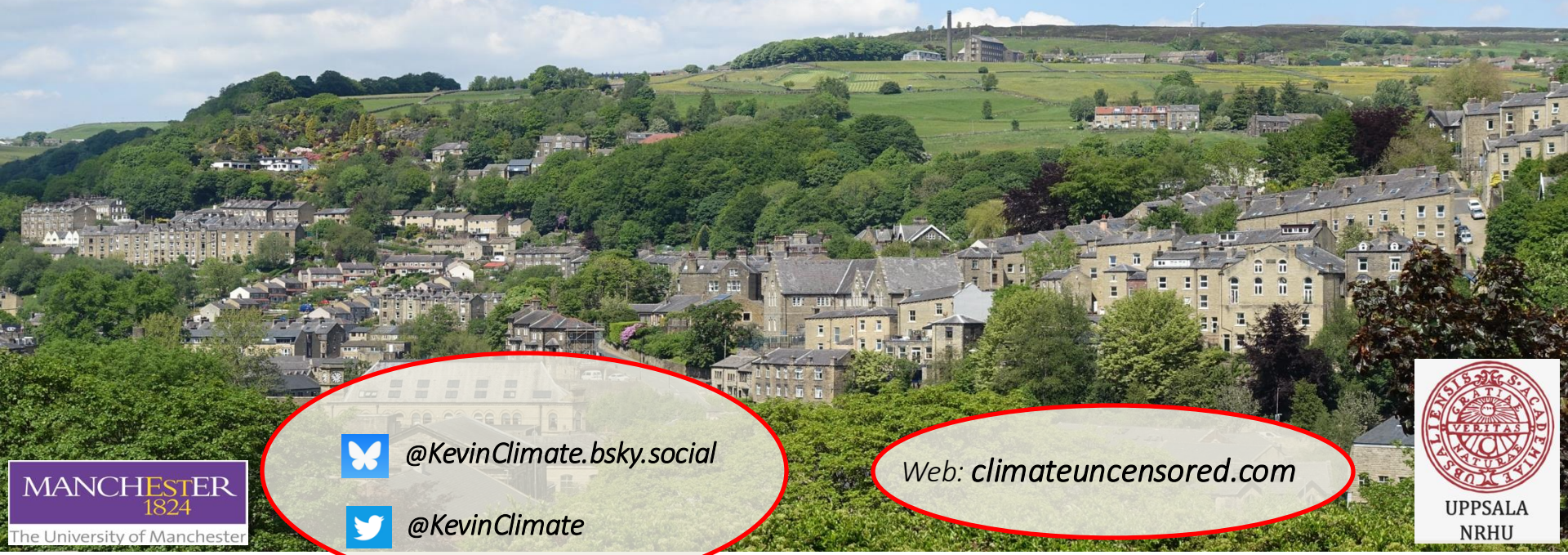
Climate Change: from the Paris Agreement to the UK in 2025

"Pessimism of the Intellect, the Optimism of the Will."



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Health warning …

I don’t like my conclusions …

But they are my conclusions – they are not over- or under-played

My language may appear provocative

…but it accurately reflects the analysis

…& it’s uncomfortable only within the cosy climate tales we’ve normalised

What is our key concern over climate change?

What is our key concern over climate change?

- … it is ***not*** temperature, 1.5°C, 2°C, 4°C, etc.

- But ***impacts*** … and really ***"the rate of change of impacts"***

  *Can **'we'** (human systems) adapt to such rates of change*

  & what are the implications for wider ecosystems (& hence us)

- Temperature across the next decades/century is a ***proxy*** for rates of change of impacts

- a central, but ignored, question is … *"who is the **we** that make the choices?"*

remembering science is our servant not master

- science can’t define what is ’dangerous’

  … it can/should inform the decision

- but the decision is ultimately political

- … and this (again) comes down to who is the **‘we’** making this decision

So, what have we committed to deliver?

1992 UNFCCC (ratified in 1994)…

i.e. an international climate treaty agreed at the Rio Earth Summit

1992 UNFCCC (ratified in 1994)…

Article 2 *"the ultimate objective of this Convention"* is the:

"stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."

i.e. cut emissions so as to avoid **dangerous** levels of climate change

1992 UNFCCC (ratified in 1994)…

Article 3 introduced the concept of international equity:

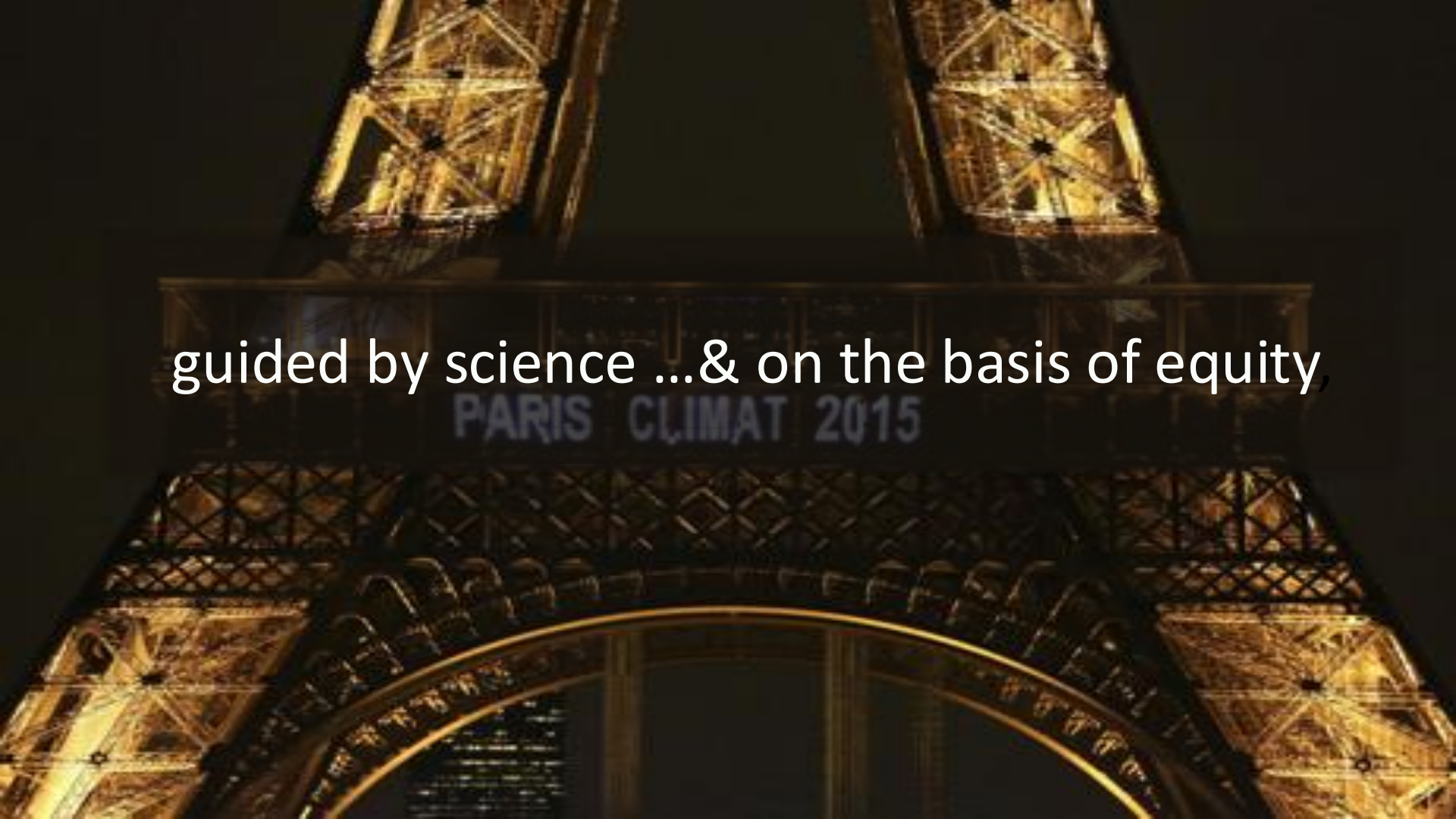
"common but differentiated responsibilities and respective capabilities"

"developed country Parties should take the lead in combating climate change."

i.e. cut emissions **fairly** with 'developed' nations taking the lead

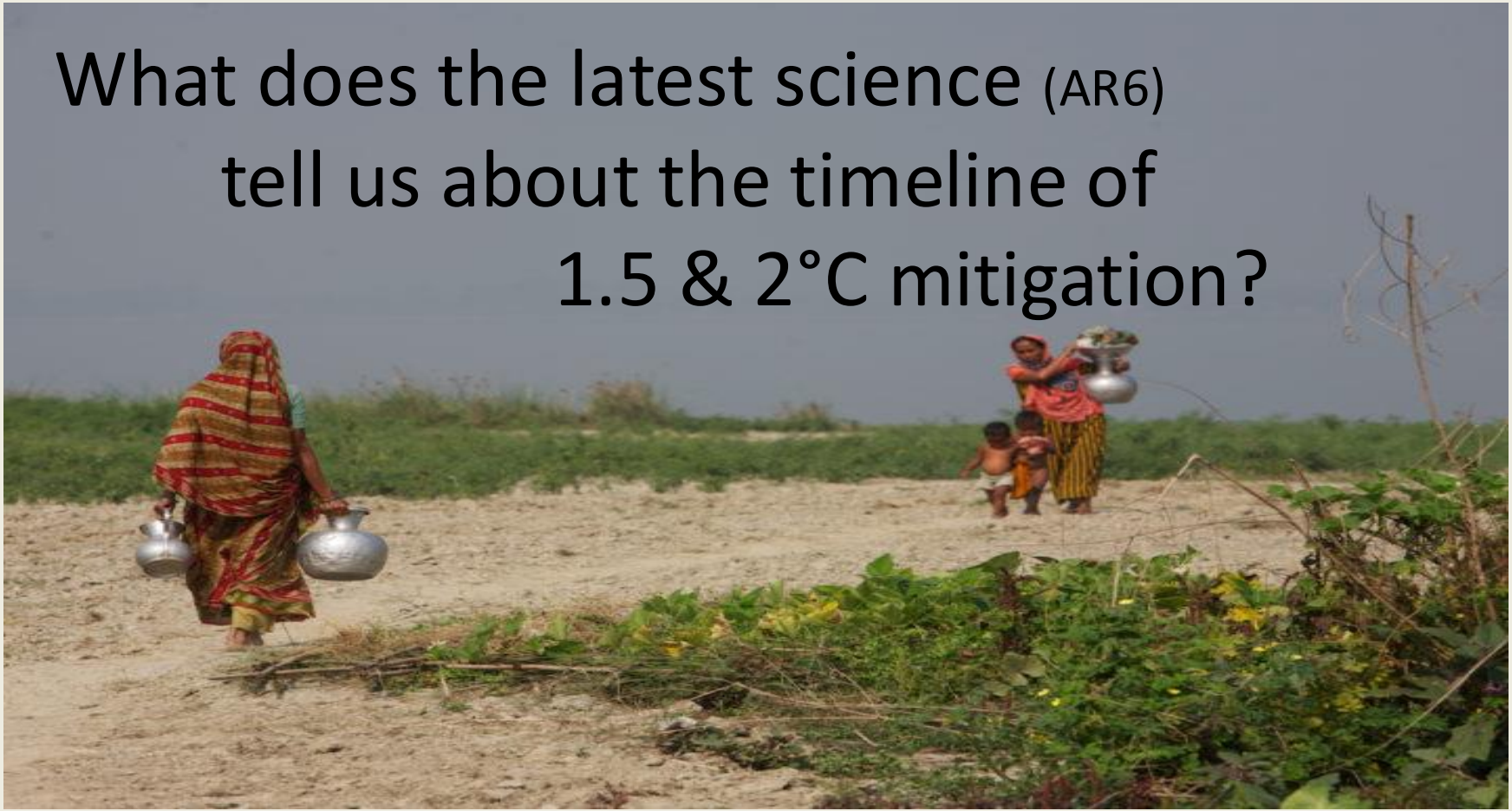

23 years later “dangerous” was defined

hold well below 2°C … & pursue 1.5°C

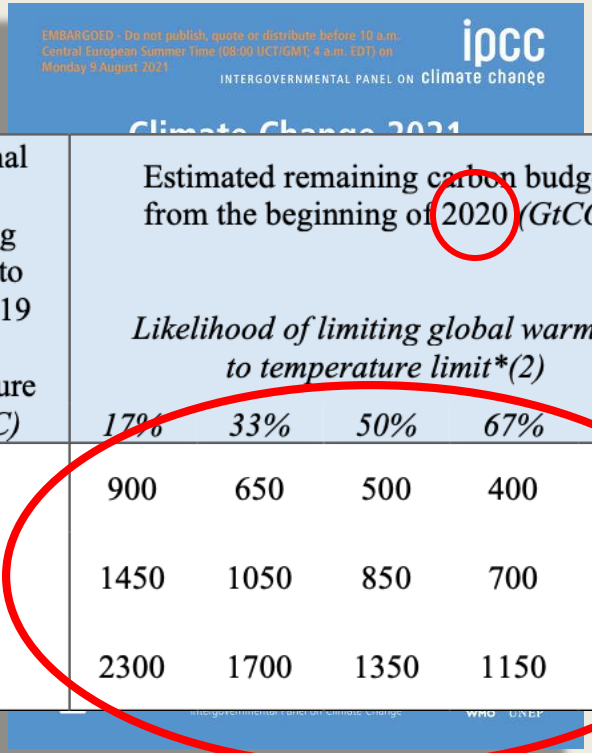


guided by science …& on the basis of equity

What does the latest science (AR6) tell us about the timeline of 1.5 & 2°C mitigation?



