



Energy
Transitions
Commission

Towards a credible reset of global country and corporate decarbonisation targets

ETC Commissioners Meeting
30 October 2025

Agenda

- **The problem: 1.5°C is now out of reach**

- The credible reset challenge
- Setting a new temperature target: hypothesis and analysis
- Stronger mechanisms and policies to ensure new target is met
- ETC's distinctive impact in this debate
- Proposed process, engagement and timetable



The Paris conference committed to “well below 2°C limit” with efforts to pursue the ideal of 1.5°C, but in subsequent years the focus on 1.5°C grew

Paris Agreement (2015) Article 2.1(a)



“This Agreement...aims to strengthen the global response to the threat of climate change... including by:

(a) Holding the increase in the global average temperature to **well below 2°C above pre-industrial levels** and to **pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels**, recognizing that this would significantly reduce the risks and impacts of climate change.”

IPCC 1.5°C Special Report (2018)



“Impacts on natural and human systems from global warming of **1.5°C are projected to be lower than at 2°C**. However, they will still be greater than at present.

Differences between 1.5°C and 2°C include increases in the frequency and intensity of extreme weather events, sea level rise, and impacts on ecosystems, human health, and livelihoods.”

COP26 (2021) and COP28 (2023)



“Recognizes that the impacts of climate change will be much lower at the temperature increase of 1.5°C compared with 2°C, and **resolves to pursue efforts to limit the temperature increase to 1.5°C.**”



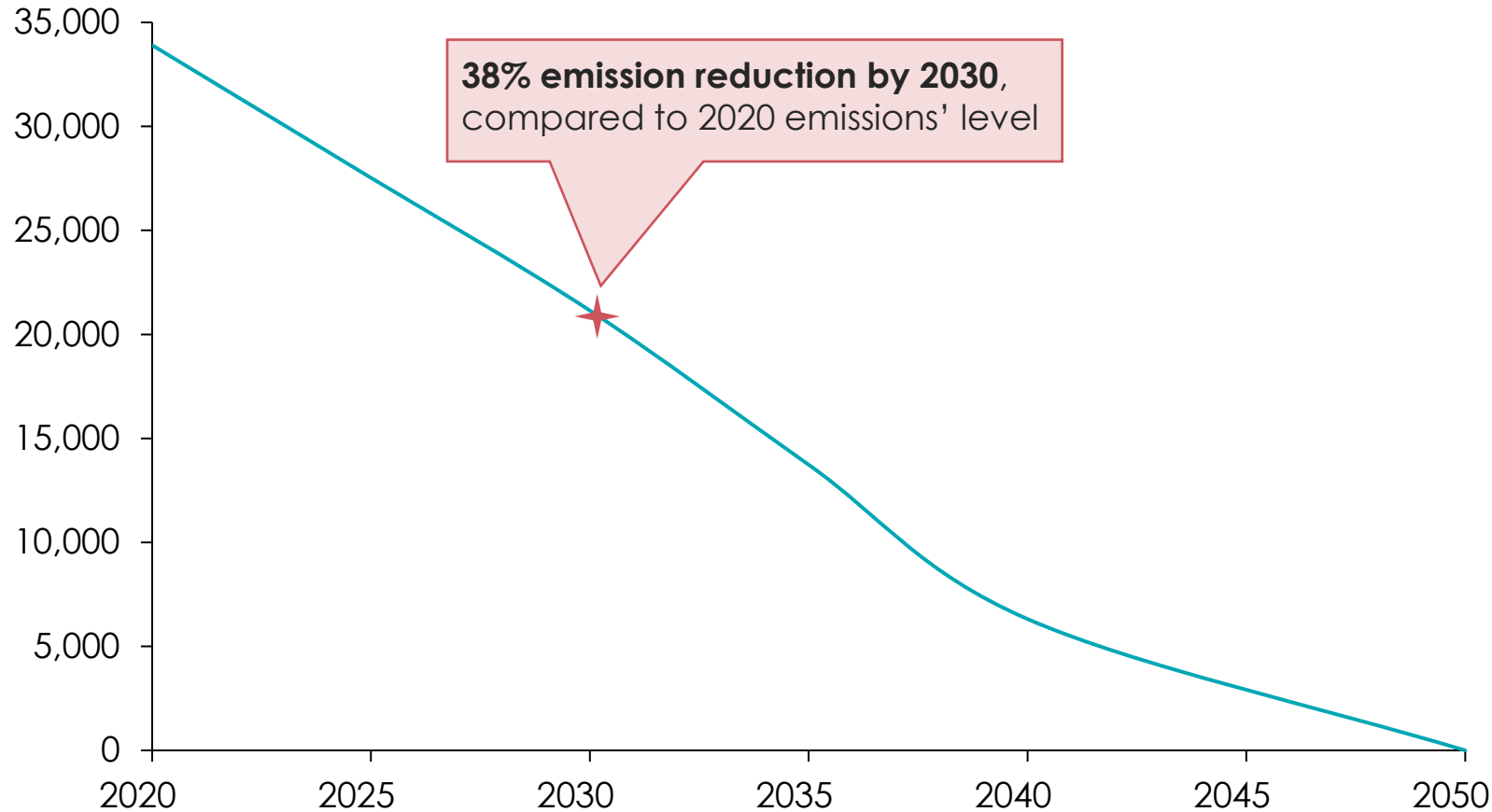
- “emphasizes the need for **urgent action and support to keep the 1.5°C goal within reach...**”
- “encourages Parties to come forward in their next **nationally determined contributions ... aligned with limiting global warming to 1.5°C**”



