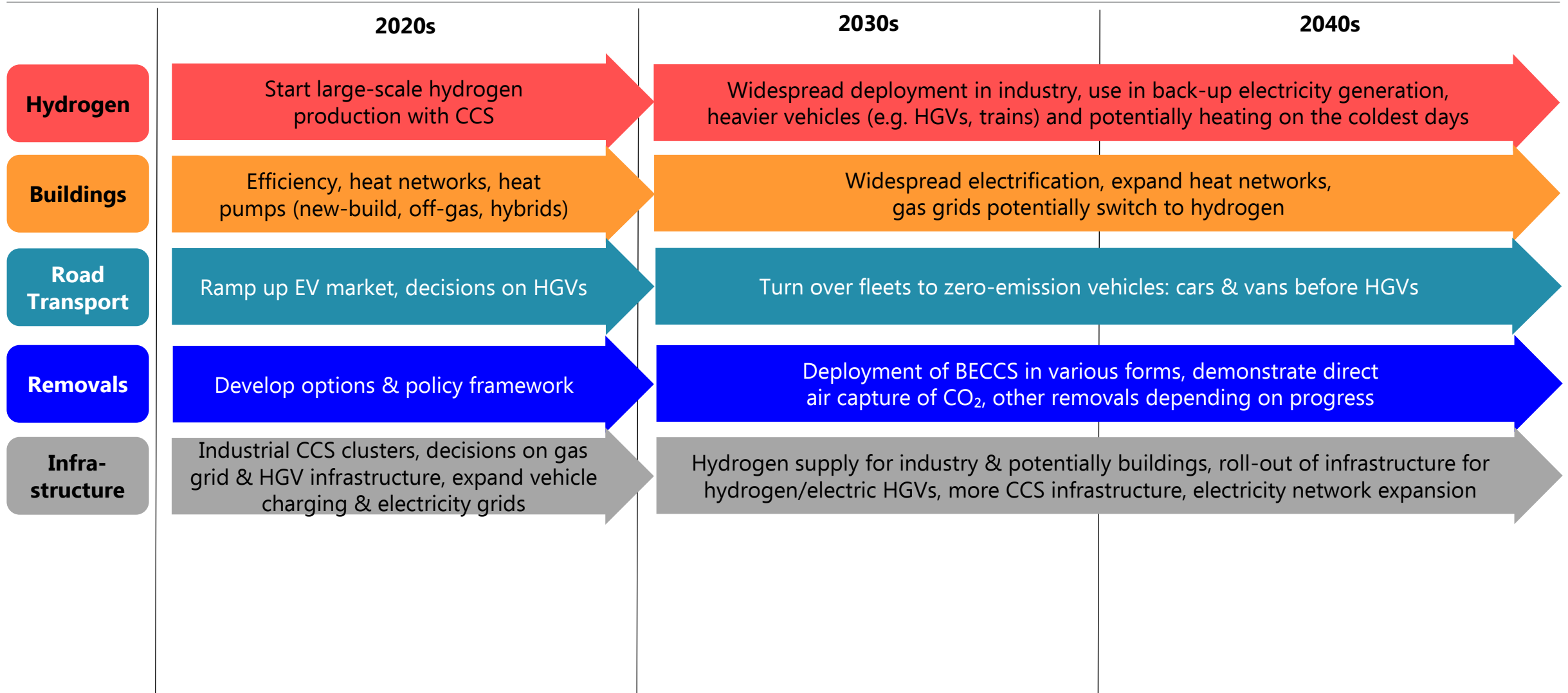
How net-zero scenarios can be delivered

Key powers largely reserved



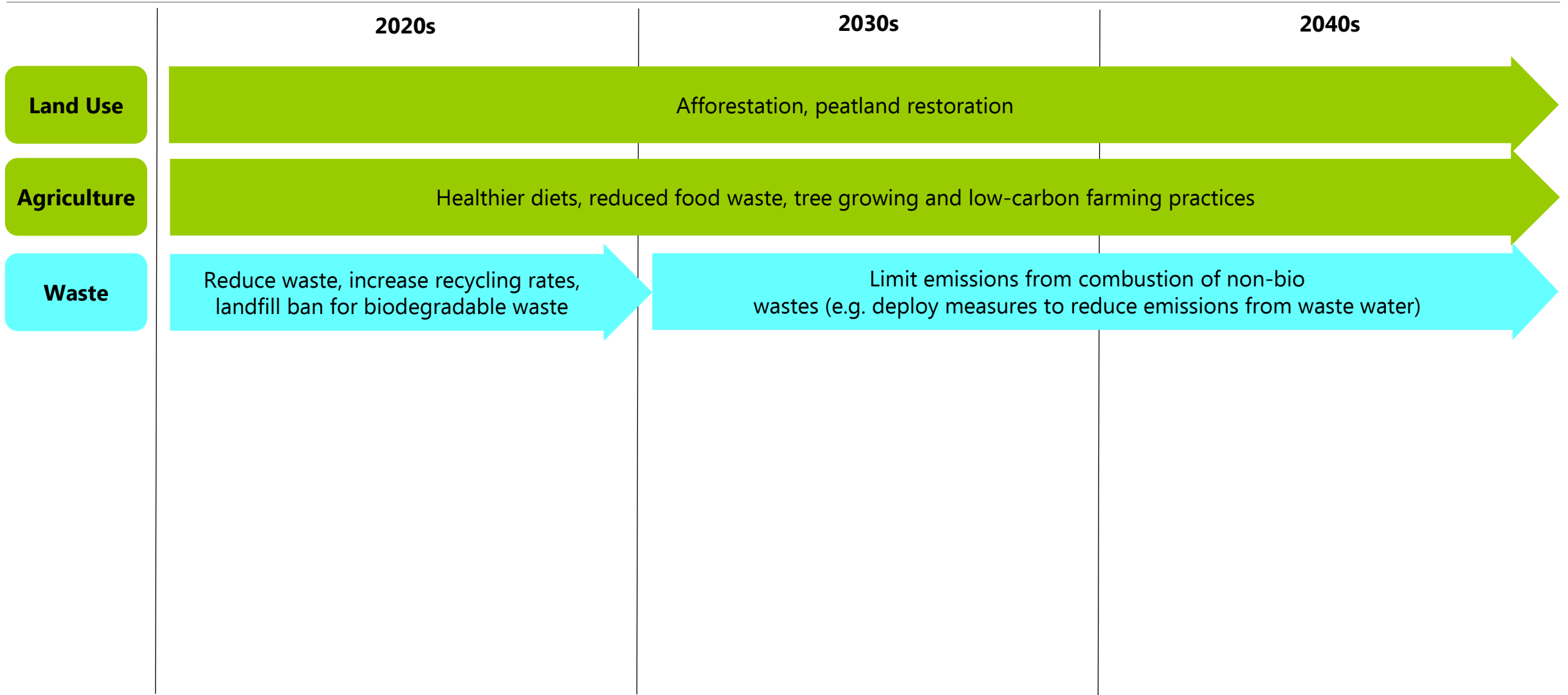
