

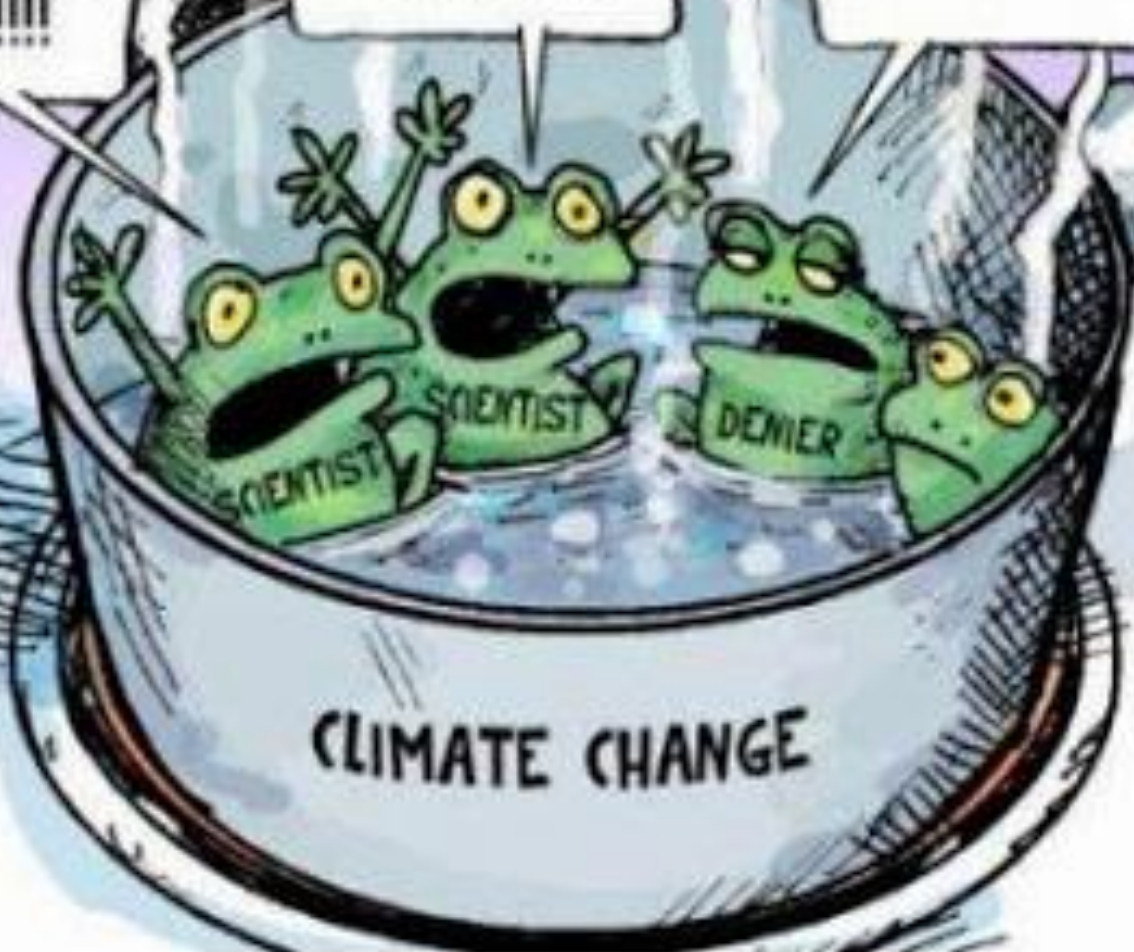
Climate Change

Where are we now?

WE'RE SLOWLY BEING COOKED IN A POT!!!!

WE'RE SLOWLY BEING BOILED IN A POT!!!