From the latest IPCC report

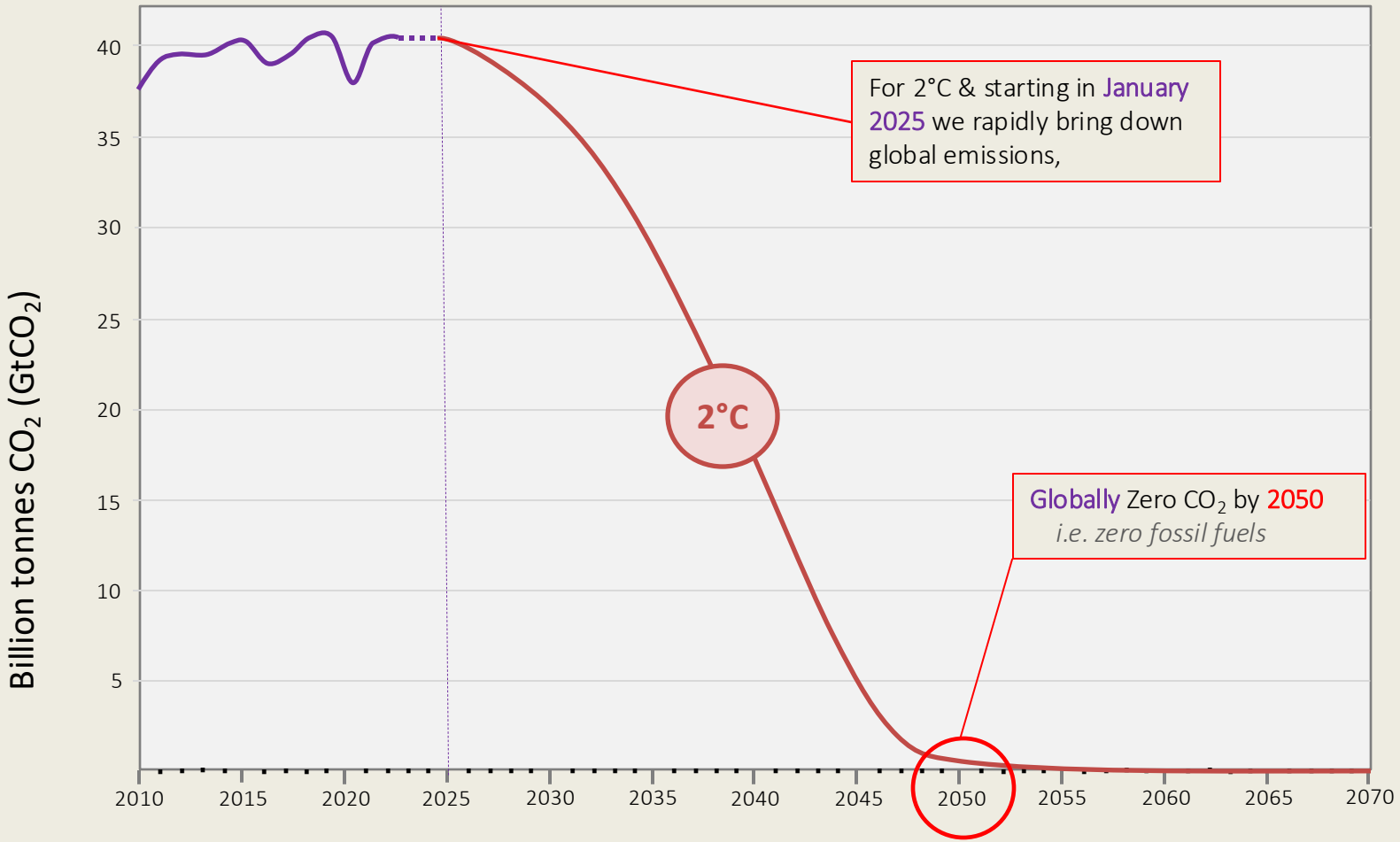


Approximate global warming relative to 1850–1900 until temperature limit *(°C)**(1)	Additional global warming relative to 2010–2019 until temperature limit *(°C)*	Estimated remaining carbon budgets from the beginning of 2020 *($GtCO_2$)*					Variations in reductions in non-CO_2 emissions*(3)
		Likelihood of limiting global warming to temperature limit(2)*					
		17%	*33%*	*50%*	*67%*	*83%*	
1.5	0.43	900	650	500	400	300	Higher or lower reductions in accompanying non-CO_2 emissions can increase or decrease the values on the left by 220 $GtCO_2$ or more
1.7	0.63	1450	1050	850	700	550	
2.0	0.93	2300	1700	1350	1150	900	

Revising & updating the carbon budgets to start 2025

January 2025	**"pursuing .. 1.5°C"** (50% ≤ 1.5°C) ***Lamboll et al***	**"well below 2°C"** (83% ≤ 2°C) ***Lamboll et al***
Remaining global budget	~170 $GtCO_2$	~575 $GtCO_2$
Equivalent years of **current** CO_2 emissions	4 years	14 years
Exponential global % annual reduction rate	19% p.a.	7% p.a.
Straight line from 2025 to Zero emissions	2032/3	2052/3
% budget being used per **month**	2%	0.6%

Looking at these graphically:


Billion tonnes CO_2 ($GtCO_2$)
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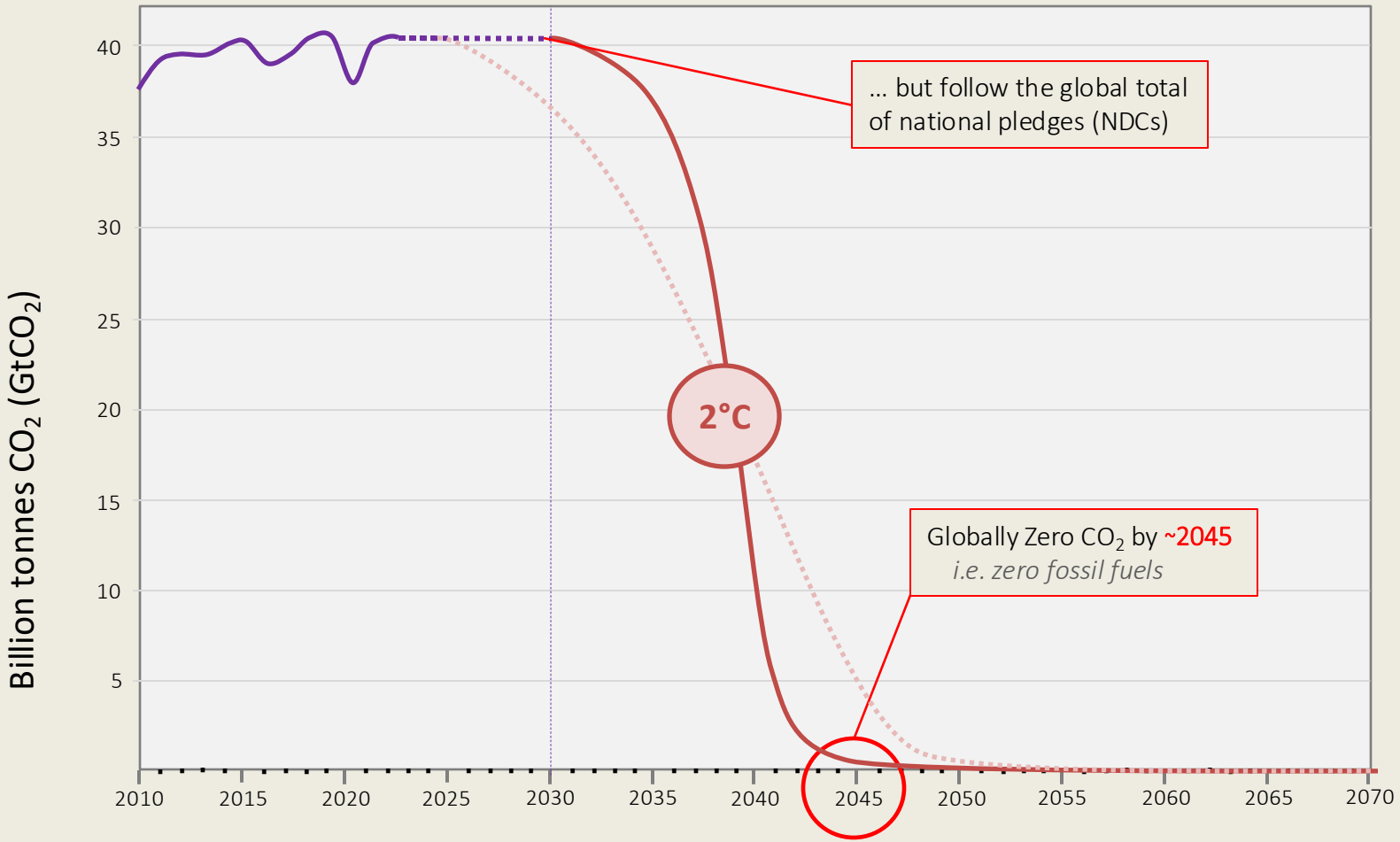
For 2°C & starting in January 2025 we rapidly bring down global emissions,
2°C
Globally Zero CO_2 by 2050
i.e. zero fossil fuels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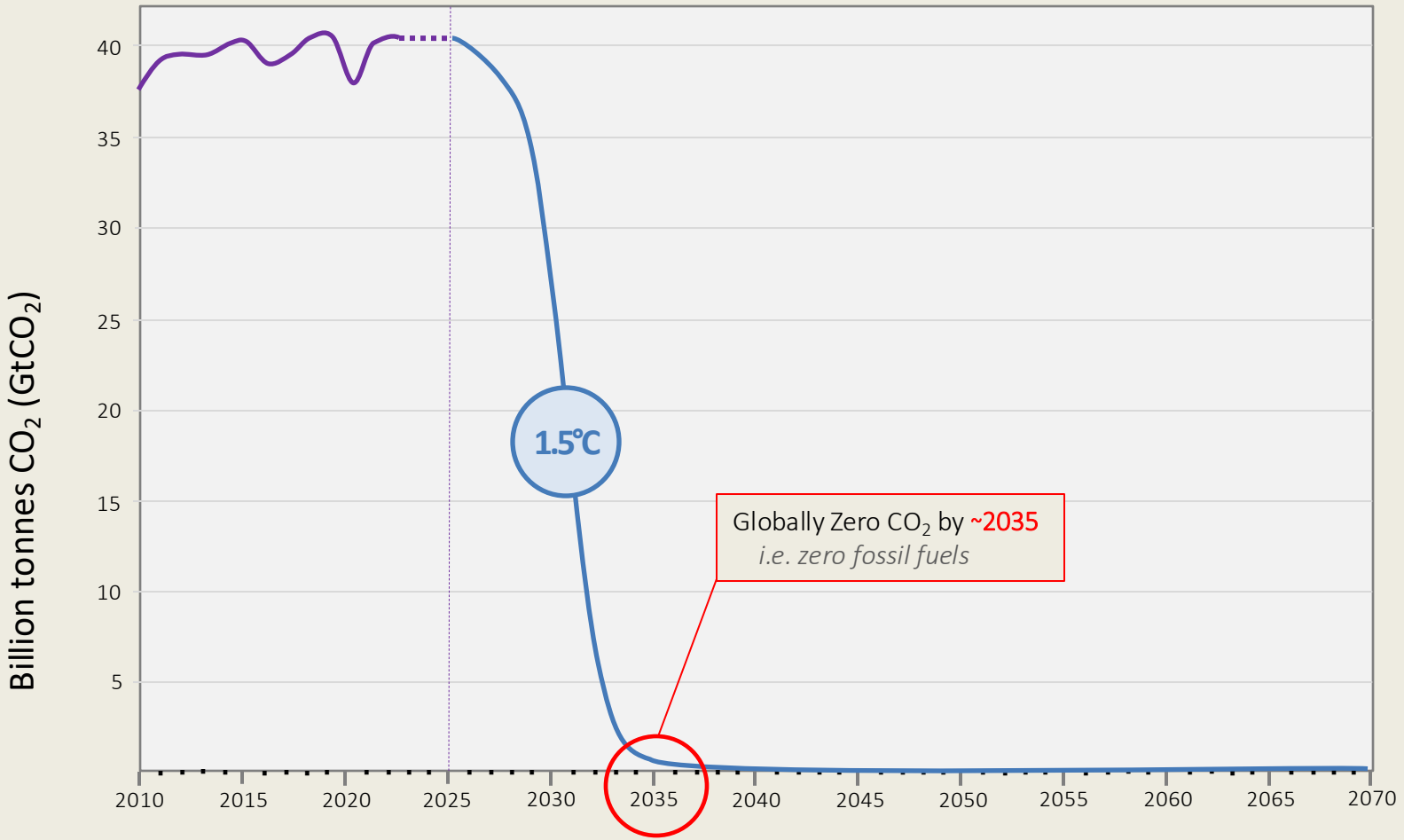
… but follow the global total of national pledges (NDCs)
2°C
Globally Zero CO_2 by ~2045
i.e. zero fossil fuels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1.5°C
Globally Zero CO_2 by ~2035
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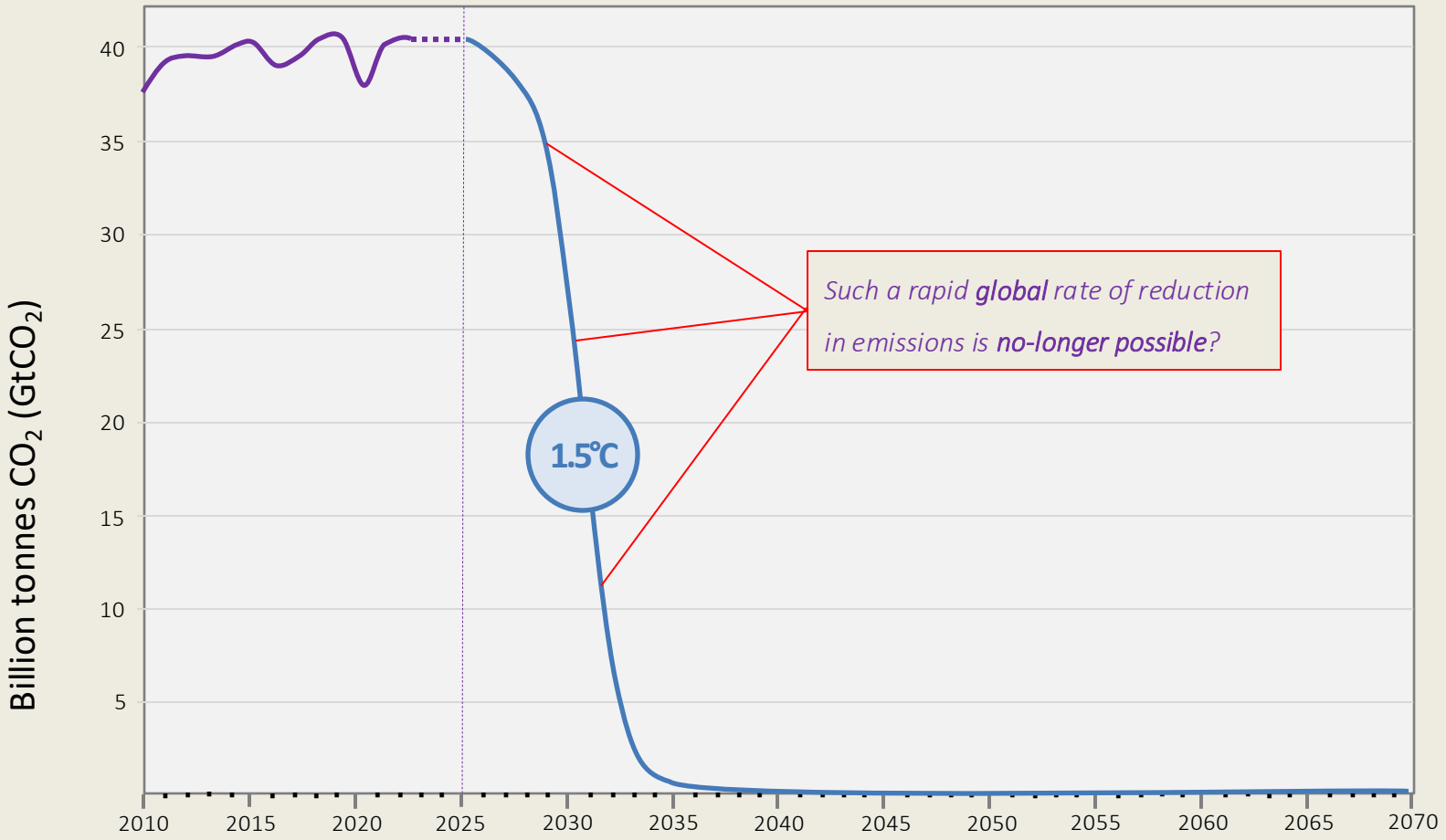
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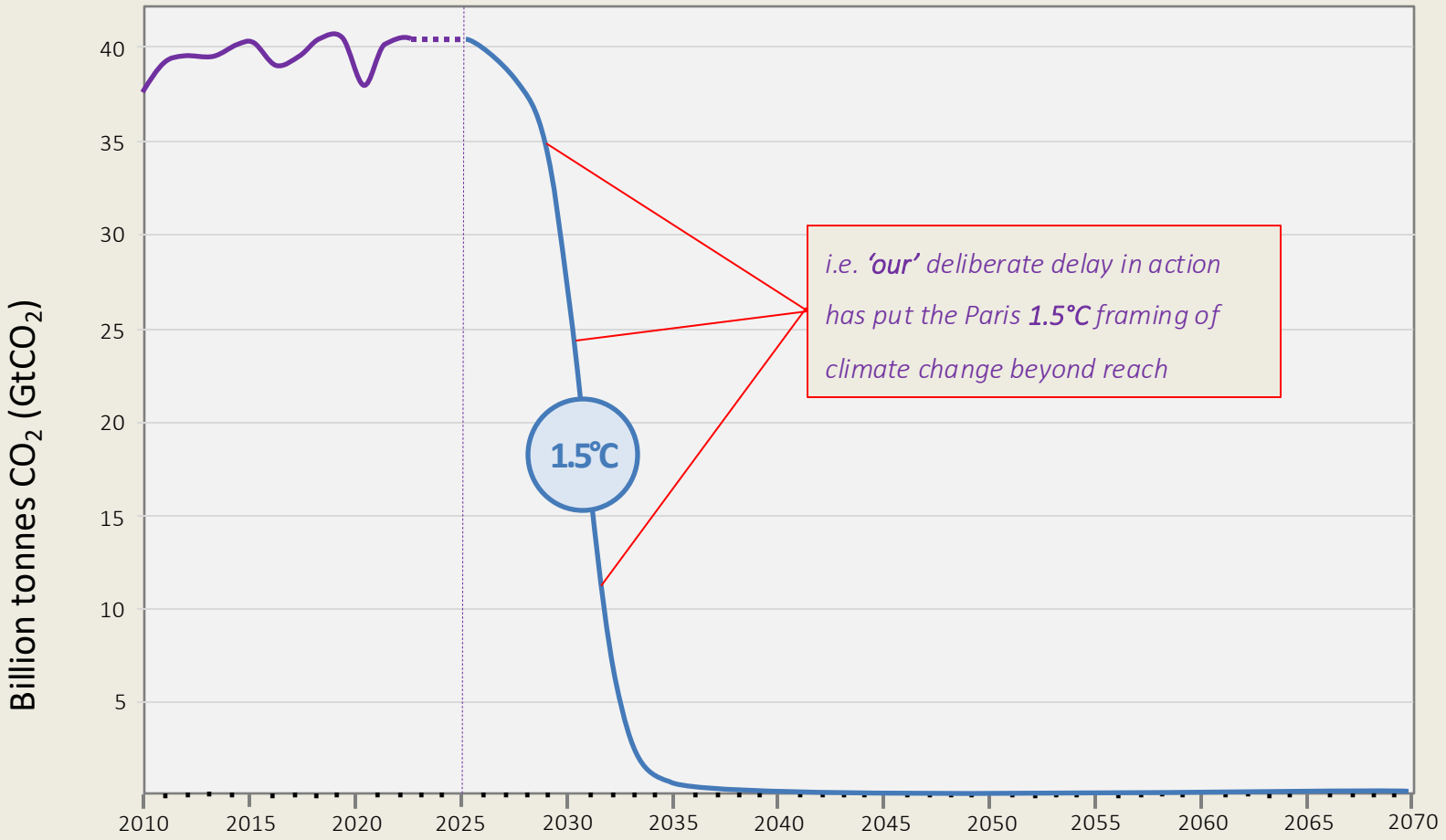
1.5°C
Such a rapid global rate of reduction in emissions is no-longer possible?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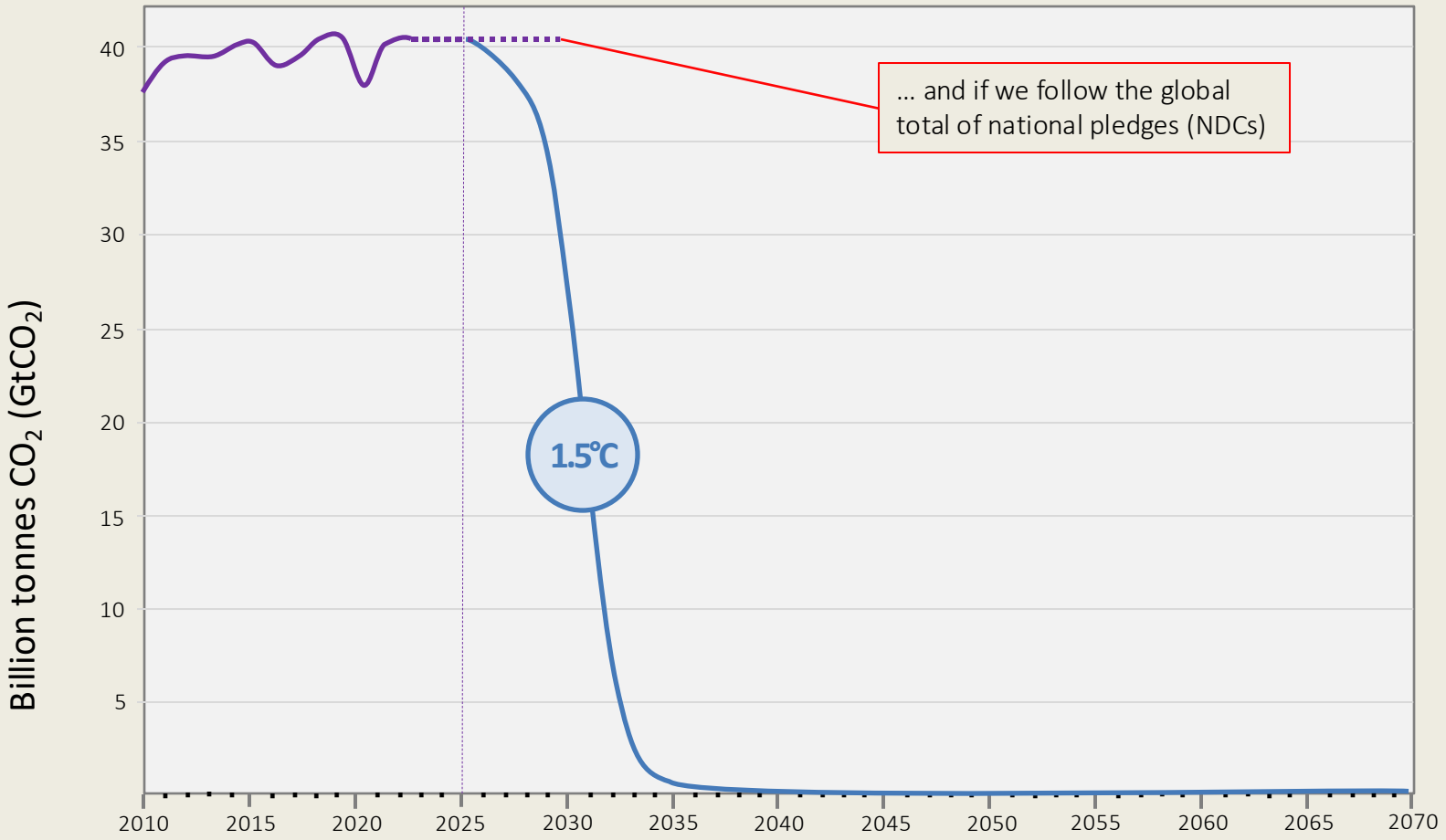
1.5°C
*i.e. **'our'** deliberate delay in action has put the Paris **1.5°C** framing of climate change beyond reach*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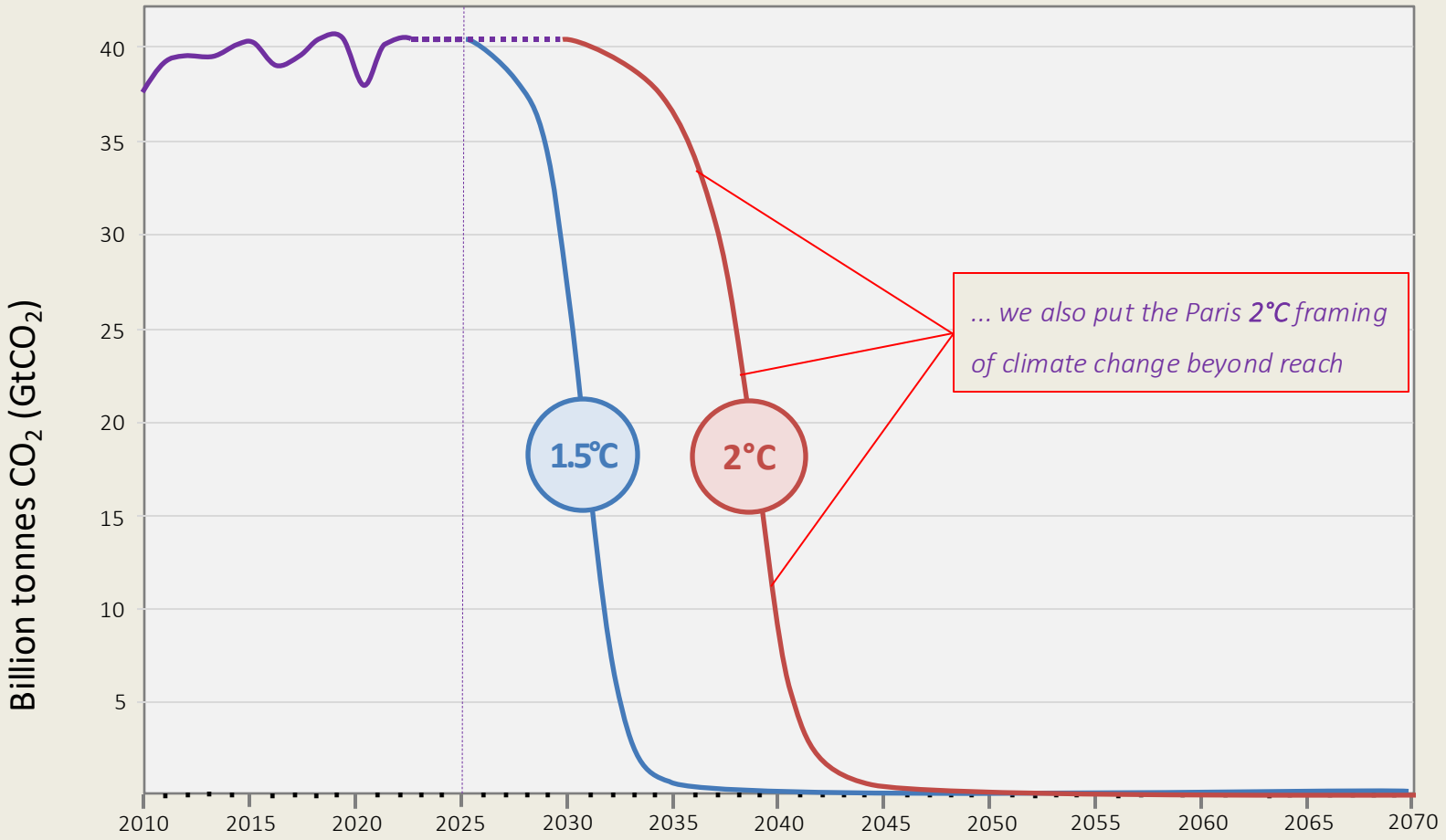
… and if we follow the global total of national pledges (NDCs)
1.5°C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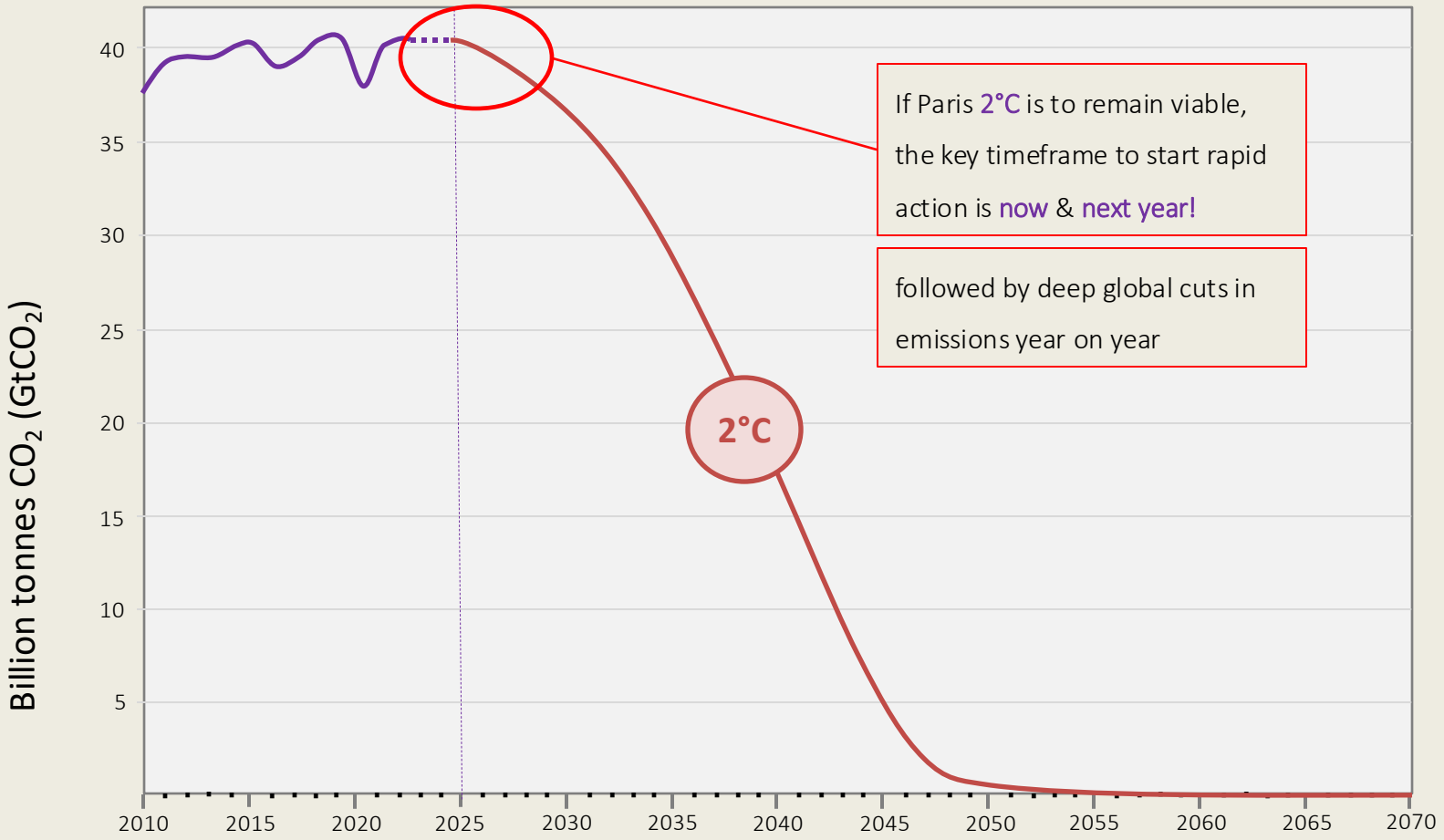
1.5°C
2°C
... we also put the Paris 2°C framing
of climate change beyond reach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2°C
If Paris 2°C is to remain viable, the key timeframe to start rapid action is now & next year!
followed by deep global cuts in emissions year on year