How net-zero scenarios can be delivered

Key powers shared between UK and Scottish Governments



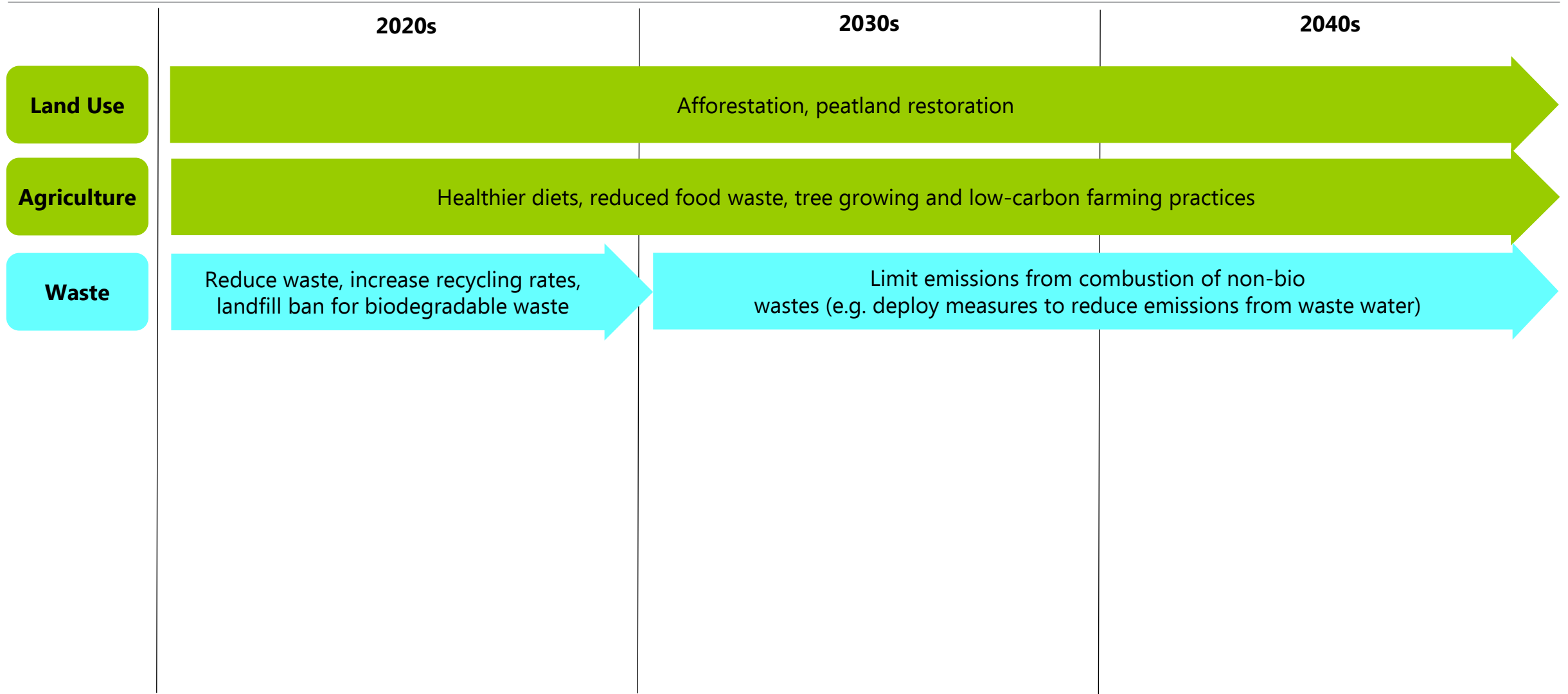