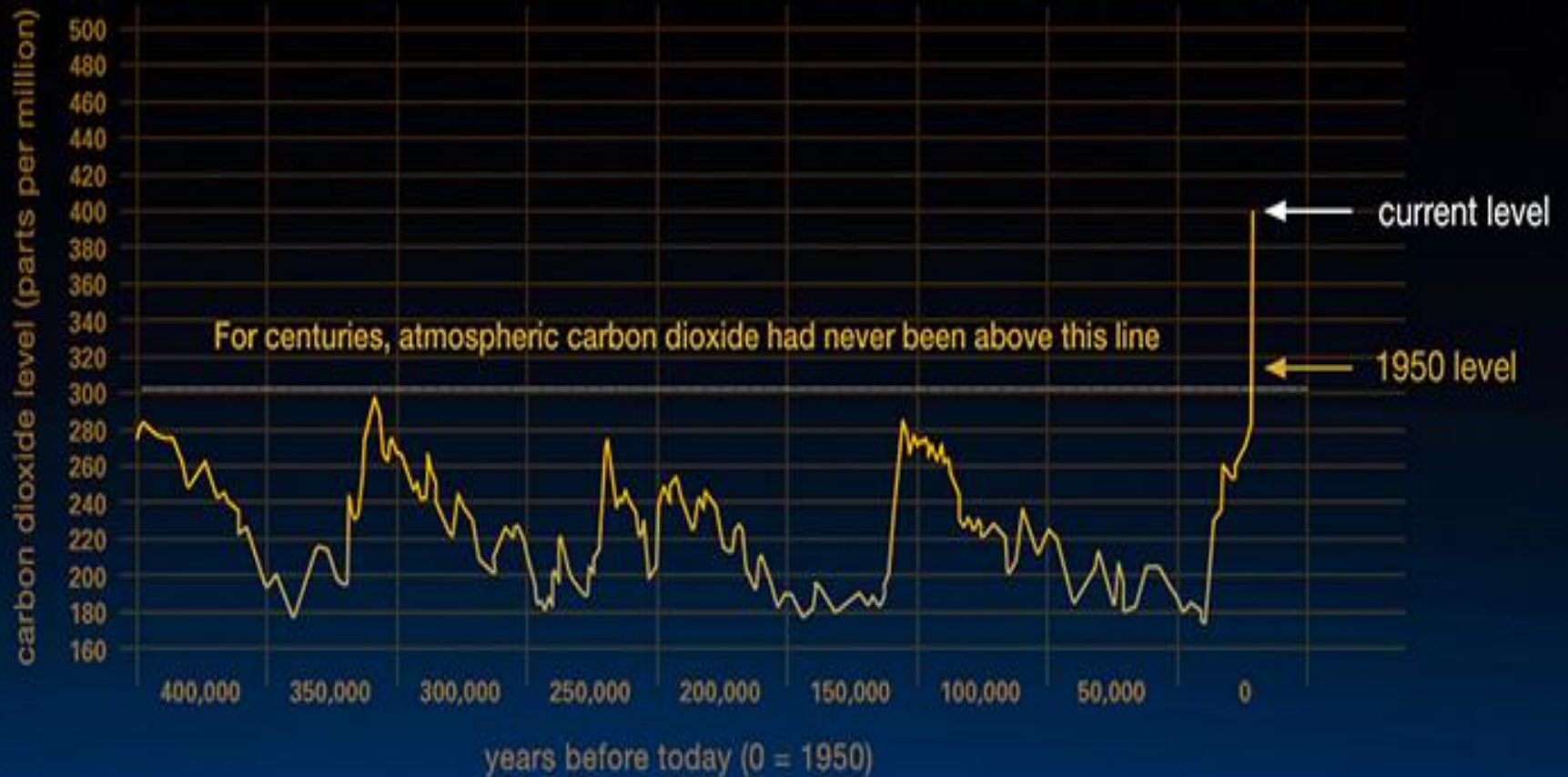
SEE? THERE'S NO CONSENSUS...