But we also committed to deliver
… emission reductions on the basis of **equity**

& following the equity language of Paris

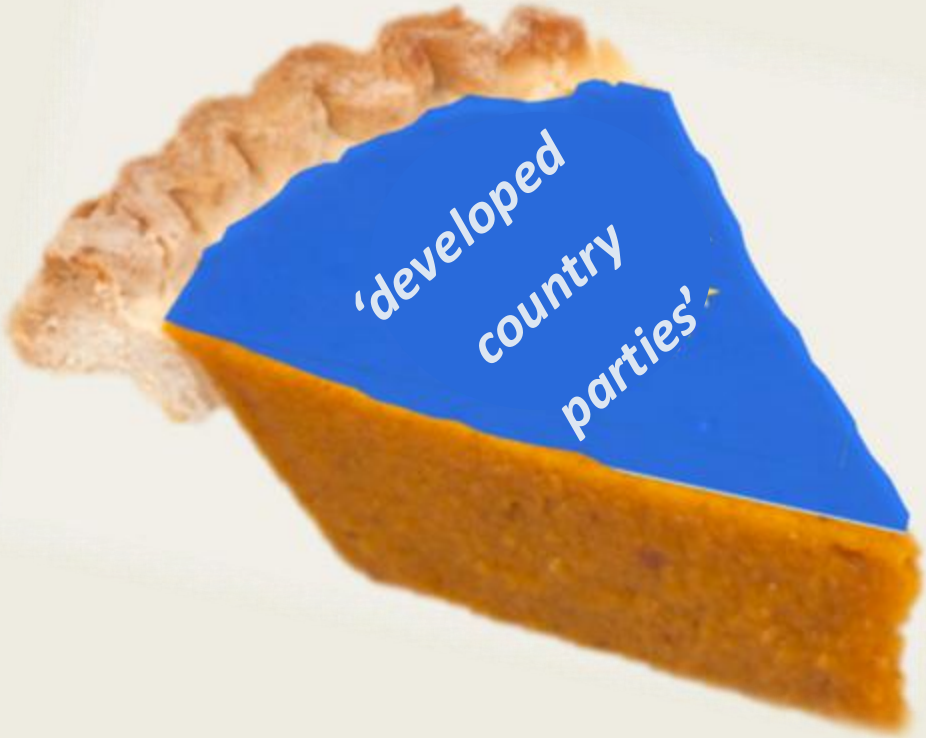
We have to consider how to divide the carbon budget between:

- “develop**ing** country parties”

  and

- “develop**ed** country parties”

So of the develop country carbon budget



… how much budget should the UK get?

… how much budget should the UK get?

Headline carbon budgets and mitigation rates

(these values remain provisional and subject to refinement)

Interpretation of Paris Agreement	Carbon budget $GtCO_2$	Approx. Years of current emissions	Annual emission reductions with exponential decline	Real Zero CO_2 date with linear CO_2 reductions
83% chance 2°C	~2.6	>7	~14%	2038
50% chance 1.5°C	~1.3	~2	~25%	2030

Table 1: UK's Paris-compliant carbon budgets starting January 1 2025. These values are for energy-only territorial CO_2 emissions, including international bunkers (aviation & shipping) and excluding cement process emissions.

Contrast this with the public views of the previous CEO of the CCC

Speaking as he moved on from his role:

> *“if you're a person going about your day-to-day life in Britain right now, I don't think your day-to-day life will be that different in 2050 when we hit net zero.*
>
> *"You will still be driving your car, you'll still be warming your house, you'll have a job which is probably very similar to the one you have now.*
>
> *"It's not frightening, you can still fly off on holiday each year, and you can have a steak if you want to.* ***There's not a huge shift here****.”*

And this, the CCC claim, aligns with the UK making its fair contribution to ≤ 1.5°C !?

… but isn't the UK showing leadership?

"The UK is the first major economy to halve its emissions – having cut them by 50% between 1990 and 2022"

… but isn't the UK showing leadership?

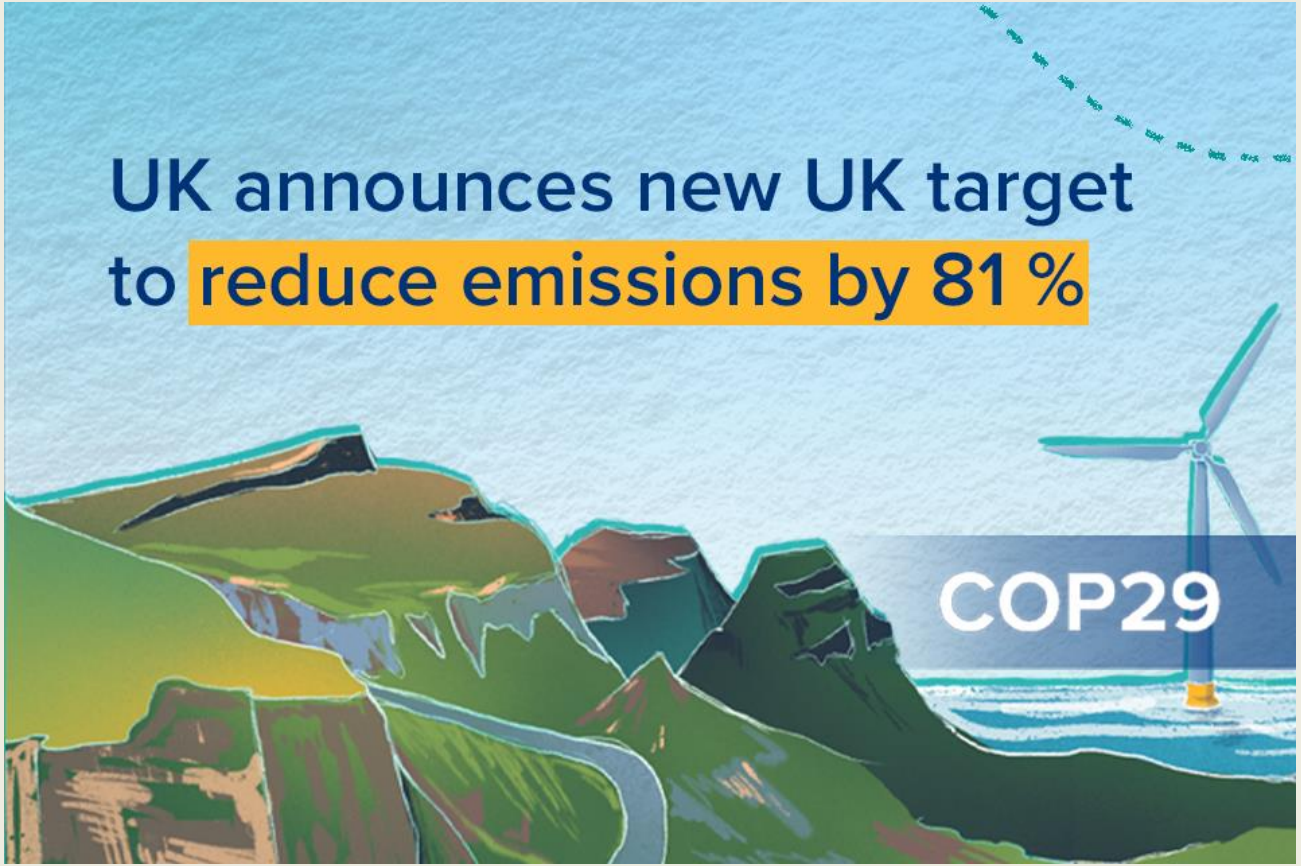
Include international aviation, shipping, imports & exports

No real leadership

~20% reduction since 1990 i.e. ~0.6% each year

same is true for Denmark, Sweden, France & the EU

… but isn't the UK showing leadership?



