

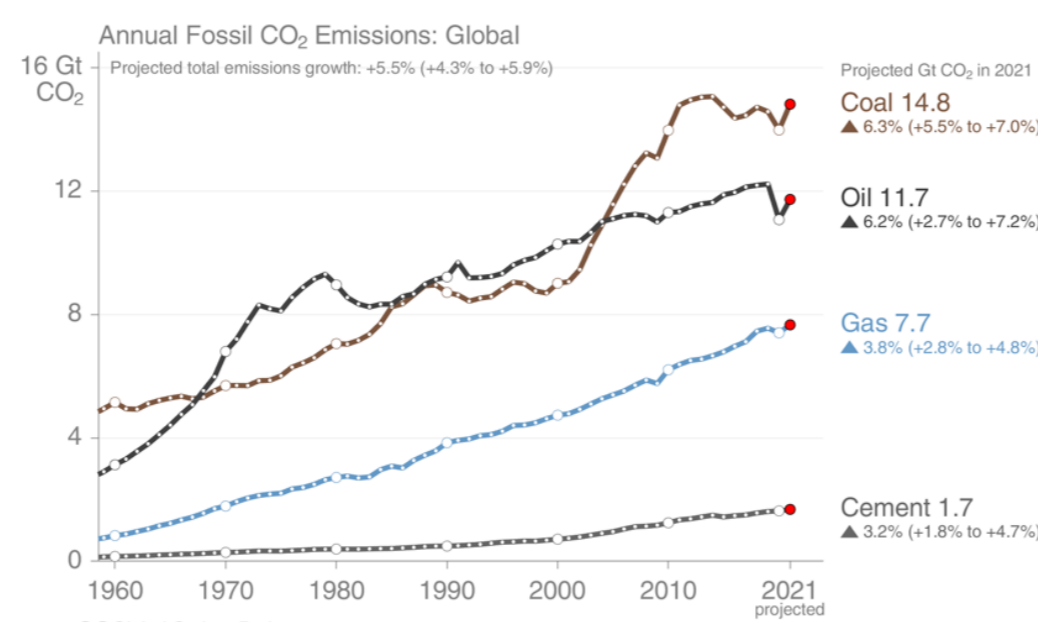
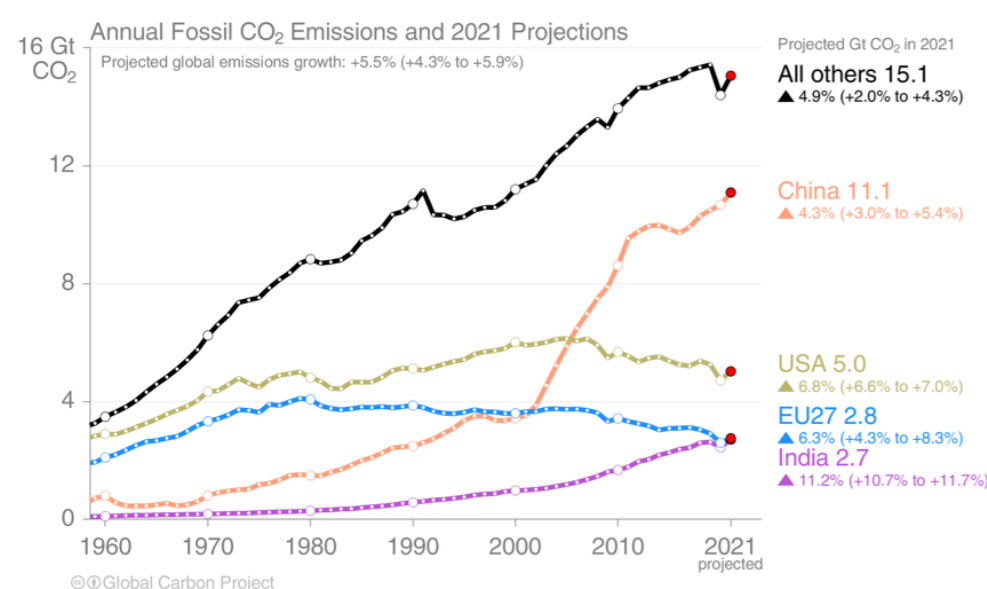