The IEA's first "Net zero scenario", compatible with a 1.5°C limit, was published in 2021

Total energy system CO₂ emissions
Mt CO₂

— IEA NZ 2021



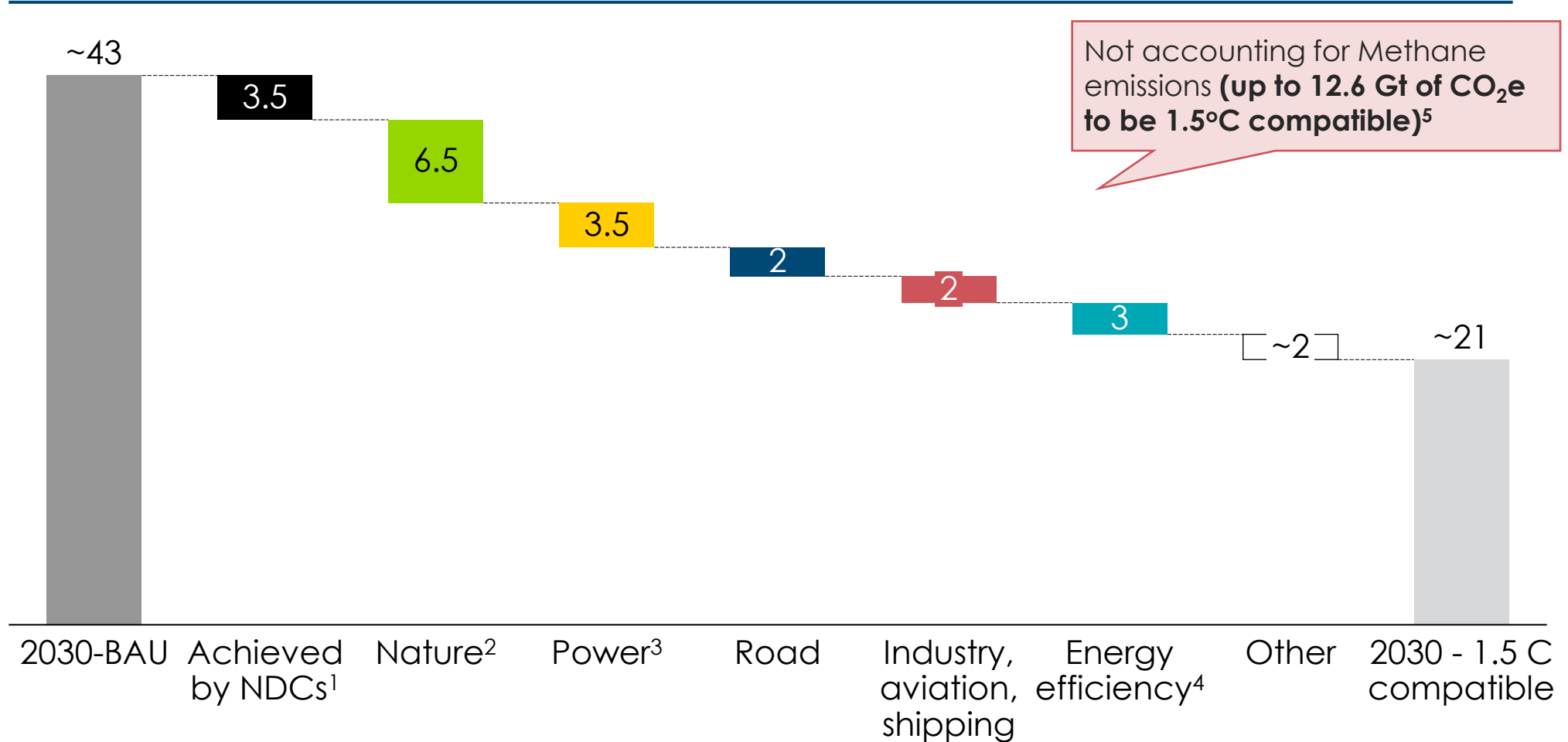
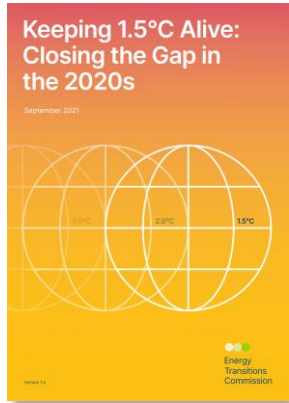
“The Net Zero Emissions by 2050 Scenario describes a pathway for the global energy sector to achieve net-zero CO₂ emissions by 2050, **consistent with limiting the global temperature rise to 1.5°C with no or limited overshoot.**”