CLIMATE CHANGE

GREG PECKY

Atmospheric CO₂

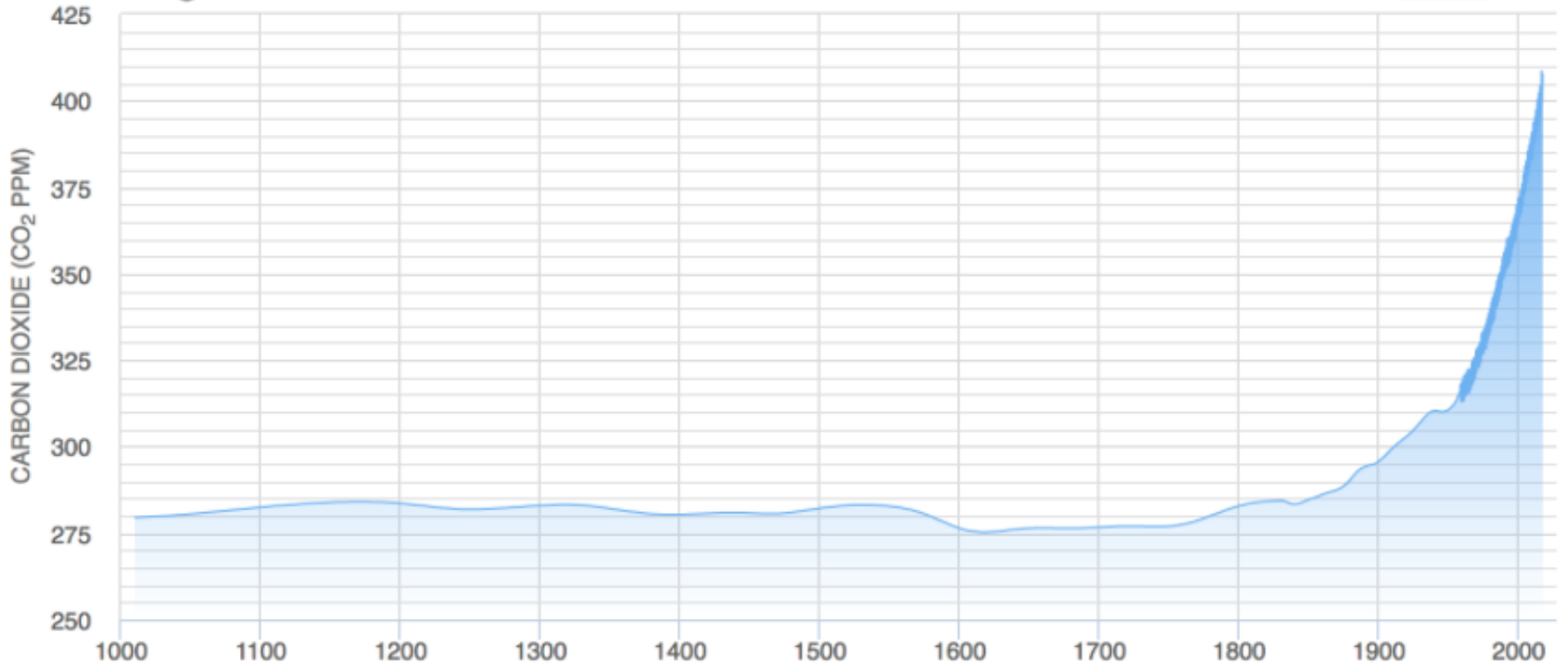


Recent CO₂ data



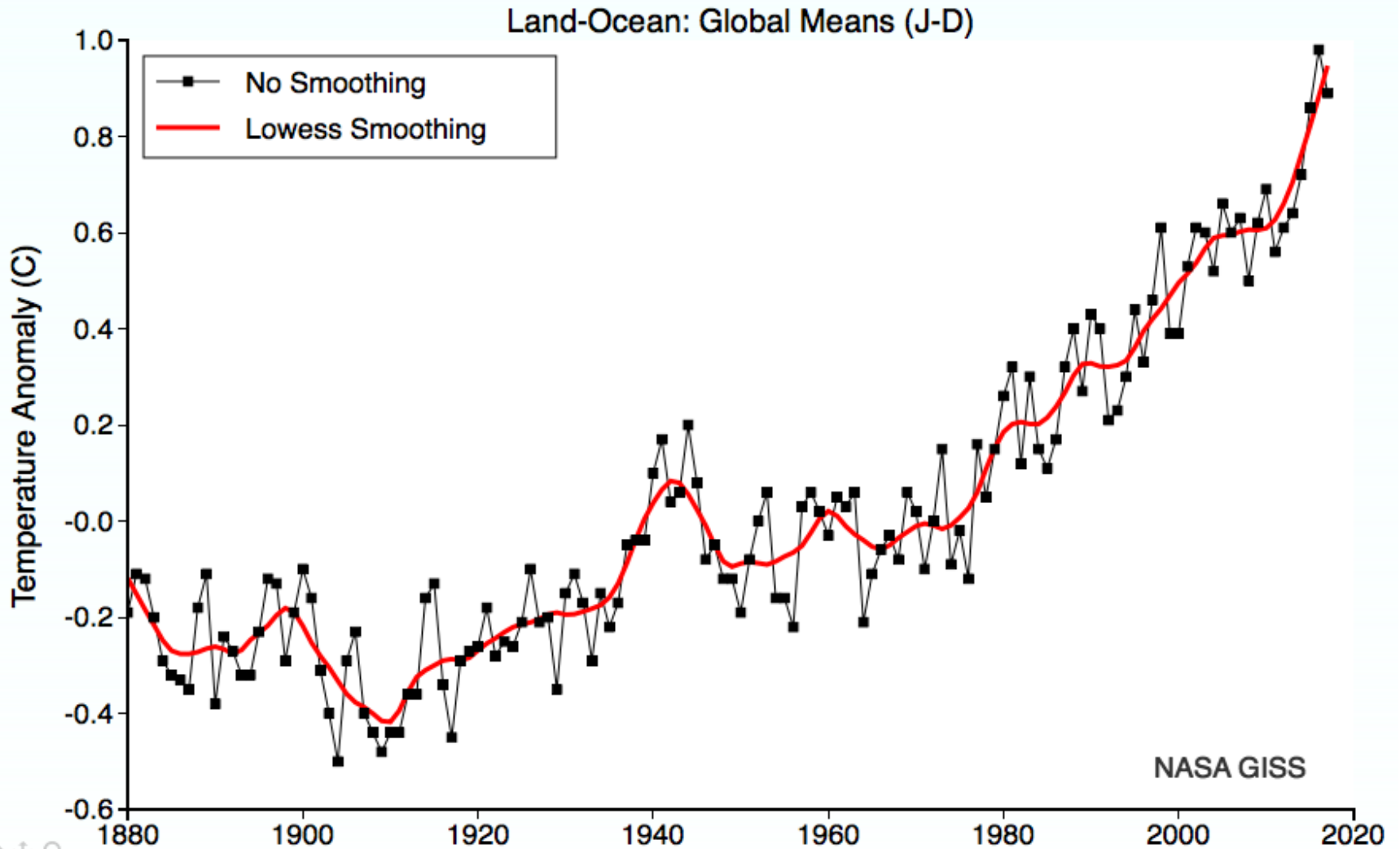
GLOBAL CO₂ LEVELS

Click and drag in the plot area to zoom in



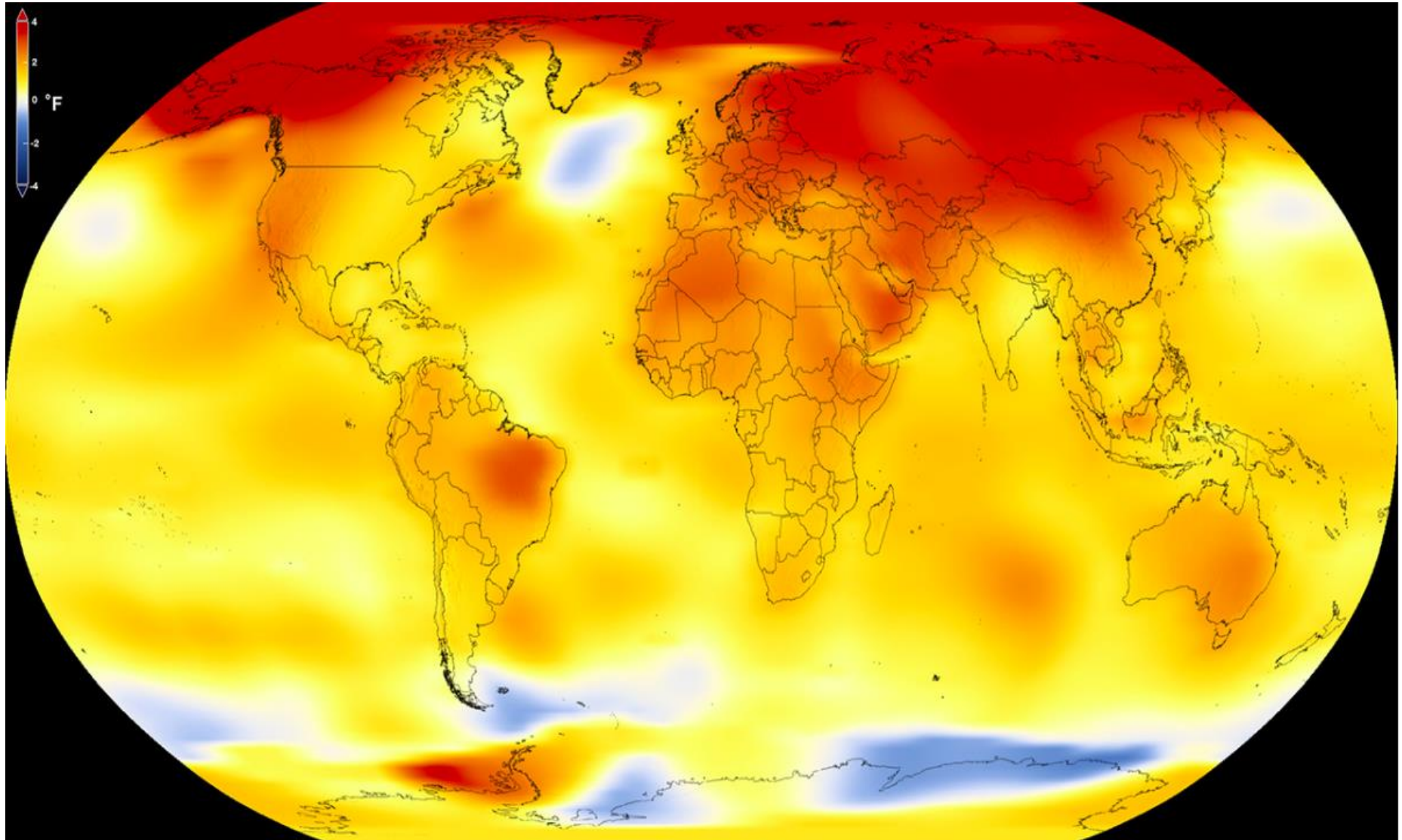
Powered by the 2 Degrees Institute

Global Temperatures



Where is it warming?

(NASA GISS)



Net Zero

- To stop temperatures increasing beyond any given point, we must cease emitting GHGs *altogether* at that point, *so*
- Our remaining GHG emissions must be balanced by GHG reductions (net zero)
 - Reduce emissions
 - Increase natural carbon sinks
 - Net emissions technologies (NETs)

Intergovernmental Panel on Climate Change (IPCC)