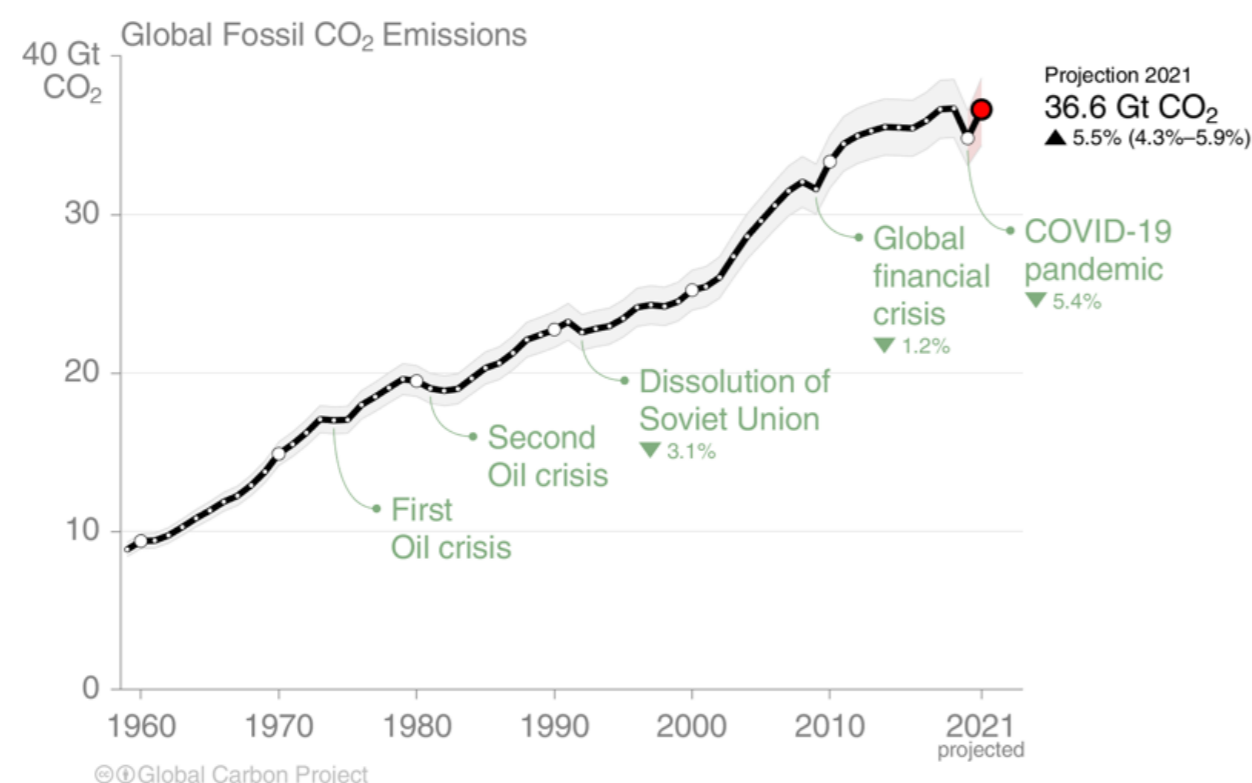
Current fossil CO₂ emissions trends and road to net-zero