How net-zero scenarios can be delivered

Key powers largely devolved

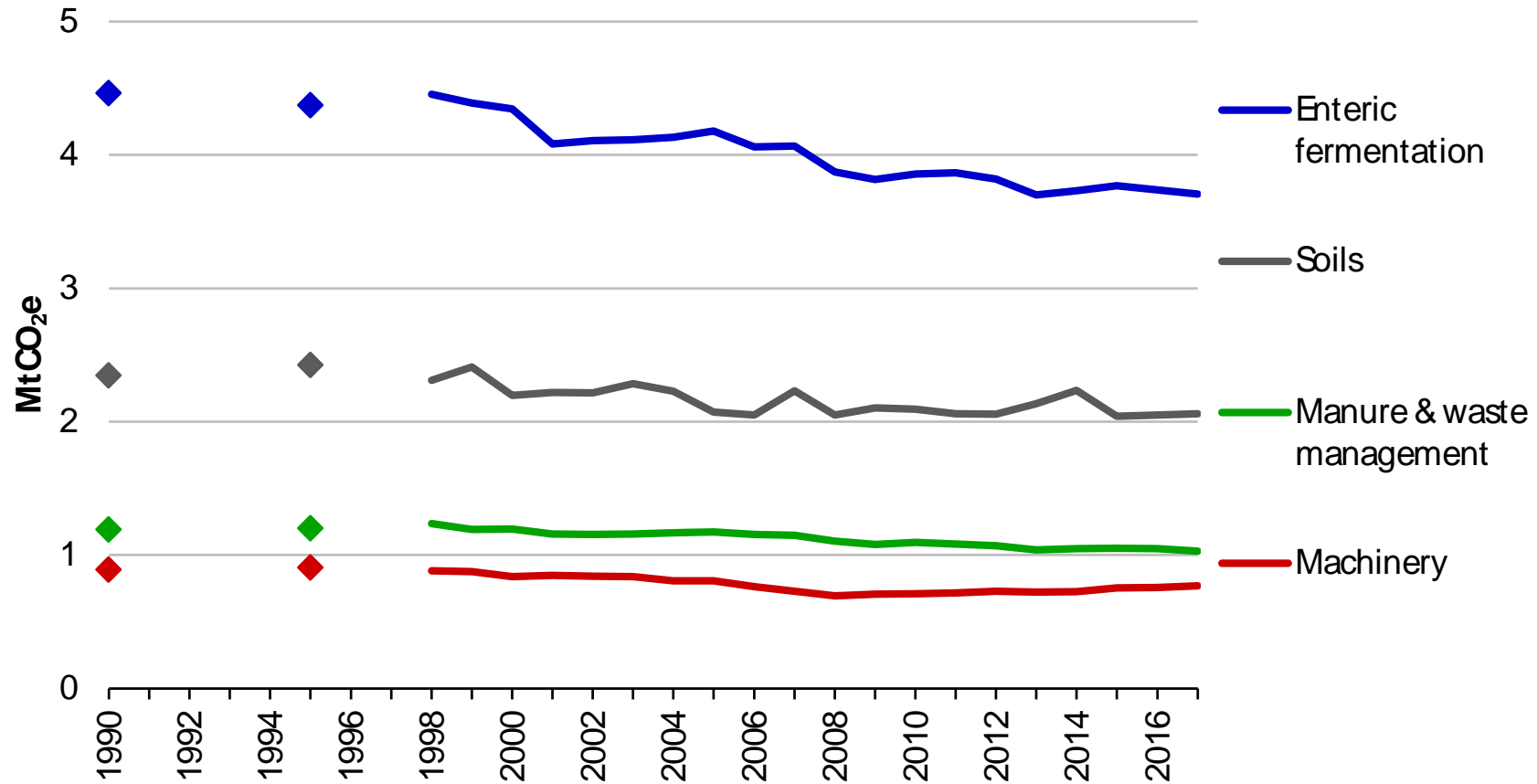


How net-zero scenarios can be delivered