@KevinClimate

… but isn't the UK showing leadership?

- The 81% is compared with 1990 *(excludes aviation & shipping)*
- Include aviation & shipping and it's a 78% reduction
- Not a new target; part of UK "net zero 2050" pathway
- Based on a UK carbon budget, that, for 1.5°C …
- assumes **3x** the UK's 'equal per capita' share of emissions

What does living within the UK's 2°C carbon budget imply?



Focus on energy: with a UK 2°C budget of ~2.6GtCO2

NB: the following scenario is work in progress

What does 2.6 $GtCO_2$ imply? *An energy view*

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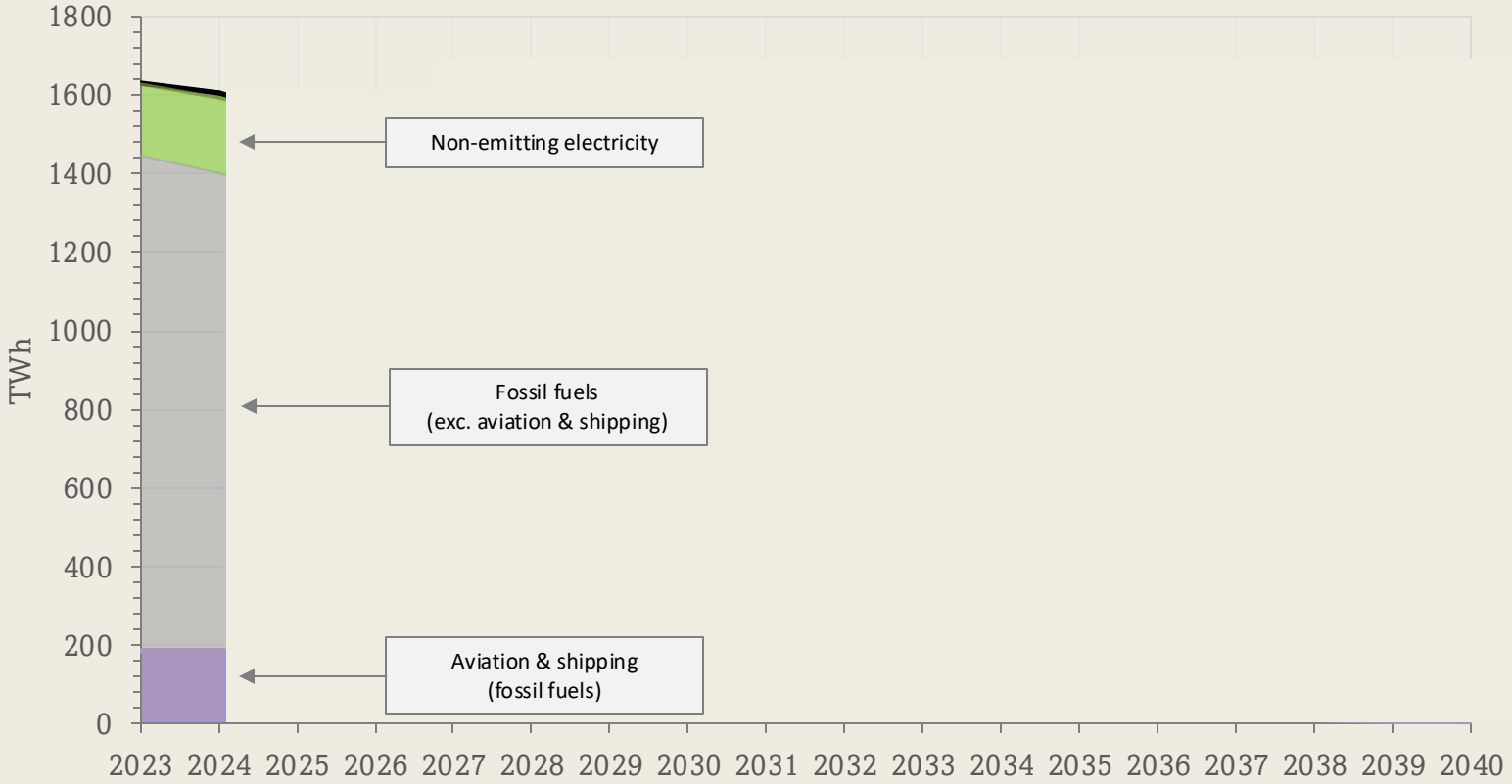

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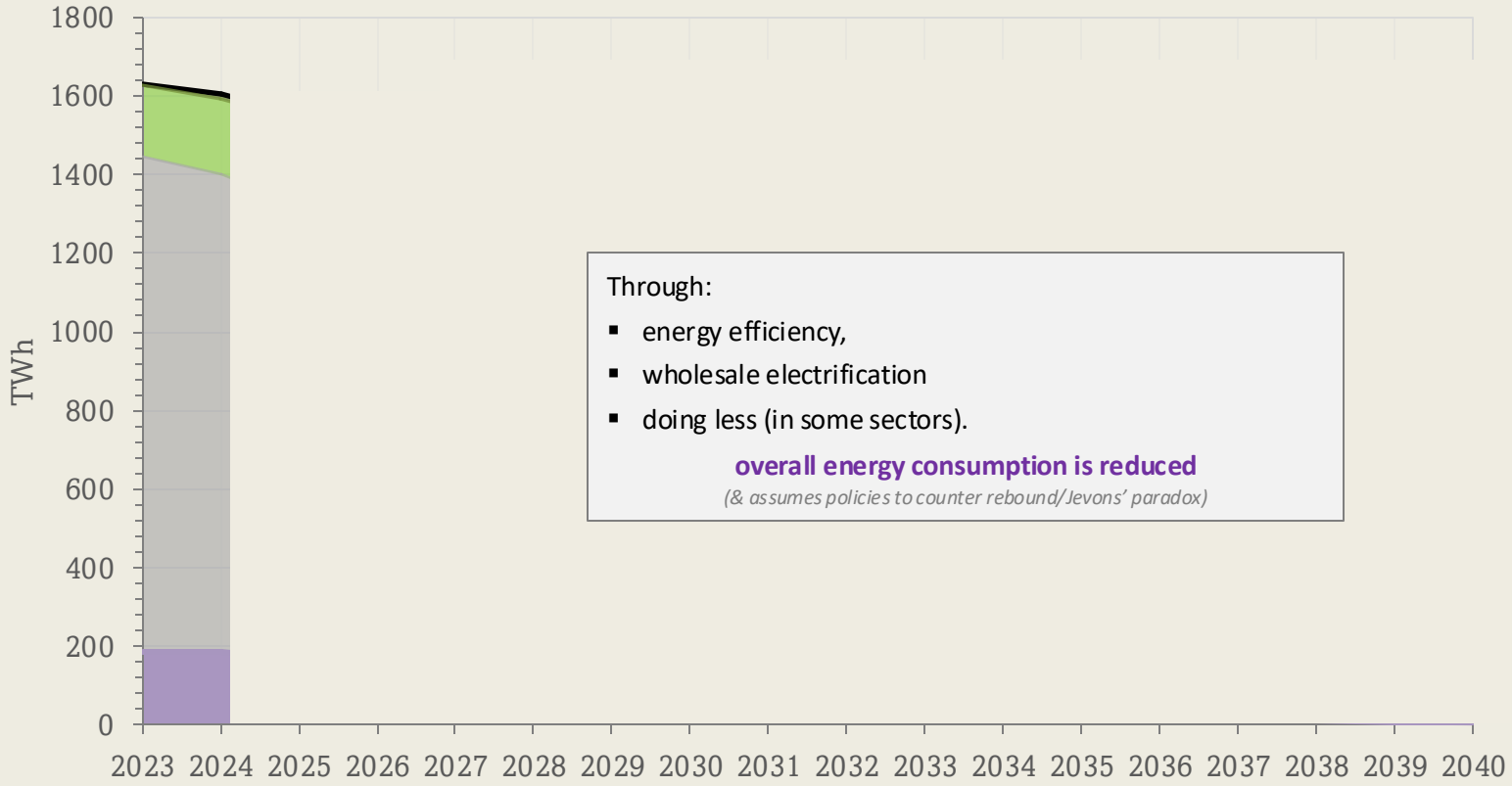

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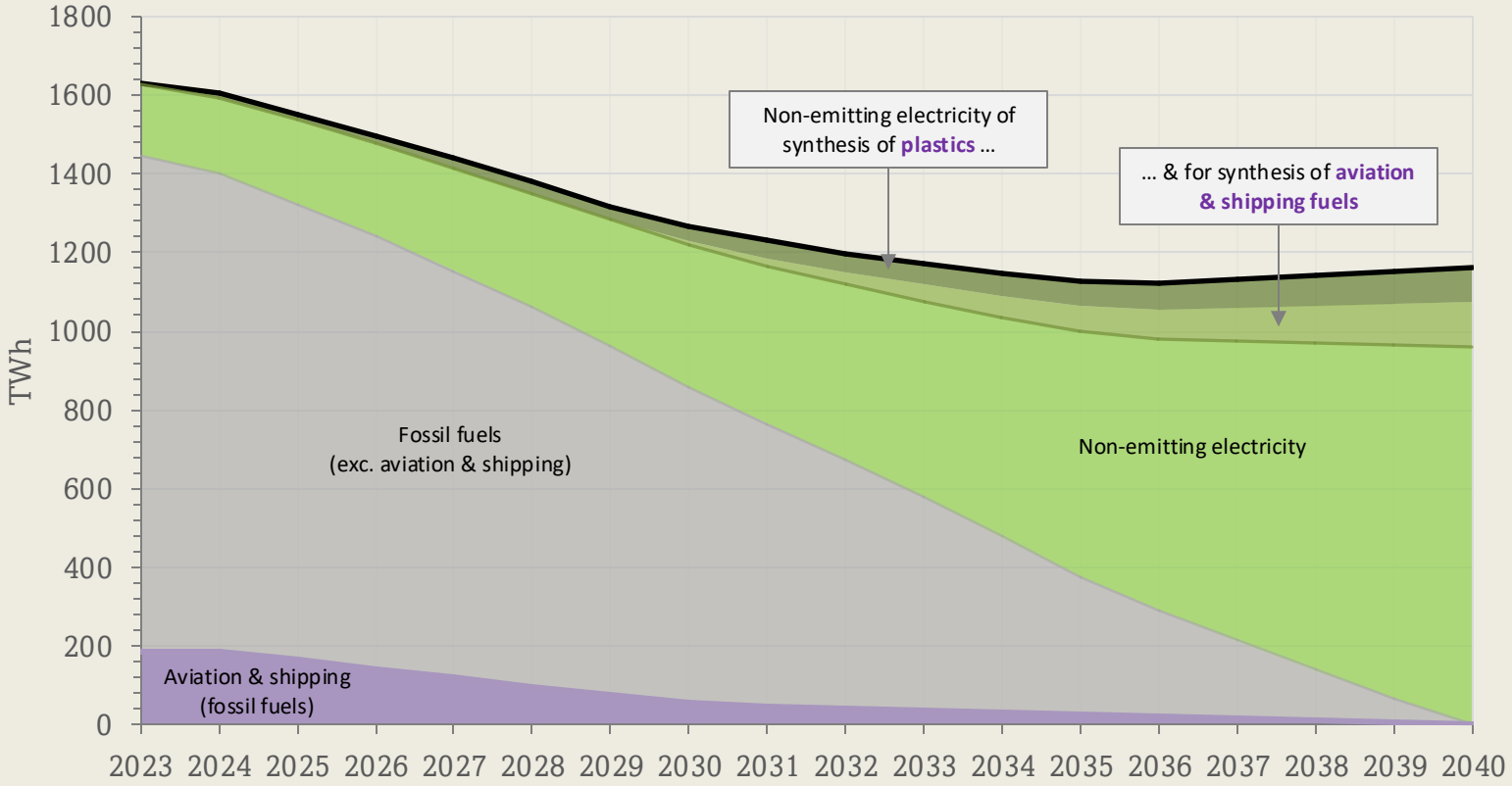