Source: IEA (2021) Net Zero by 2050; IEA (2024) A Net Zero Roadmap; IEA (2024) World Energy Outlook; IEA (2025) Global Energy Review
Note: Emissions are interpolated between 5 year averages

At both COP26 and COP28 the ETC worked with COP presidency to define the actions required to “bridge the gap” and “keep 1.5°C alive”

Global CO₂ emissions
Gt per annum



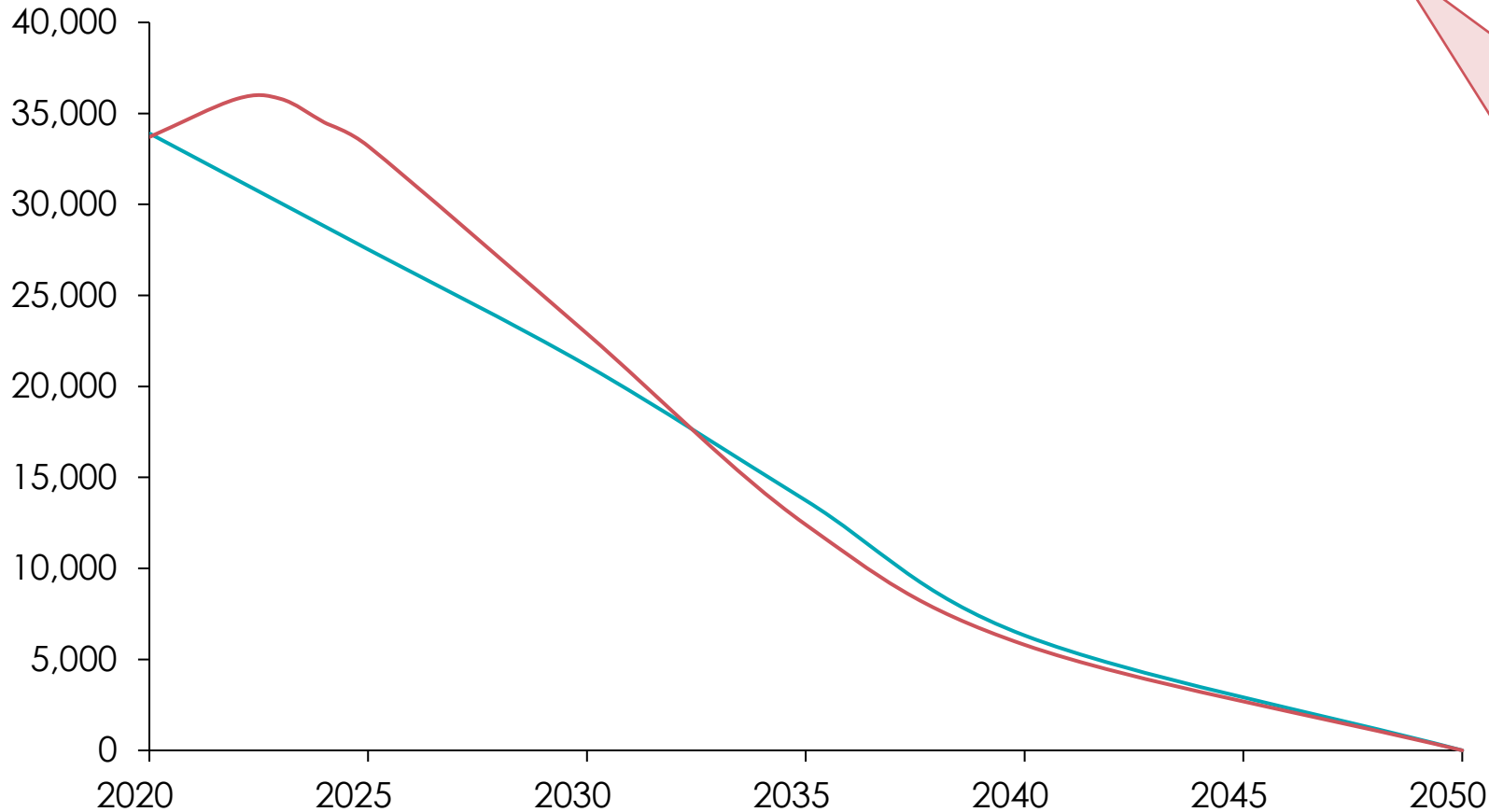
Note: Potential of levers was scaled down not to overlap with NDCs; (1) 3.5 Gt CO₂ is the estimated carbon dioxide impact of the NDCs, taking the mid-point of the estimated impact range of unconditional (3.3 GtCO₂e) and conditional (4.7 GtCO₂e) commitments; (2) Ending deforestation and carbon dioxide removals; (3) Early coal phase out being the most important lever in power; (4) Includes resource efficiency; (5) Equivalent to 150 Mt CH₄



Emissions have not decreased as assumed in IEA's Net Zero scenario

Total energy system CO₂ emissions
Mt CO₂

— IEA NZ 2021 — IEA NZ 2024



IEA 2024 update included:

- Stronger deployment of clean tech
- Greater weight on efficiency
- Additional annual investments
- No relaxation on carbon removals