Key powers largely devolved

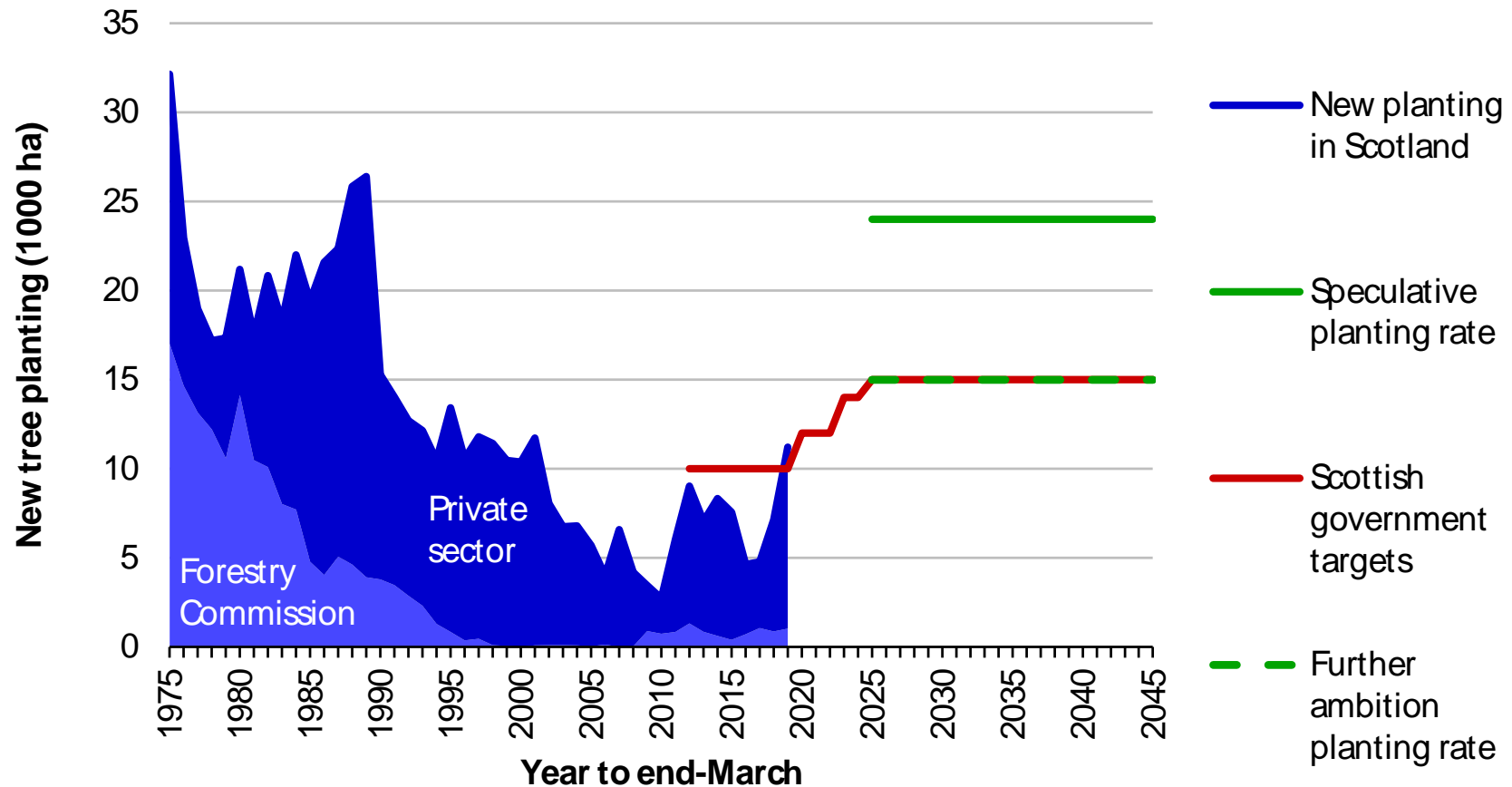


Emissions from Scottish agriculture (1990-2017)