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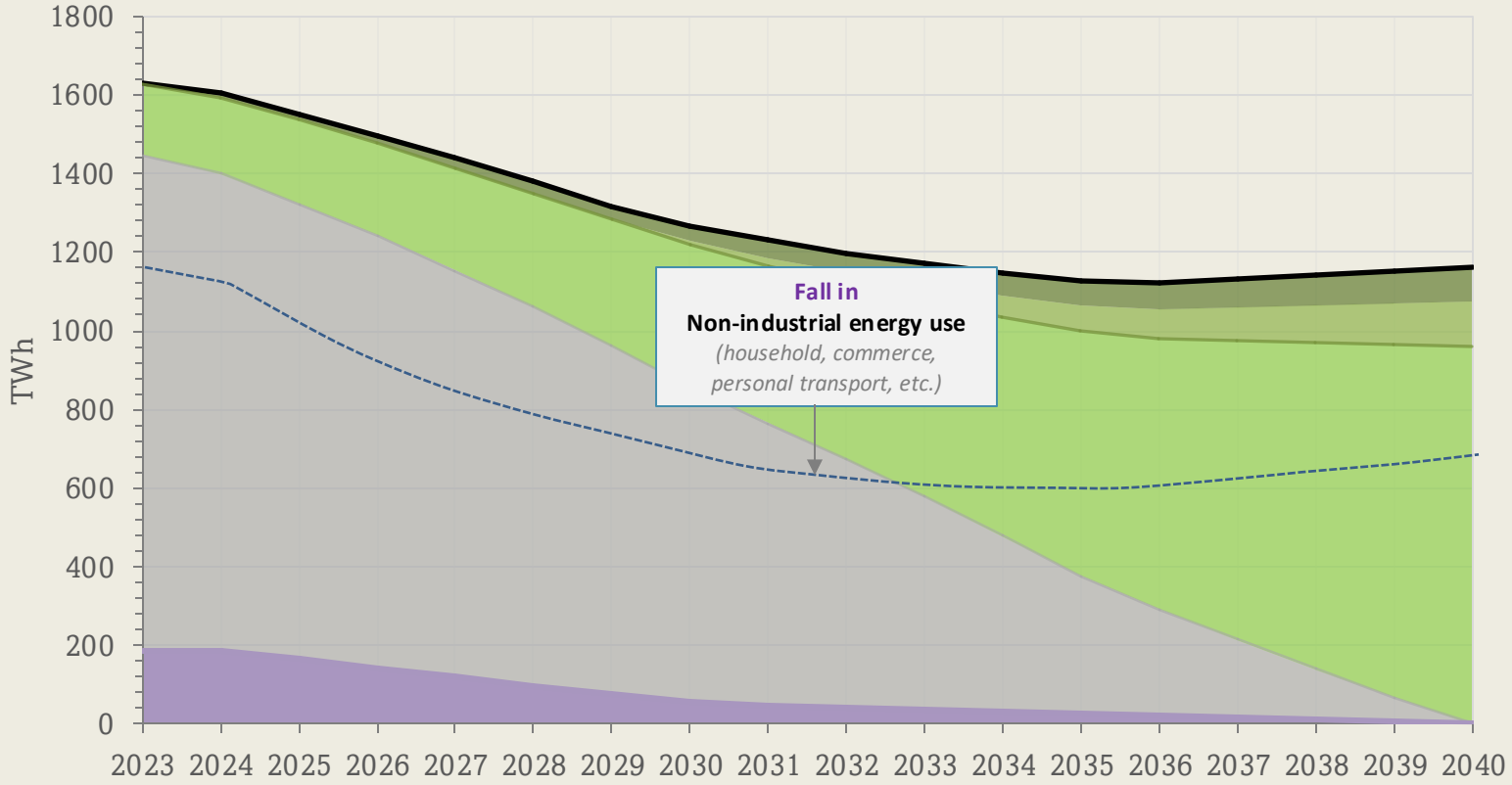

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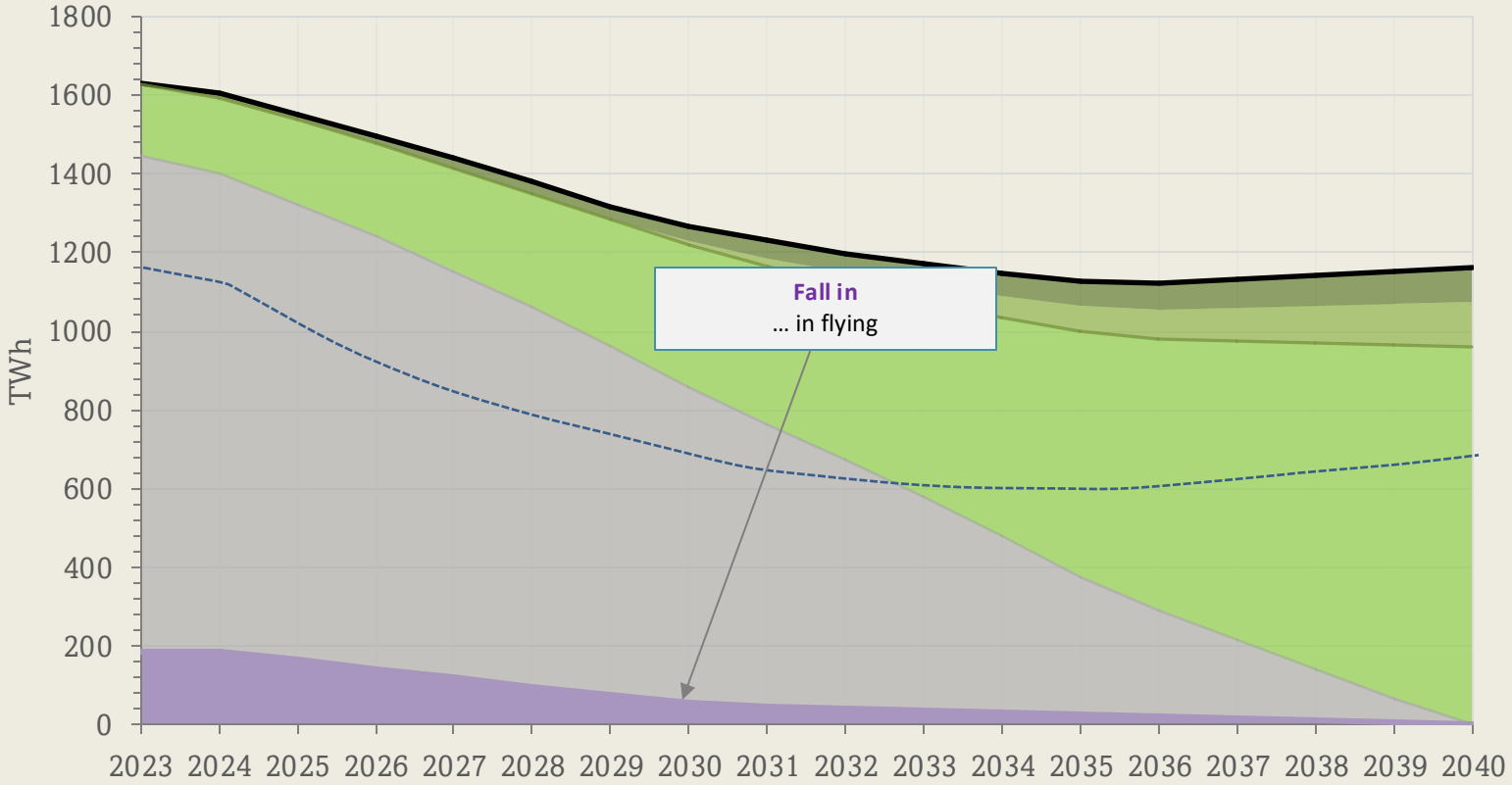

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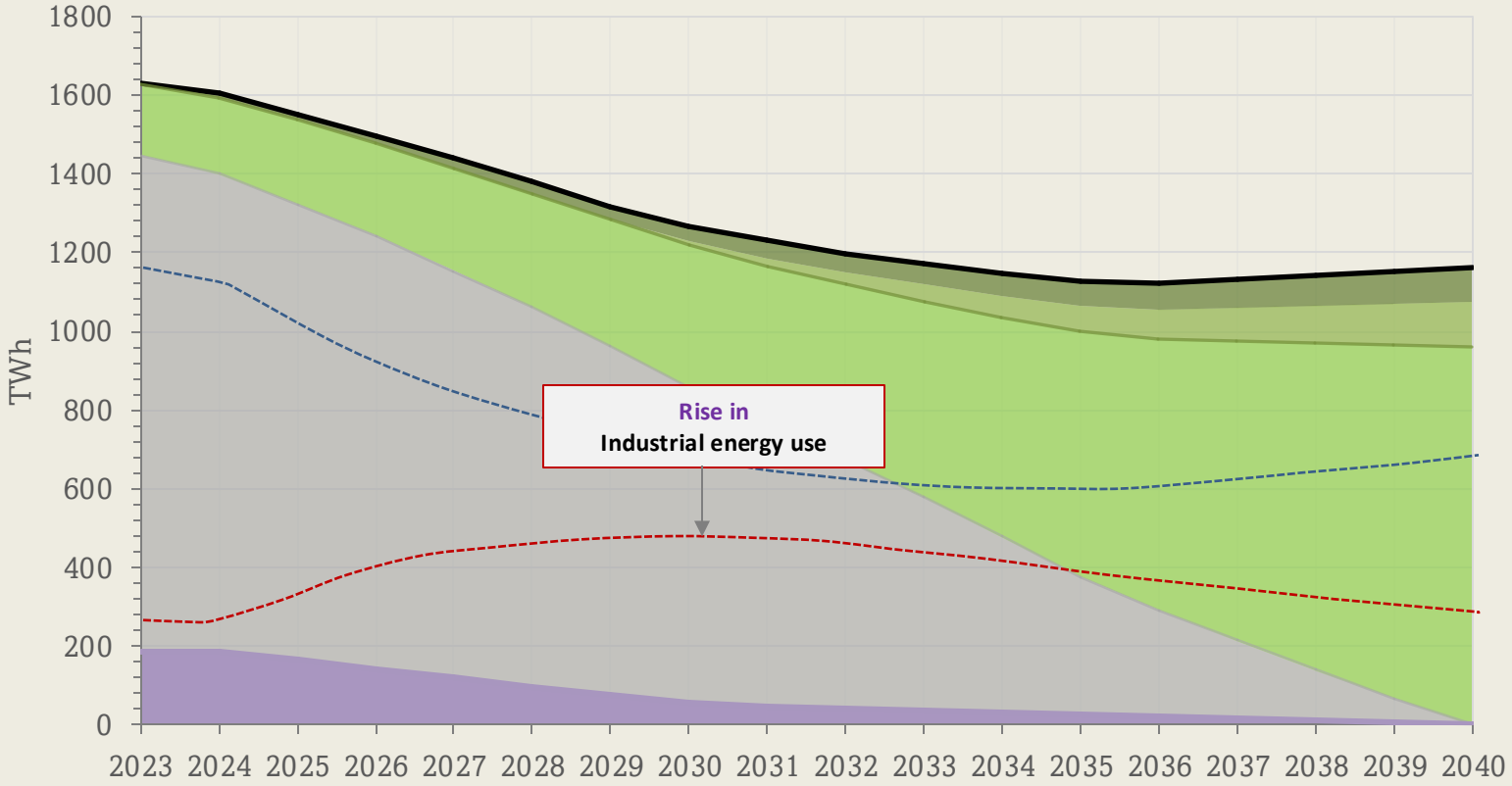