Peak emissions not yet reached:
CO₂ still grew at 0.8% in 2024

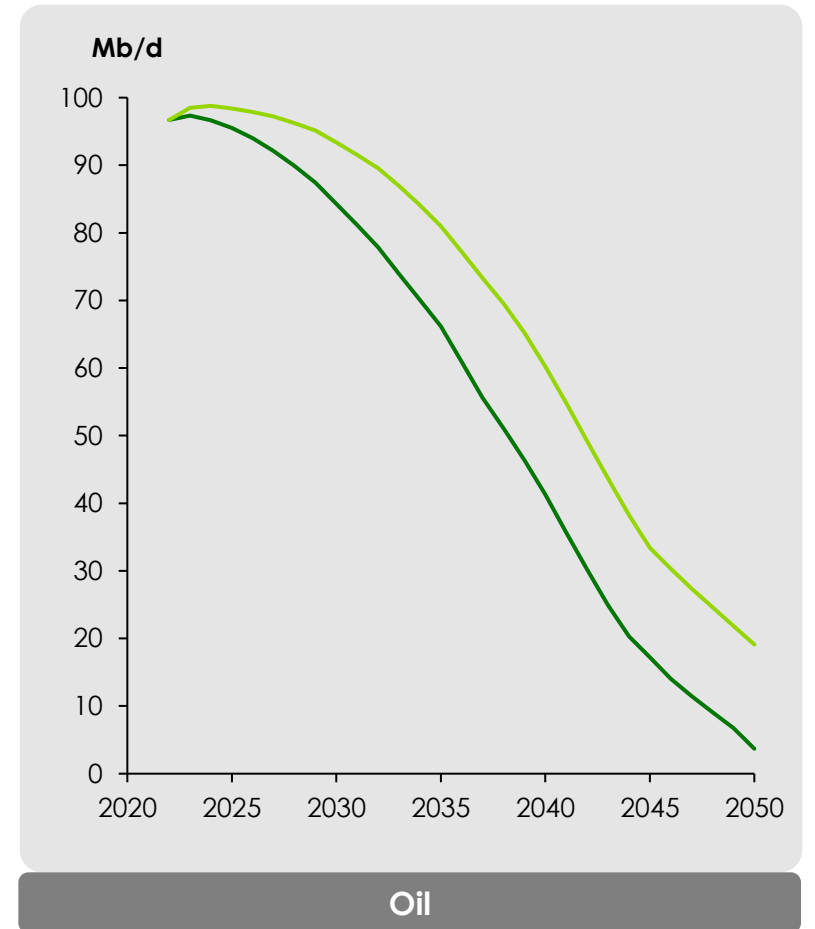
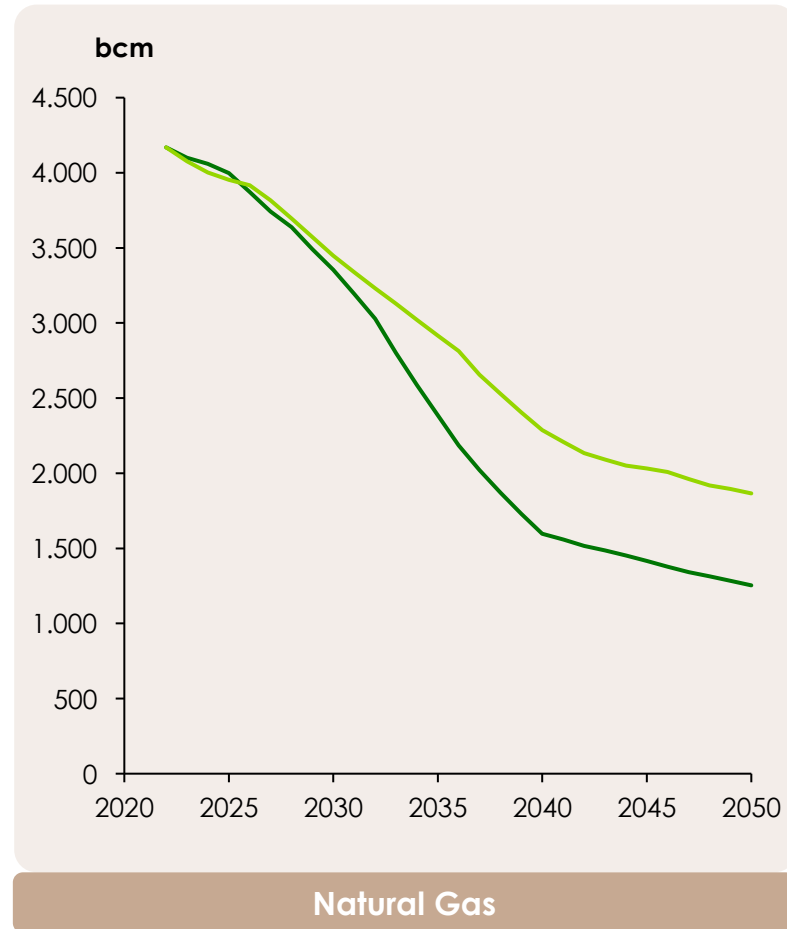
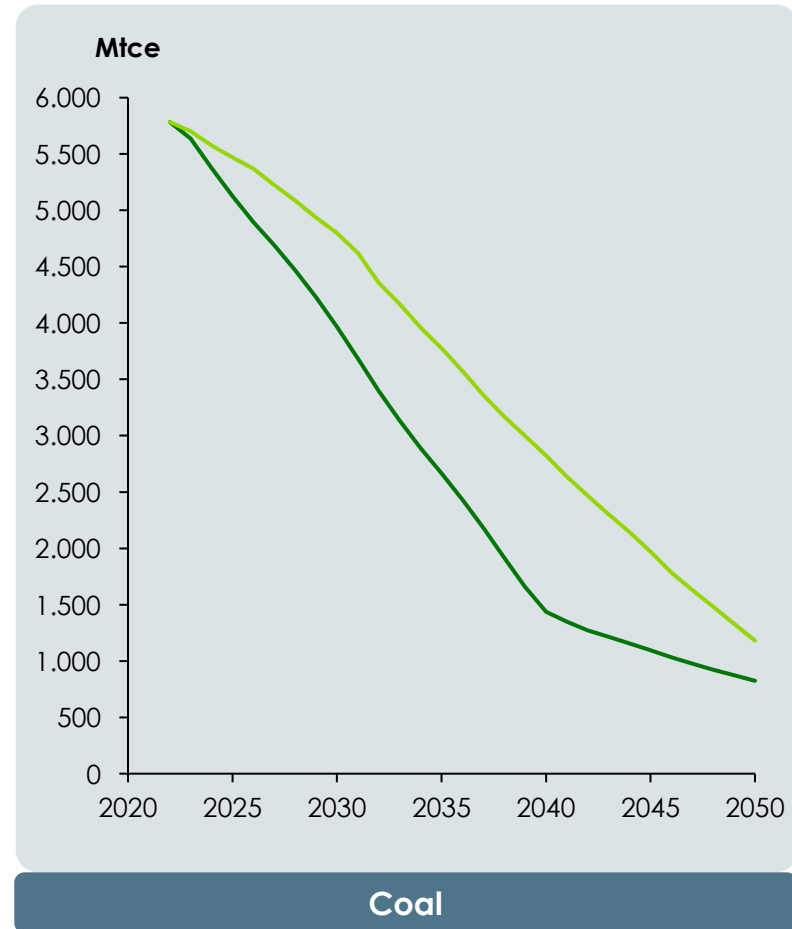
Source: IEA (2021) Net Zero by 2050; IEA (2024) A Net Zero Roadmap; IEA (2024) World Energy Outlook; IEA (2025) Global Energy Review
Note: Emissions are interpolated between 5 year averages