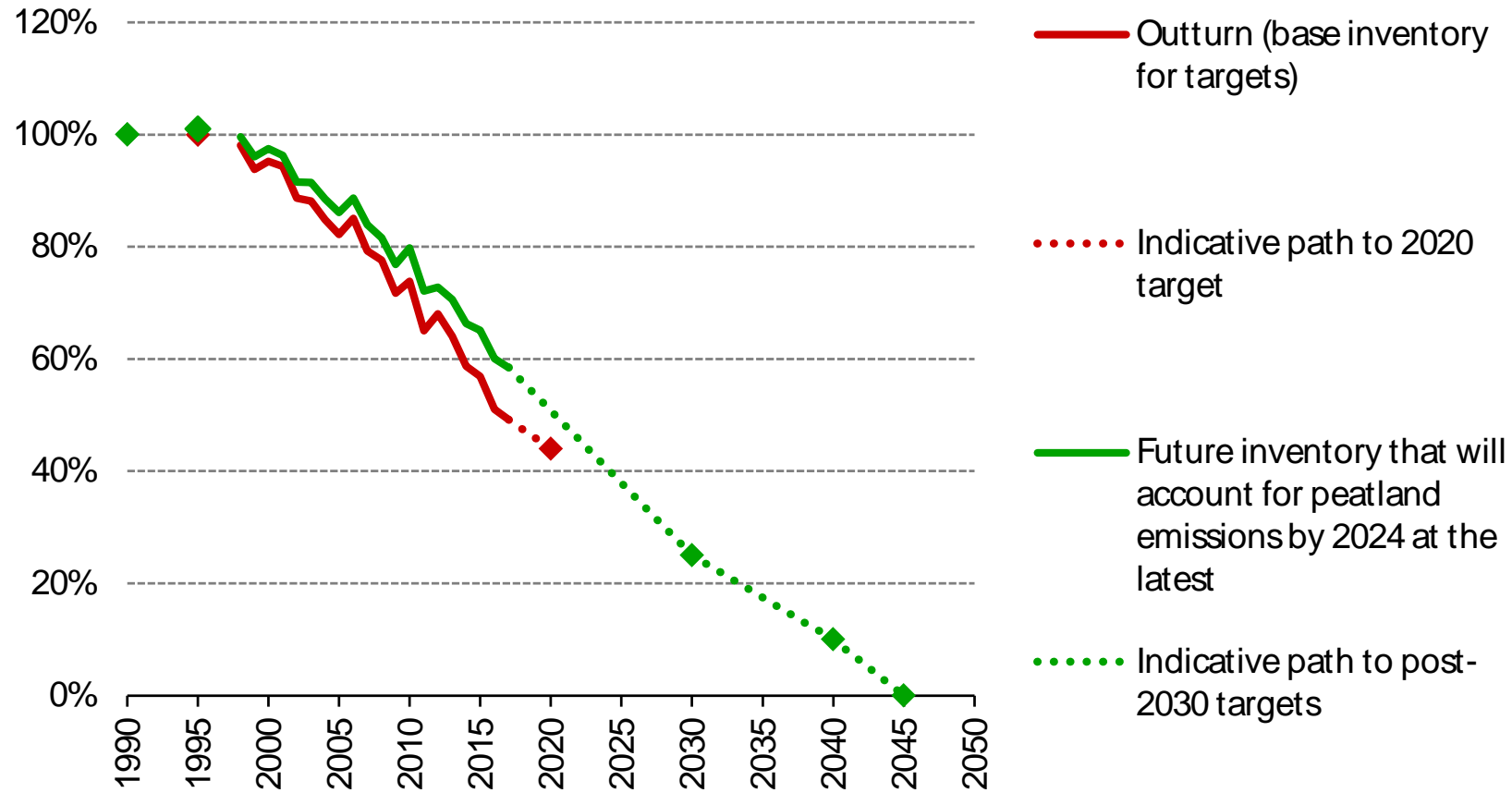
Source: CCC analysis

New tree planting in Scotland (1975-2019)



Source: CCC analysis

Indicative emissions trajectory



Source: CCC analysis

Thank you