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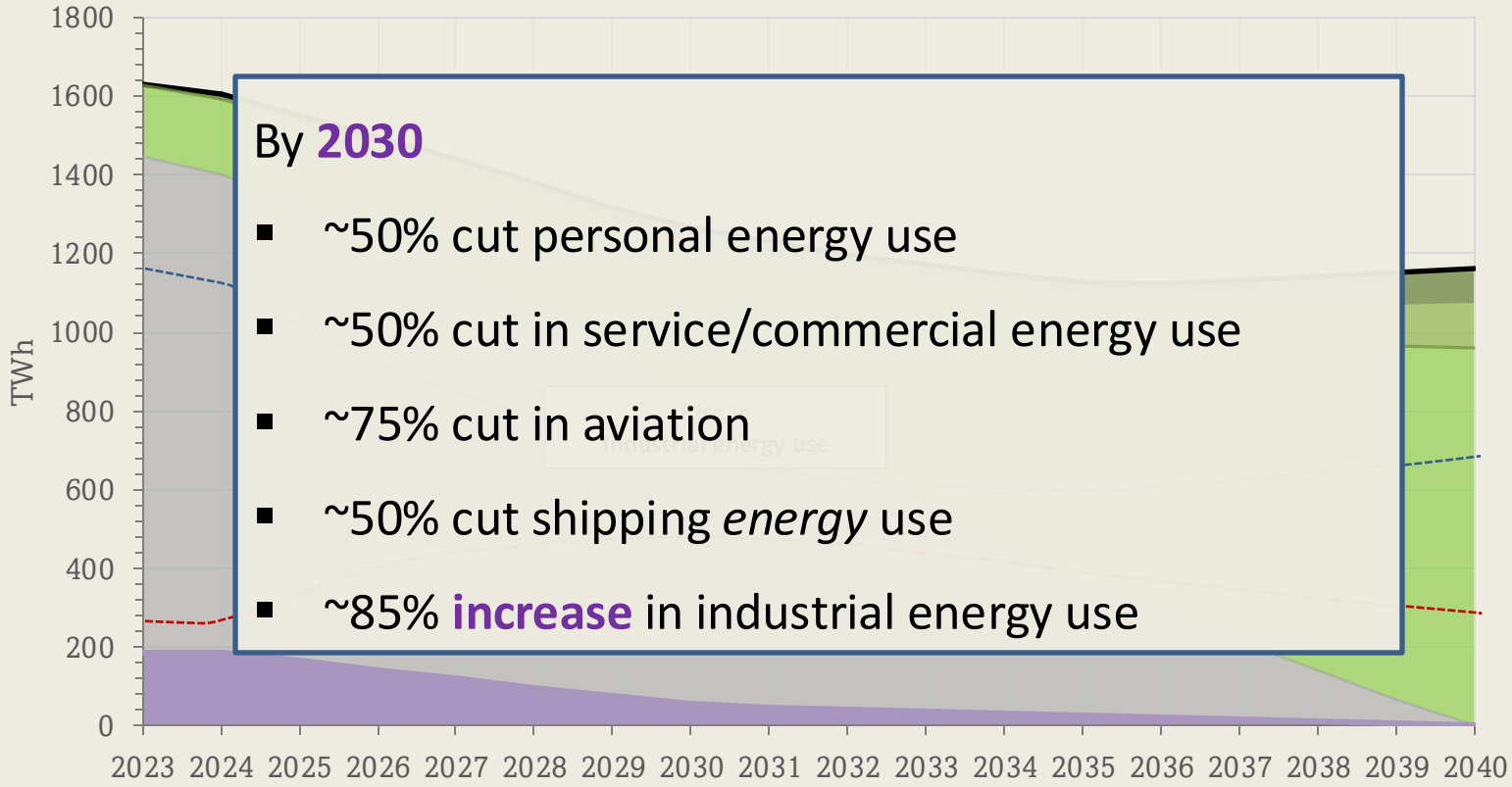

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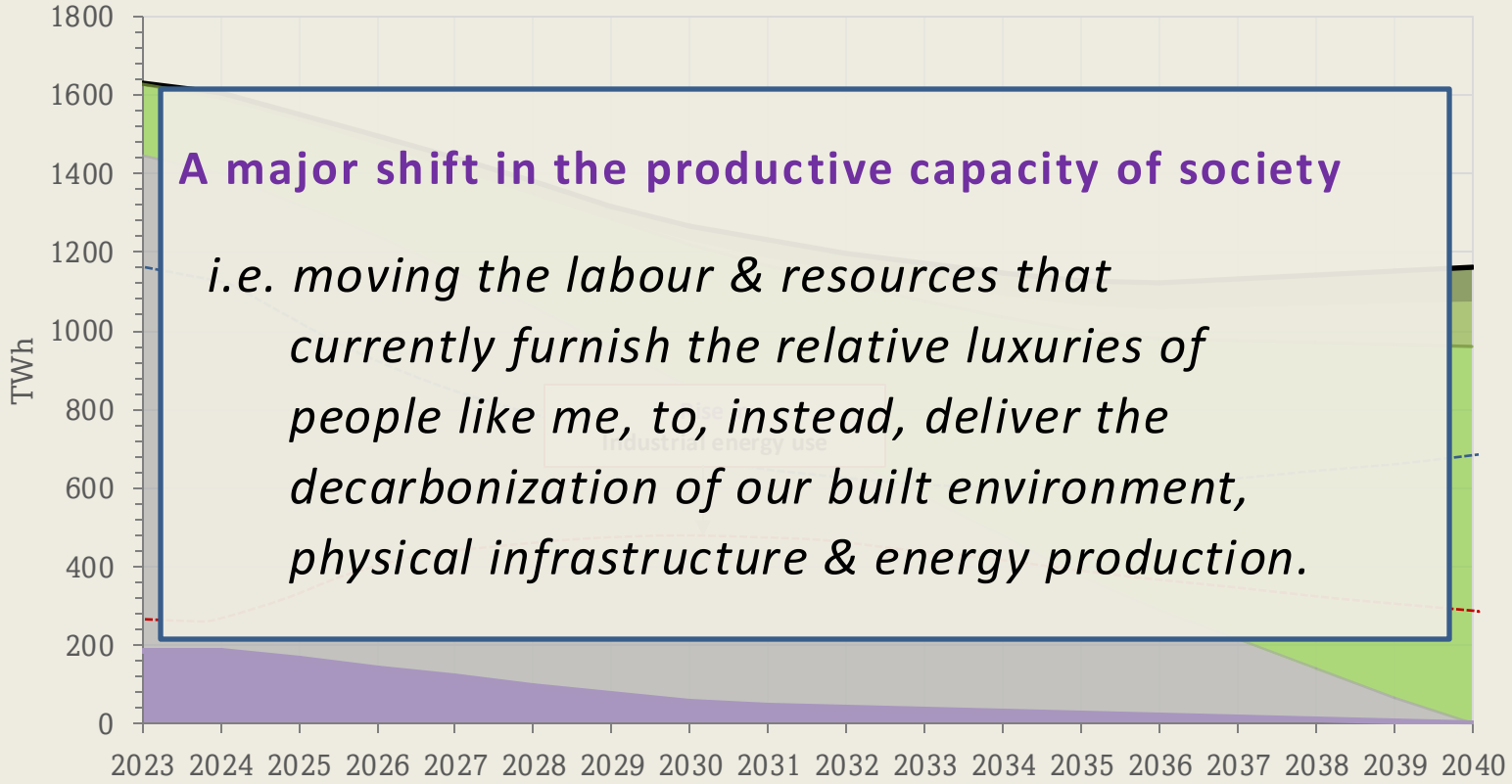


Why is all this so different to **net-zero**

In summary: ‘net-zero 2050’ …

- permits **expedient accountancy** to masquerade as **‘science-based’**
- embeds a deeply **colonial division** of the global carbon budget between ”developing” and ”developed” nations
- relies on planetary-scale future **Negative Emission Technologies (& wider CDR)** tomorrow to avoid deep/immediate cuts in emissions by wealthy hi-emitters today
- & almost completely **neglects imbalance in responsibility for emissions** within nations

These apply to all IPCC ‘mitigation’ scenarios (without exception)

& to the UK’s ‘balanced net zero’ pathway

Net-zero – a policy framework for all

Some argue that this is the real strength of net-zero

… but for me,

this vagueness undermines the call for a rapid phase out of all fossil fuels

Net-zero – a policy framework for all

ExxonMobil

Net-zero – a policy framework for all

UK?

USA

Saudi Arabia

Norway

Canada

China

Australia

EU

Russia

In stark contrast to the UN Secretary General's very clear statement


“Today, fossil fuel producers and their enablers are still racing to expand production, knowing full well that this business model is inconsistent with human survival”

A two-phase response to the Paris

1.5-2°C demands a technical revolution

… in deployment

A modern day “Marshall Plan” on steroids…

This is rapid deployment of **existing** zero carbon technologies

Headline examples:

- Make existing homes highly efficient *(‘retrofit’)*
- All new homes to be zero-energy for heating *(i.e. passive house design & limited in size)*
- Rapid roll out of public transport *(for all socio-economic groups)*
- EV charging etc. for rural environments *(much less for cities)*
- Rapid shift to zero CO_2 electricity *(meeting social & ecological sustainability criteria)*
- Major programme of electrification *(electricity is typically only 20% of total energy demand)*
- *(Deep & rapid reduction in aviation; slow steaming, etc. for shipping)*

Responding to CC is win-win-win for the majority

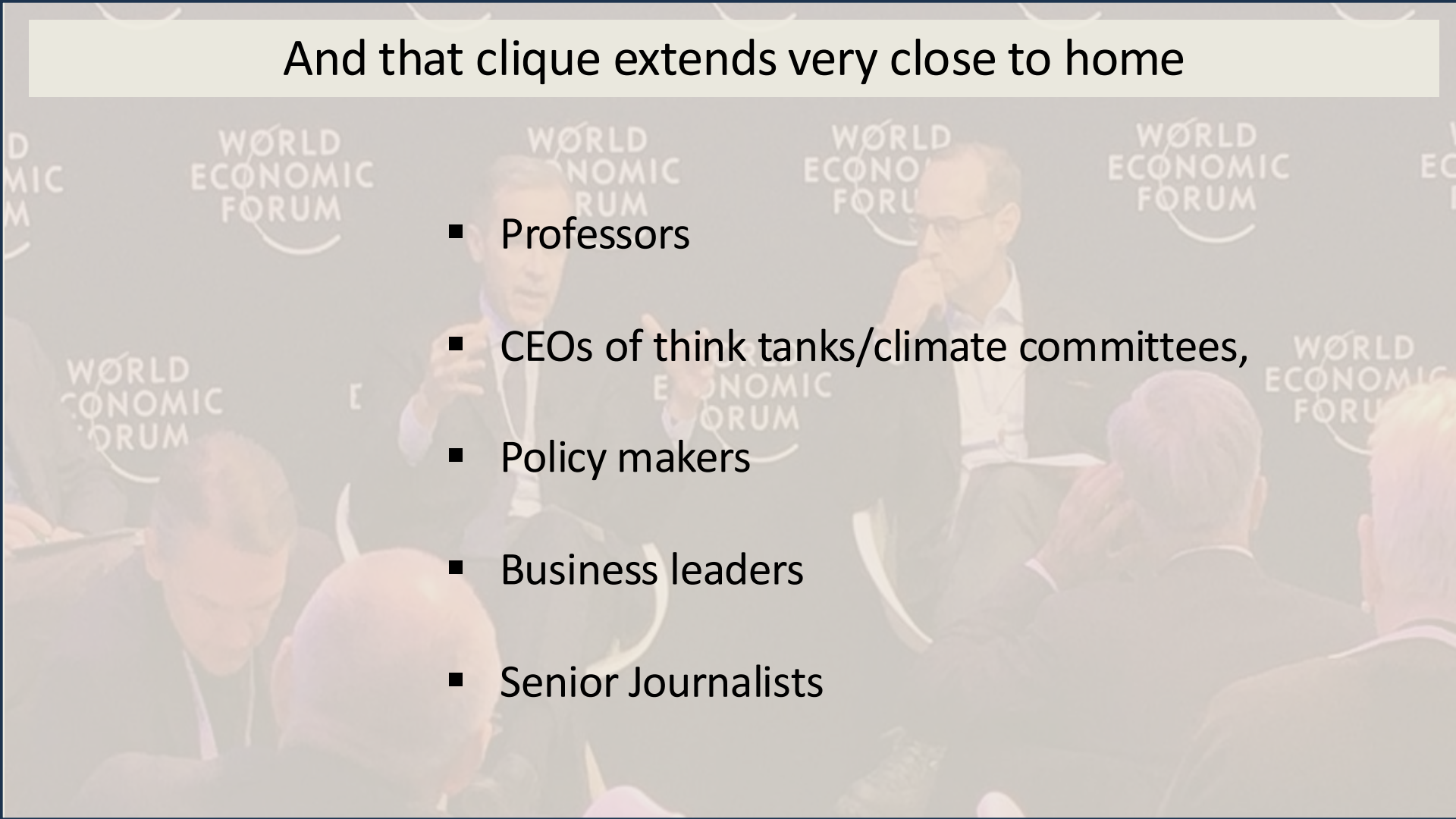
- Comfortable & affordable homes
- High quality public transport
- Secure & valued employment
- Better air quality … health … education
- Functioning infrastructure
- Improved civic well being

but requires moving resources & labour from the private luxury of a relative few to public wellbeing for all

… to a future of ***private sufficiency & public luxury***

an agenda deliberately undermined by the Davos clique

And that clique extends very close to home



- Professors
- CEOs of think tanks/climate committees,
- Policy makers
- Business leaders
- Senior Journalists

Frédéric Bastiat (1801–1850) …

"When plunder becomes a way of life for a group of men *[sic]* in a society, over the course of time they create for themselves a legal system that authorizes it & a moral code that glorifies it."