In 2023, ETC's most ambitious scenario, PBS, implied an increase slightly above 1.5°C while a more realistic scenario, ACF, implied around 1.7°C

Fossil fuel demand by scenario, 2020-2050

Mtce for coal; bcm for natural gas; Md/d for oil

— ETC - PBS (~1.5C) — ETC - ACF (~1.7C)

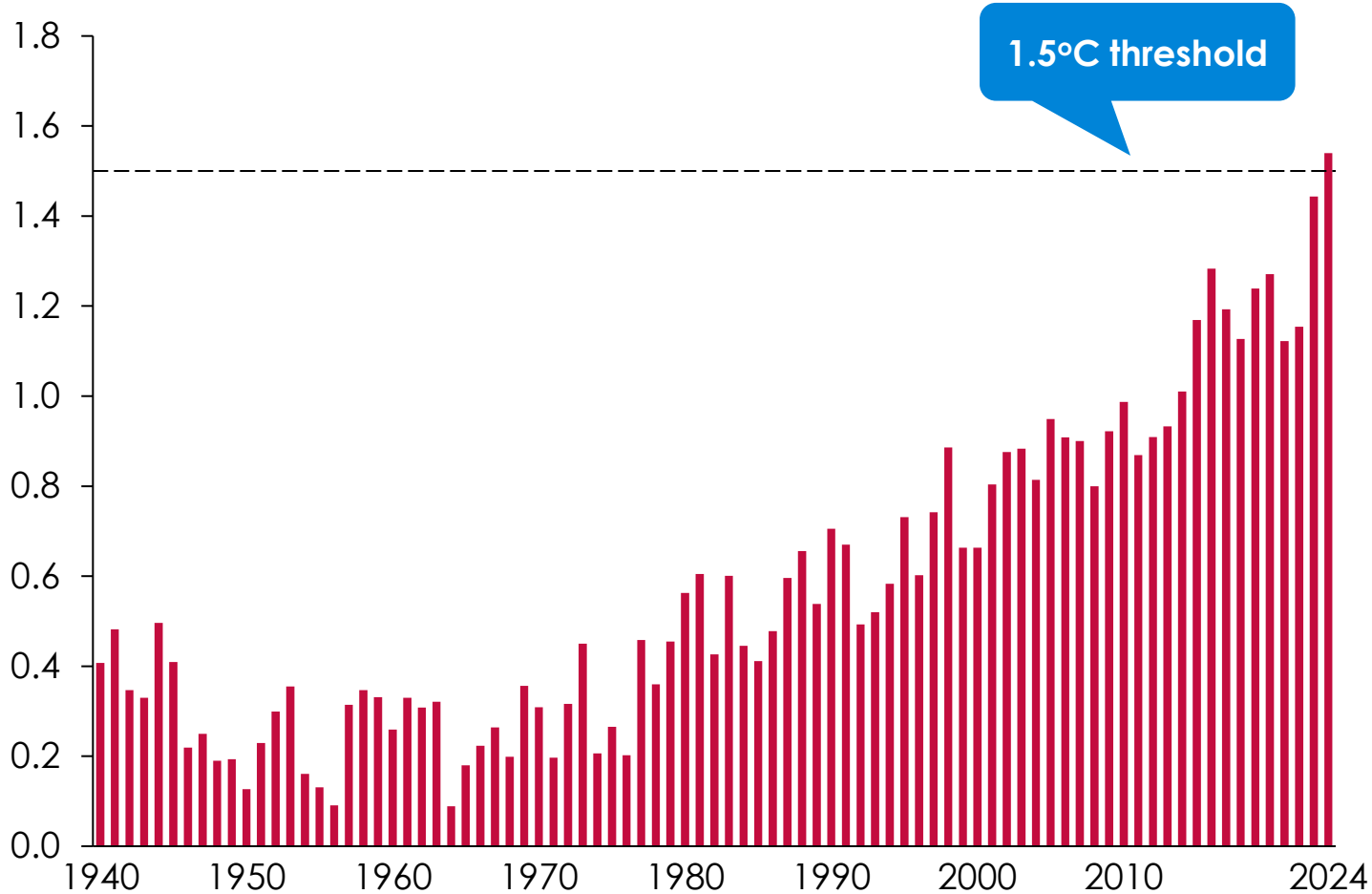


Source: ETC (2023) Fossil Fuel in Transition
 Note: PBS = Possible but Stretching; ACF = Accelerated but Clearly Feasible.

2024 saw an annual increase of 1.5°C in global temperatures above pre-industrial levels for the first time

Global surface temperature increase above pre-industrial

°C above pre-industrial levels; Reference period: pre-industrial (1850-1900)