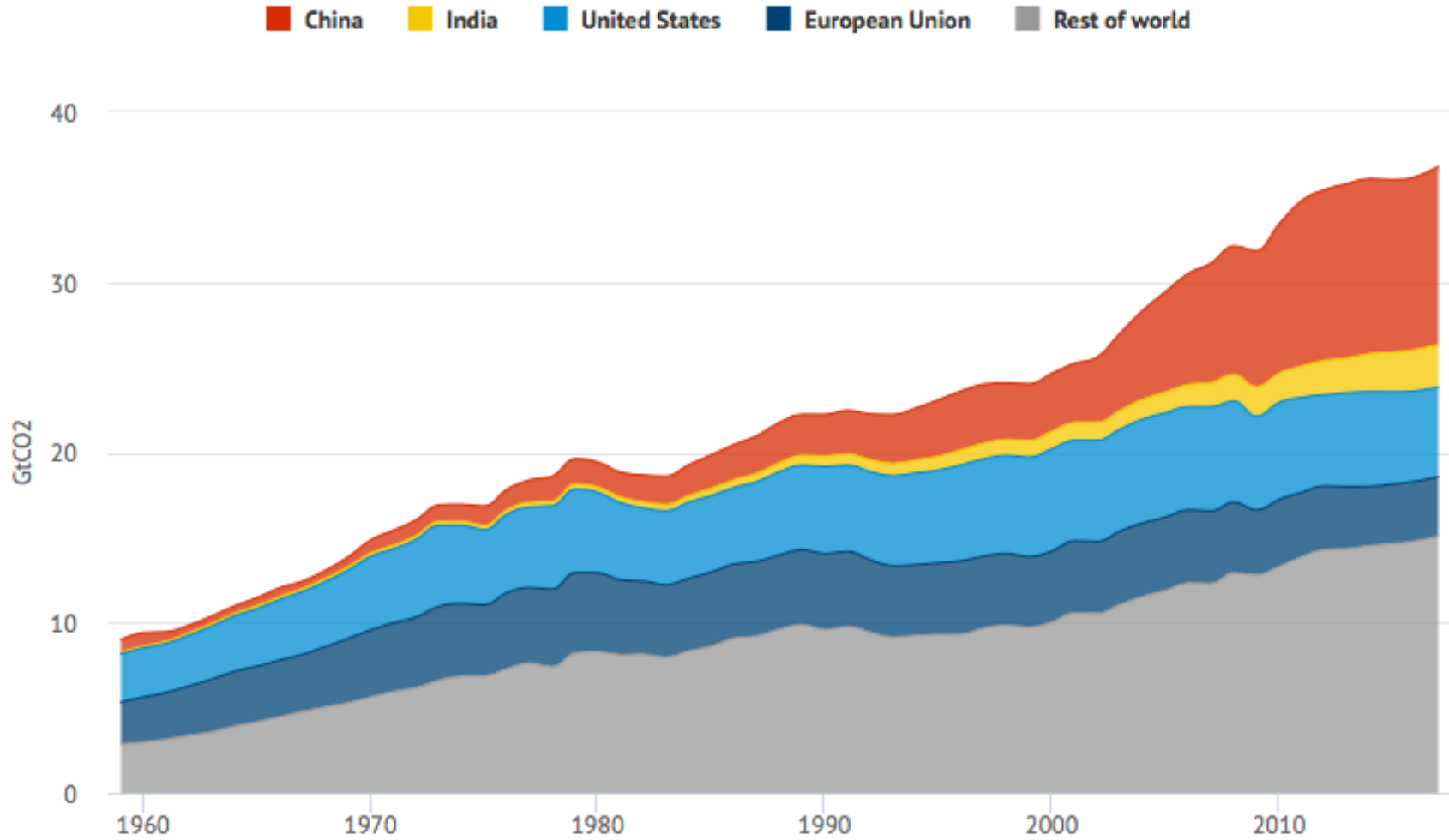
1) Consequence of 2 degrees C a lot worse than 1.5 degrees C

2) GHG emission reductions:

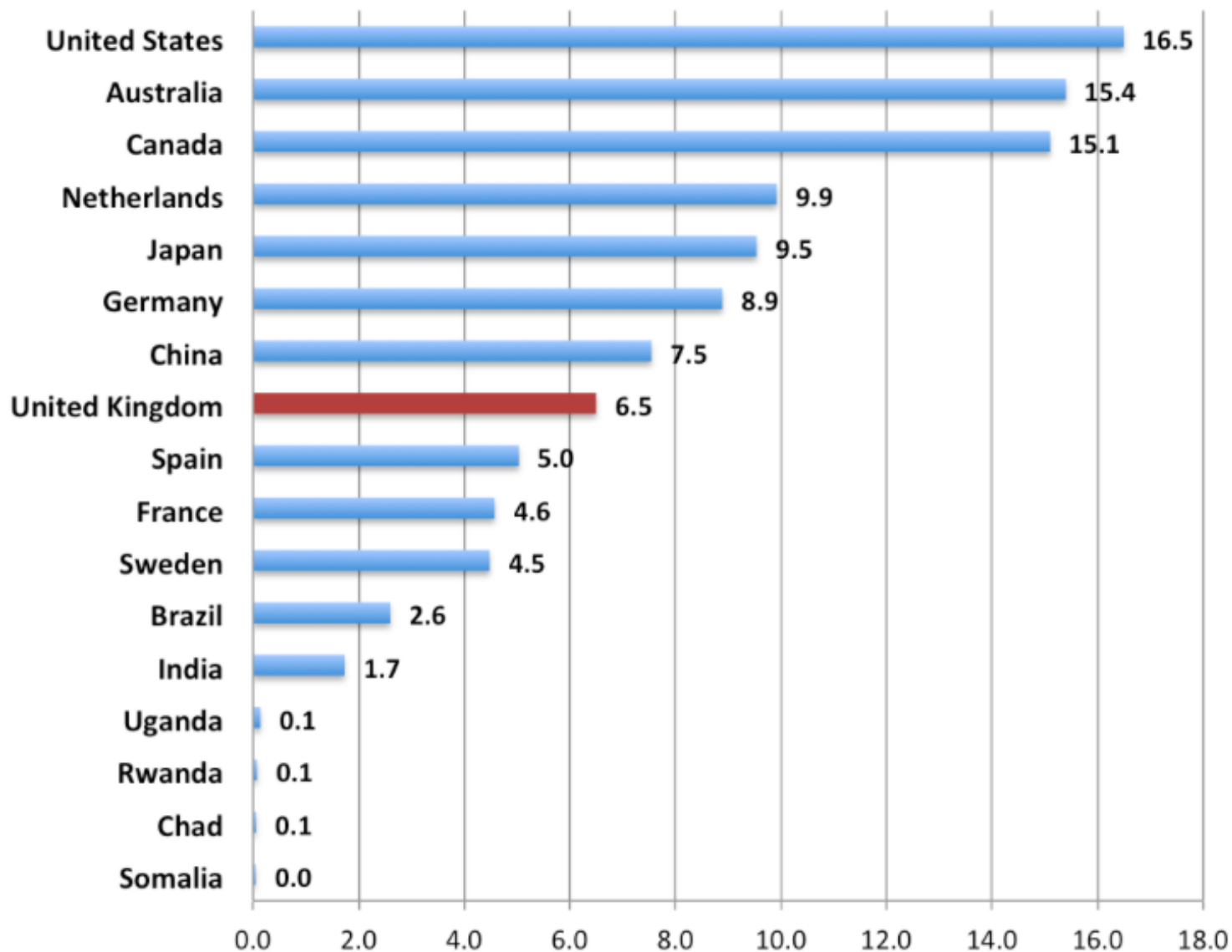
– for 2 degrees C, 20% by 2030, net zero by **2075**

– for 1.5 degrees C, 45% by 2030, net zero by **2050**

Annual CO2 emissions from fossil fuels by country, 1959-2017



CO2 emissions per capita



www.economicshelp.org | Source: World Bank - EN.ATM.CO2E.PC - Accessed 27 Oct 2017.