GCB Office, University of Exeter, UK

Global fossil CO₂ emissions

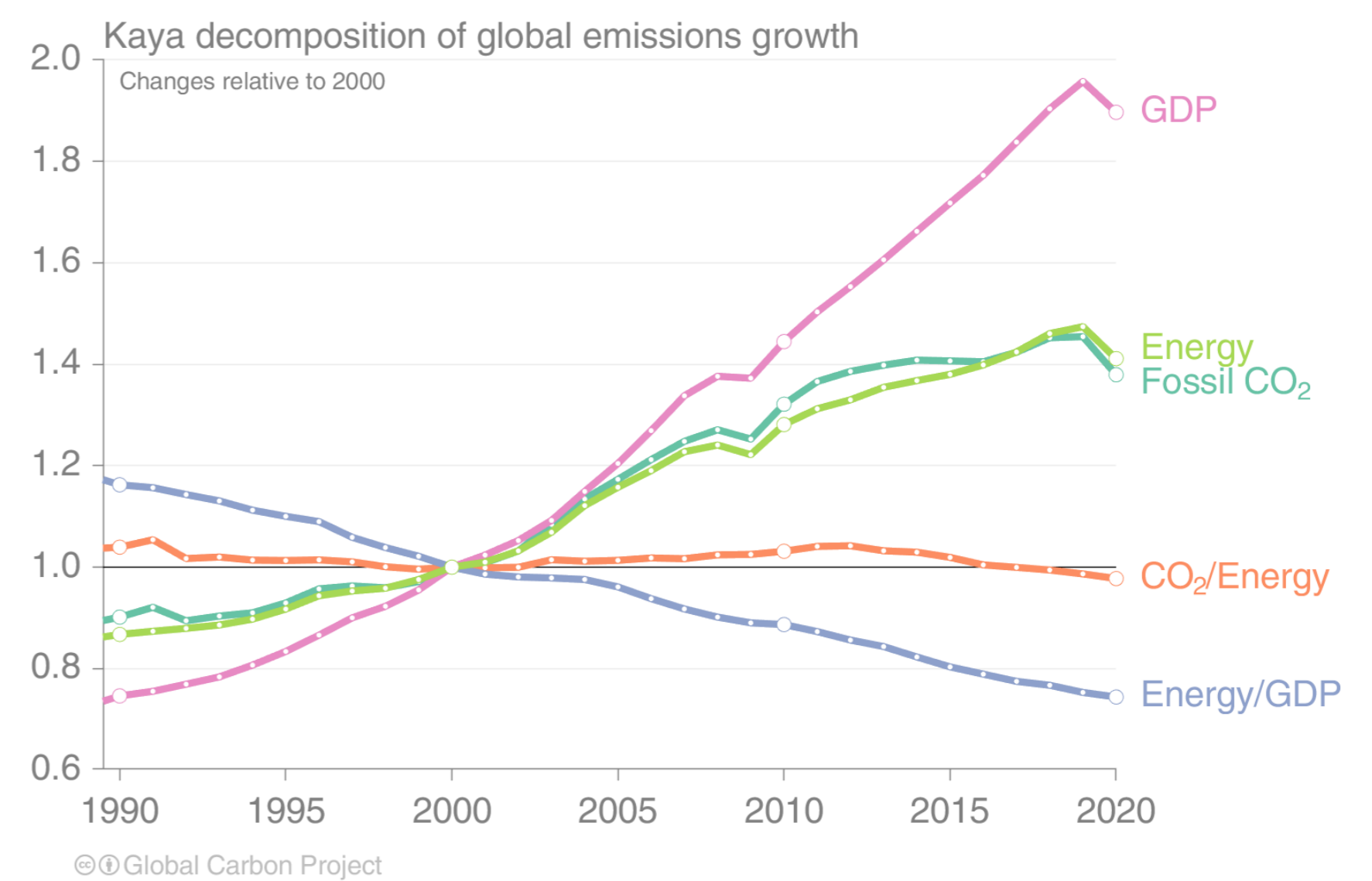
2020: 5.4% drop due to response to Covid pandemic
 2021 estimate: 36.6 ± 2 GtCO₂, back to pre-covid level
 About 60% above 1990 level

Have we reached peak fossil CO₂ emissions?