- The Paris Agreement didn't provide a specific definition of '**global average temperature**', or what period in history should be considered '**pre-industrial**'
 - The IPCC Special Report on Global Warming of 1.5°C defined **1850–1900** as the **earliest period with near-global observations** to represent pre-industrial temperature
 - The Paris Agreement contemplates a "**long-term temperature increase**", typically defined by climate experts (i.e. IPCC, Corpenicus, etc.) as **a period of 20-30 years**



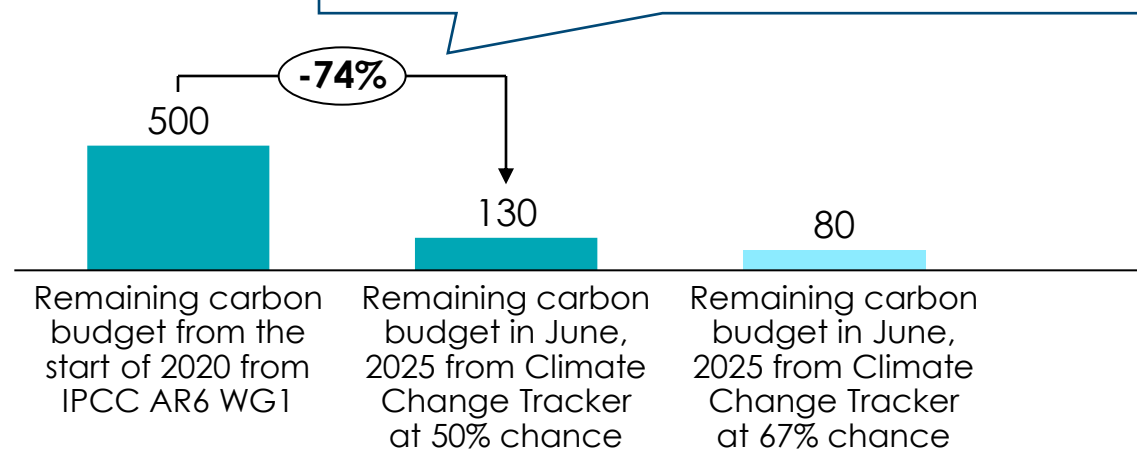
The remaining emission budget to contain temperature rises to 1.5°C is less than 3 years of current annual emissions