Metric tonnes per capita

The energy revolution



World's largest off-shore wind farm

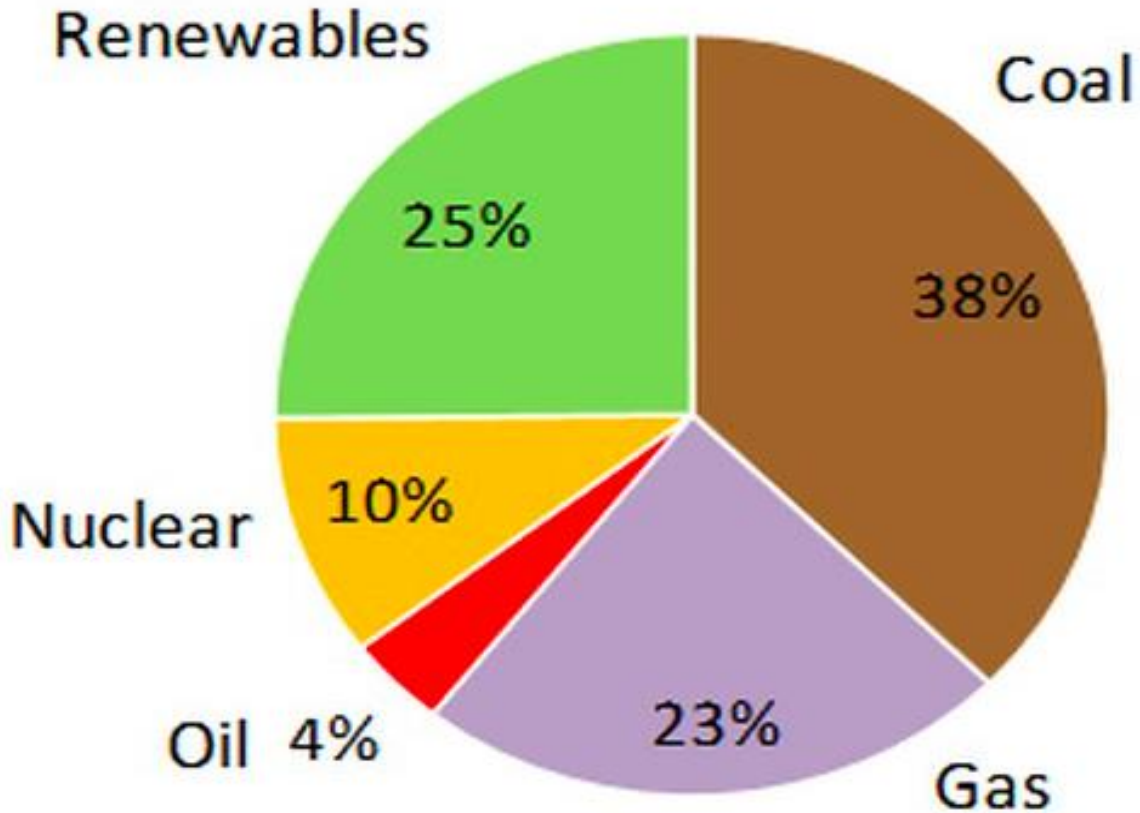


Walney Extension, off the Cumbrian coast: the world's largest offshore windfarm opened in September | Credit: PA Images

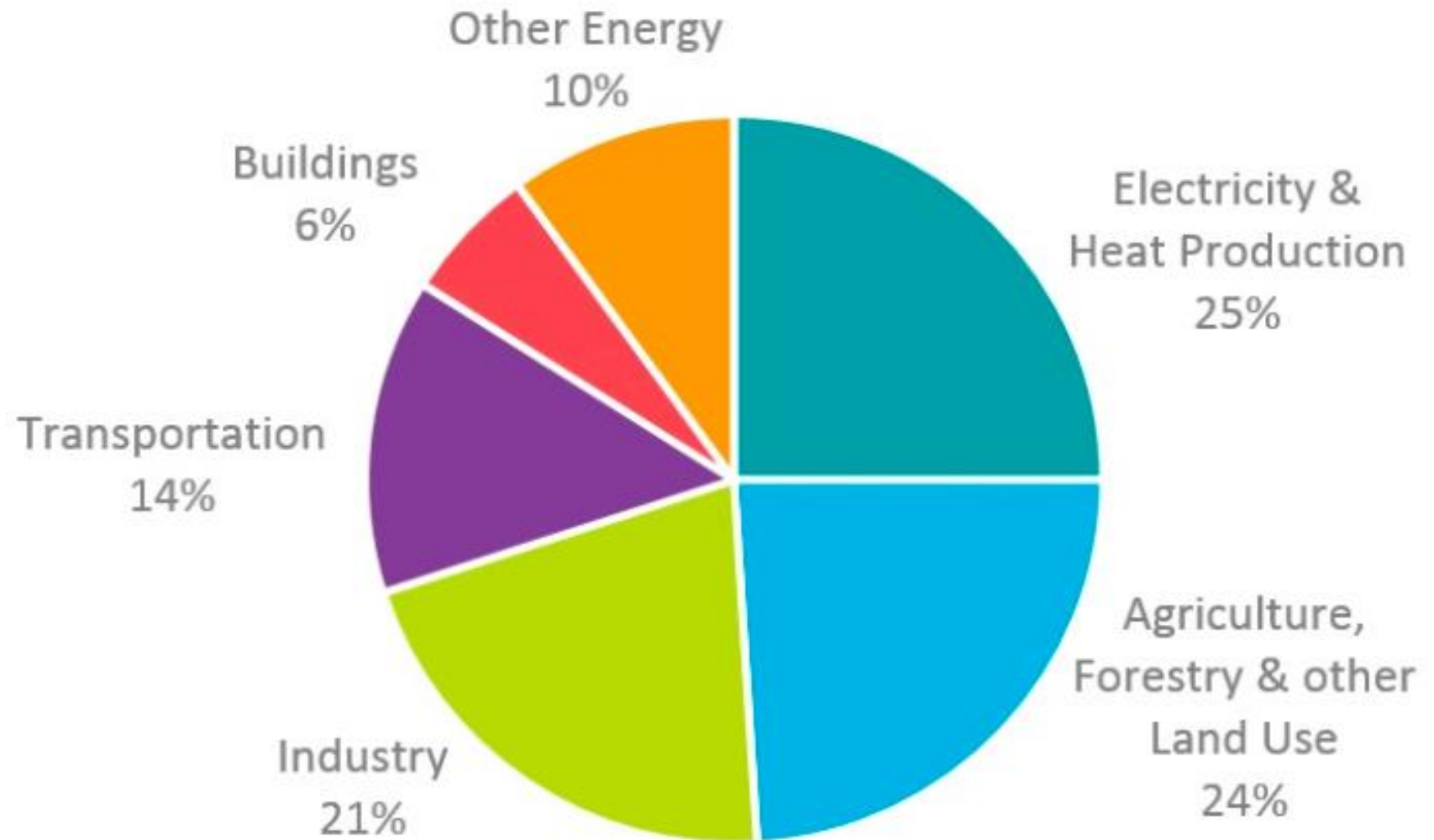
International Energy Agency

Electricity generation in 2017:

25 570 TWh



Global Greenhouse Gas Emissions by Economic Sector



Source: IPCC

UK Climate Change Act 2008

- Commits to 80% cut in from 1990 CO₂ level by 2050
- 5 year carbon budgets overseen by Committee on Climate Change (CCC)
- Carbon Neutrality Coalition
- CCC to report on implications of UK reaching net zero by 2050

UK Progress

- CO₂ cut 40% since 1990, economy 70% up
- 400,000 in low carbon energy jobs
- UK world leader in off-shore wind
- Electricity from coal: 40% in 2012, 7% 2017, gone by 2025
- Grid now >50% low carbon, and rising
- On-shore wind now our cheapest source of electricity.

Eveley in Hampshire – 15k homes

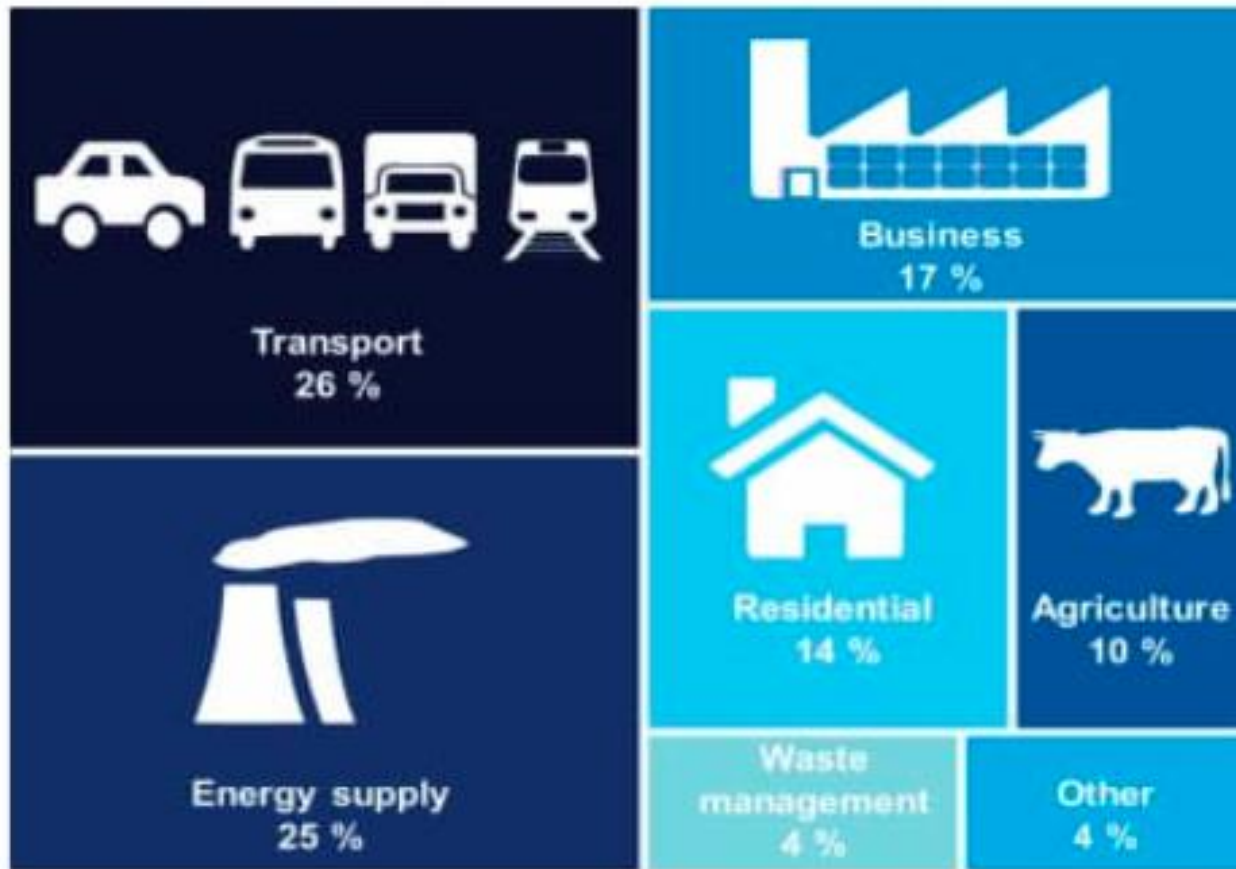


UK Solar

- Now 1 million solar homes
- 28% of UK electricity on 30/6/2018
- Costs falling dramatically
- Several subsidy free solar projects in 2019

The task ahead

Transport becomes the largest emitting sector of UK 2016 greenhouse gas emissions



The Government's latest official figures show transport is the most polluting sector

Taxes and subsidies

Fossil fuel subsidies don't exist – *right??*

Carbon pricing

'There is no Planet B'