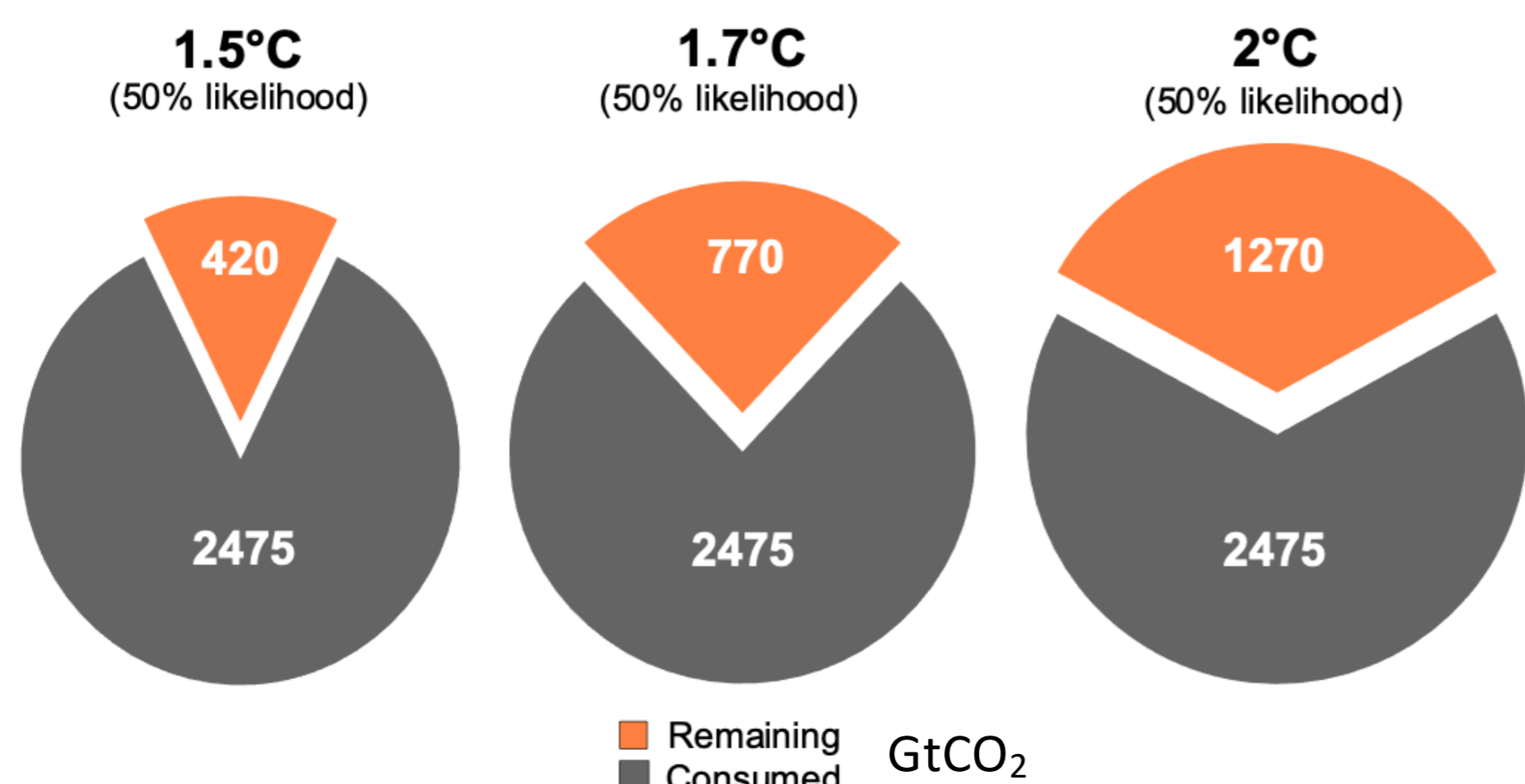
Positive trends in global fossil CO₂ emissions are primarily driven by positive trends in global economic growth.

Globally, decarbonisation and declines in energy per GDP are largely responsible for the reduced growth rate in emissions over the last decade.