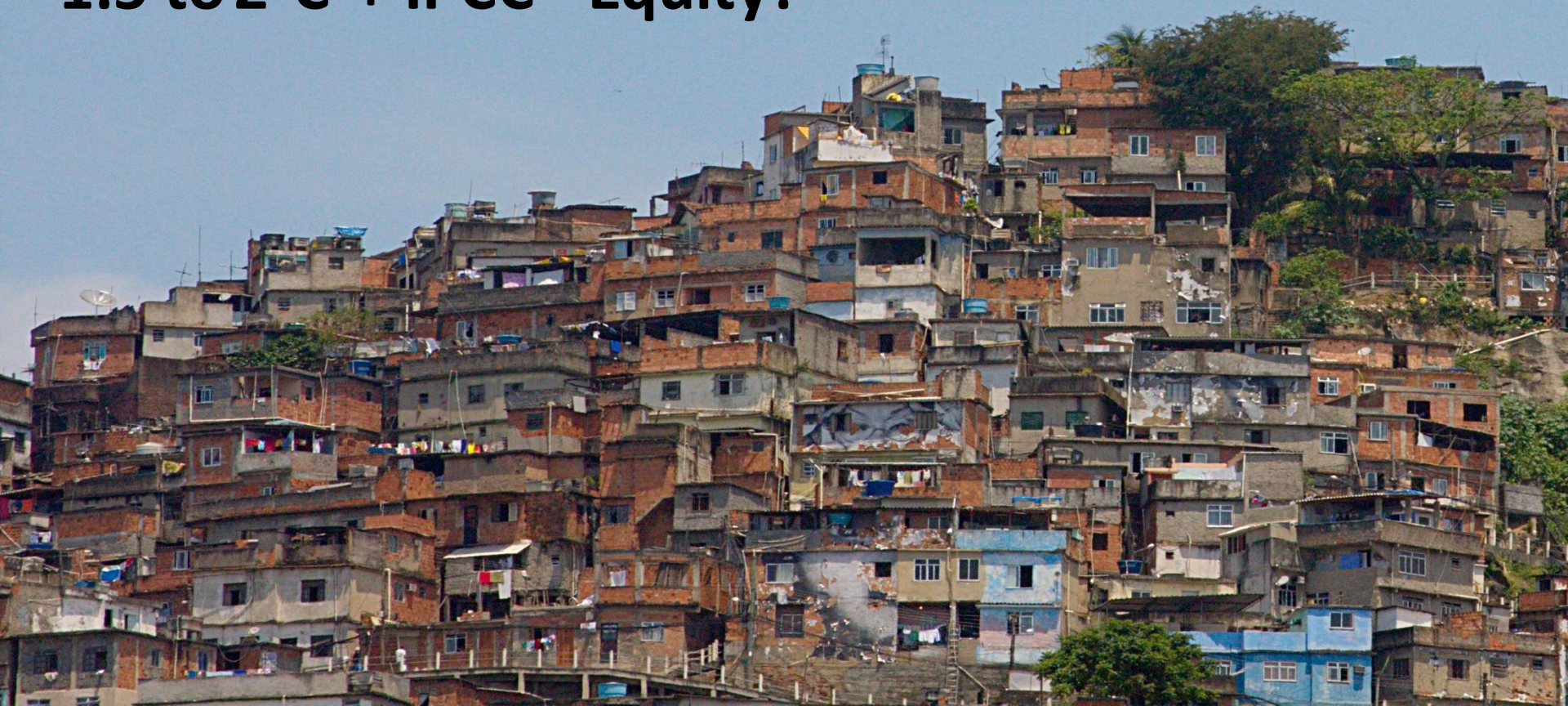
Economic sophisms 1848

Frédéric Bastiat (1801–1850) …

"When plunder becomes a way of life for a group of men *[sic]* in a society, over the course of time they create for themselves a legal system that authorizes it & a moral code that glorifies it.

… an academia that justifies it and a media that disseminates it."

1.5 to 2°C + IPCC = Equity?



CO_2 is highly skewed towards the ‘few’?

50% of CO_2 from 10% of the population

Huge (obscene?) asymmetry in emissions

… collectively the top 1% have lifestyles

that give rise to almost **twice** the emissions

of the **bottom half** of the world's population

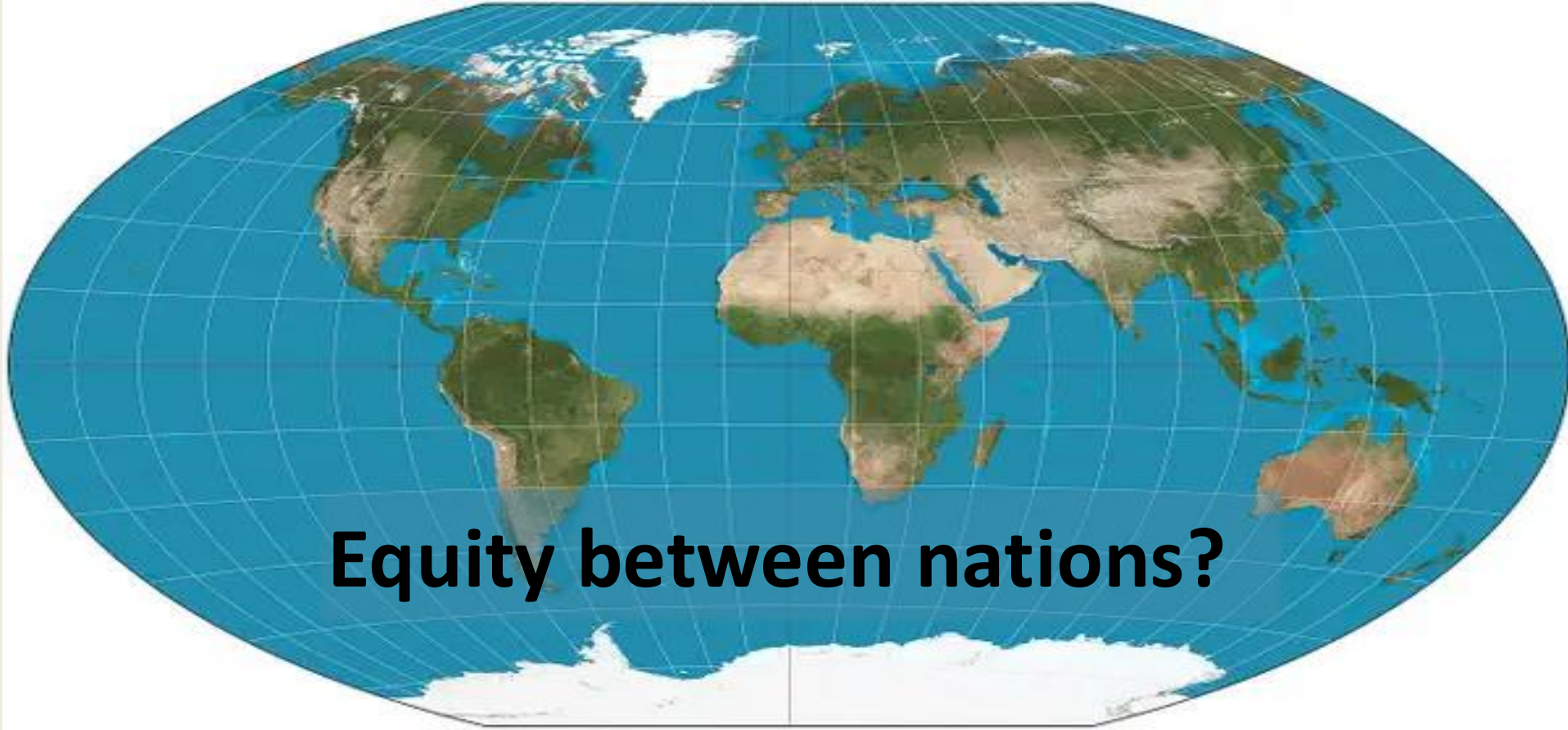
Imagine …

1) We responded as if it were a ‘climate emergency’

2) Regulations require top 10% to cut their CO_2 footprint to the EU mean

3) The other 90% make no reductions

= 1/3 cut in global CO_2


Equity between nations?

Scenarios treat developing nations with contempt

- All major mitigation models are based in wealthy developed nations
- All IPCC scenarios maintain huge inequality between ‘developed’ & ‘developing’ nations
- In many scenarios the levels of inequality actually rise

Scenarios treat developing nations with contempt

'IPCC latest scenarios disregard both the historical responsibility of the global North for carbon emissions & future energy needs of the global South required to meet developmental goals.

The burden of climate change mitigation is placed squarely on less developed countries, while developed countries continue to increase their energy consumption …'

Equity Assessment of Global Pathways in IPCC AR6 (2022)

Tejal Kanitkar, Akhil Mythri, T Jayaraman

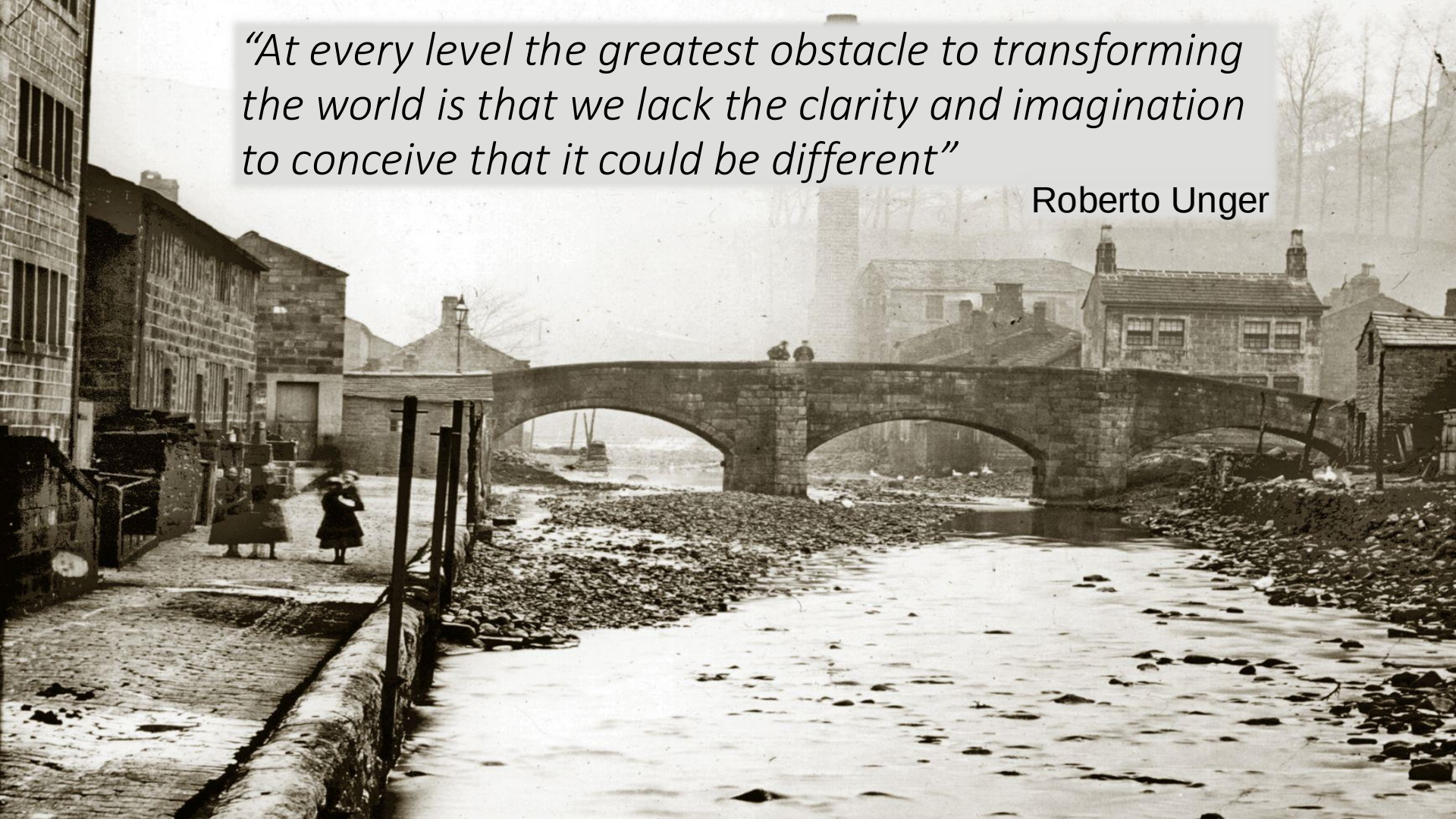
… so where does all this leave us?

In 2024 there are no non-radical futures …

Even for ***"well below 2°C"***

we need **immediate & profound system change**

*& with **equity/fairness** at the core*



"At every level the greatest obstacle to transforming the world is that we lack the clarity and imagination to conceive that it could be different"

Roberto Unger

… we face a Velvet or a Violent revolution

I see no way out of revolutionary changes to how **we** live today

… it is too late for non-radical futures

The choice is between

1) A deep, rapid & ***fair*** decarbonisation of modern society

… an organised(ish) **Velvet** revolution …

2) Ongoing lies, rhetoric & delay as temperatures exceed “dangerous” for all

… i.e. revolutionary-scales of change that are chaotic & **Violent**

The IPCC capture the scale & depth of the challenge

"Targeting a climate resilient, sustainable world involves fundamental changes to how society functions, including changes to underlying values, worldviews, ideologies, social structures, political and economic systems, and power relationships. "

Roosevelt-ian leadership for the 21st Century?

i.e. vision & courage

Not focus groups & fear

Roosevelt-ian leadership for the 21st Century?

- such leadership can be as important bottom up as top down
- they are not independent, but inexorably linked
- we all have agency for catalysing change

Pessimism of the Intellect, Optimism of the Will


Thanks for listening
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