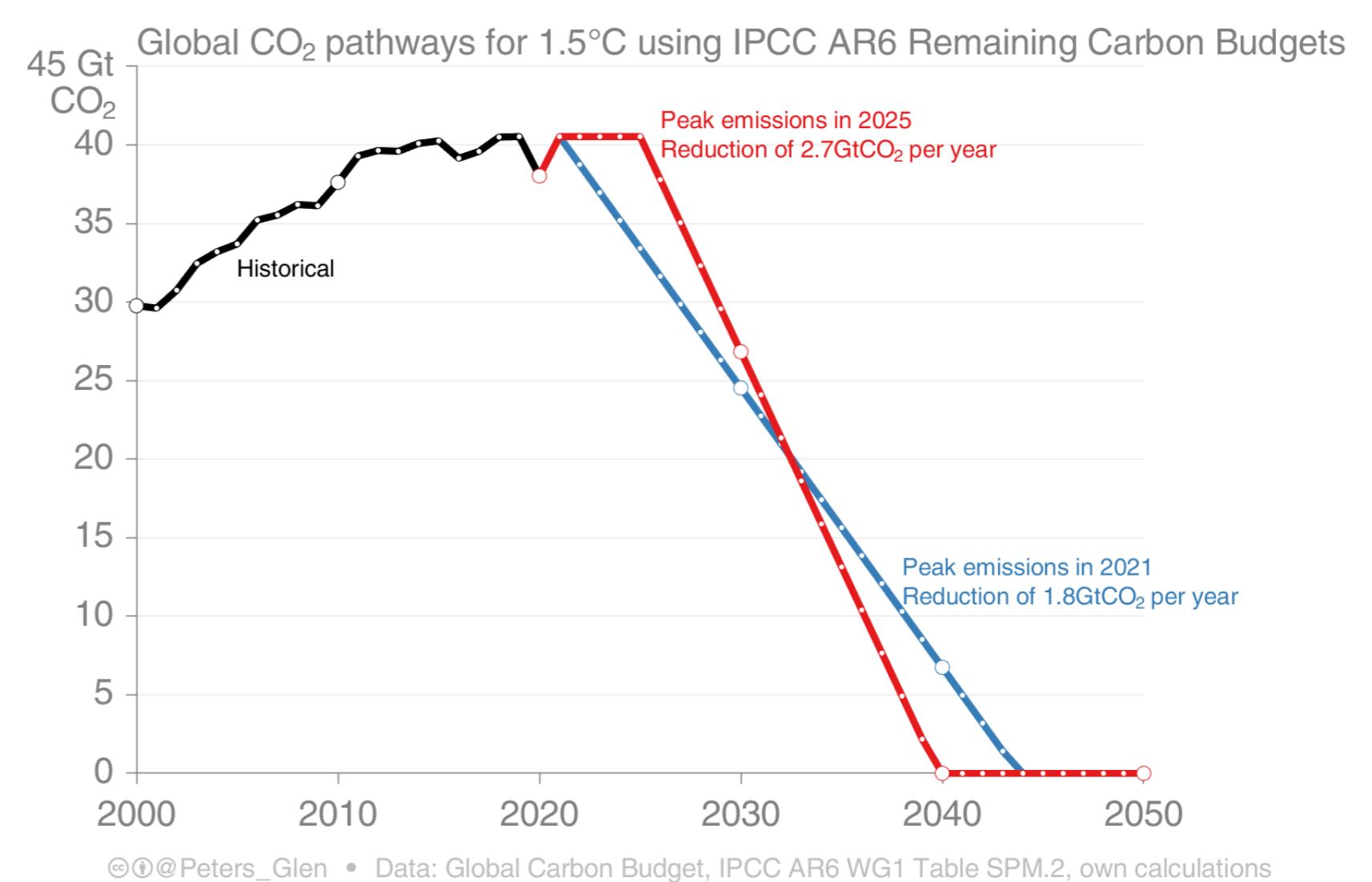
There is a limited cumulative CO₂ emission budget for any given climate target
 Remaining budget for 1.5°C is about 420 GtCO₂

This budget will be exhausted in 12 years at current rate of emissions



To keep warming below 1.5°C, global emissions need to decrease by about 5% per year, reaching zero around 2045

Delay in action would imply stronger mitigation rate to keep “net-CO₂ emissions” within the remaining budget



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