Carbon budgets for a given temperature rise

GtCO₂

Budget for staying within 1.5°C

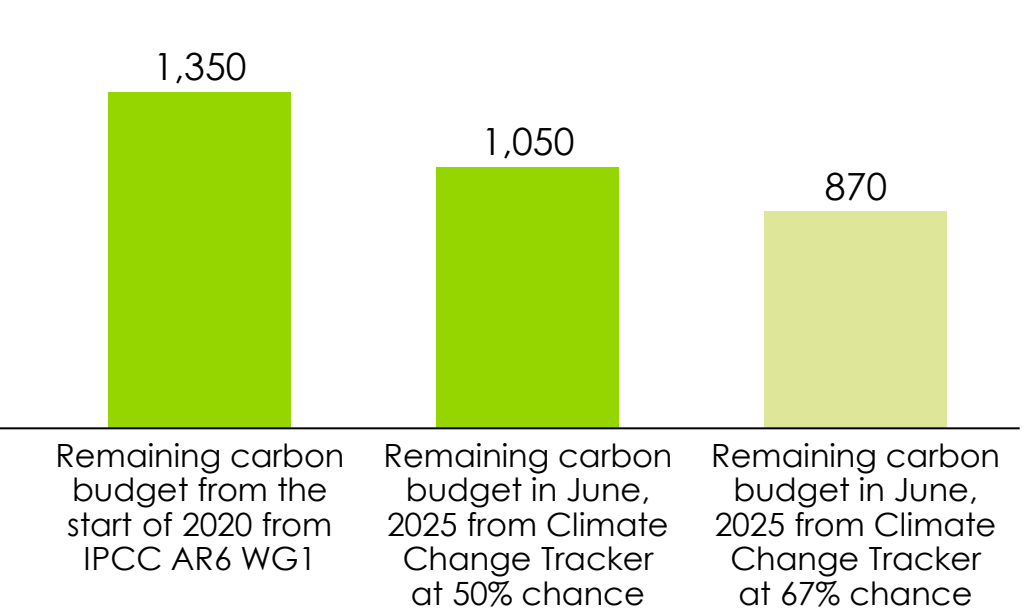
5.5 years of human induced emissions, and improved measuring, have reduced global carbon budget by $\frac{3}{4}$



Number of years until budget exhaustion at current annual emission



Budget for staying within 2.0°C

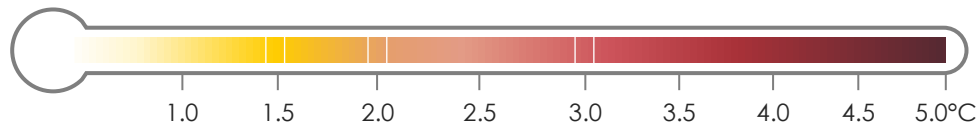


Source: Climate Change Tracker available at: <https://climatechangetracker.org/climate-change-progress/current-remaining-carbon-budget-and-trajectory-till-exhaustion> [Accessed October 2025]

UNEP's 2024 Emission Gap report places current NDC pledges at a 50% chance of increasing global temperatures between 2.4 to 2.6°C

Projections of global warming under the pledge-based scenarios assessed in this chapter

Peak warming over the twenty-first century (°C) relative to pre-industrial levels



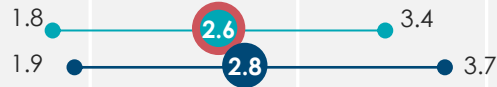
Scenarios

● 50% chance ● 66% chance

Current policies continuing



Unconditional NDCs continuing



Conditional NDCs continuing



Conditional NDCs + all net-zero pledges



2025 update, due next week, is unlikely to shift this significantly – key NDCs from Europe and India still missing

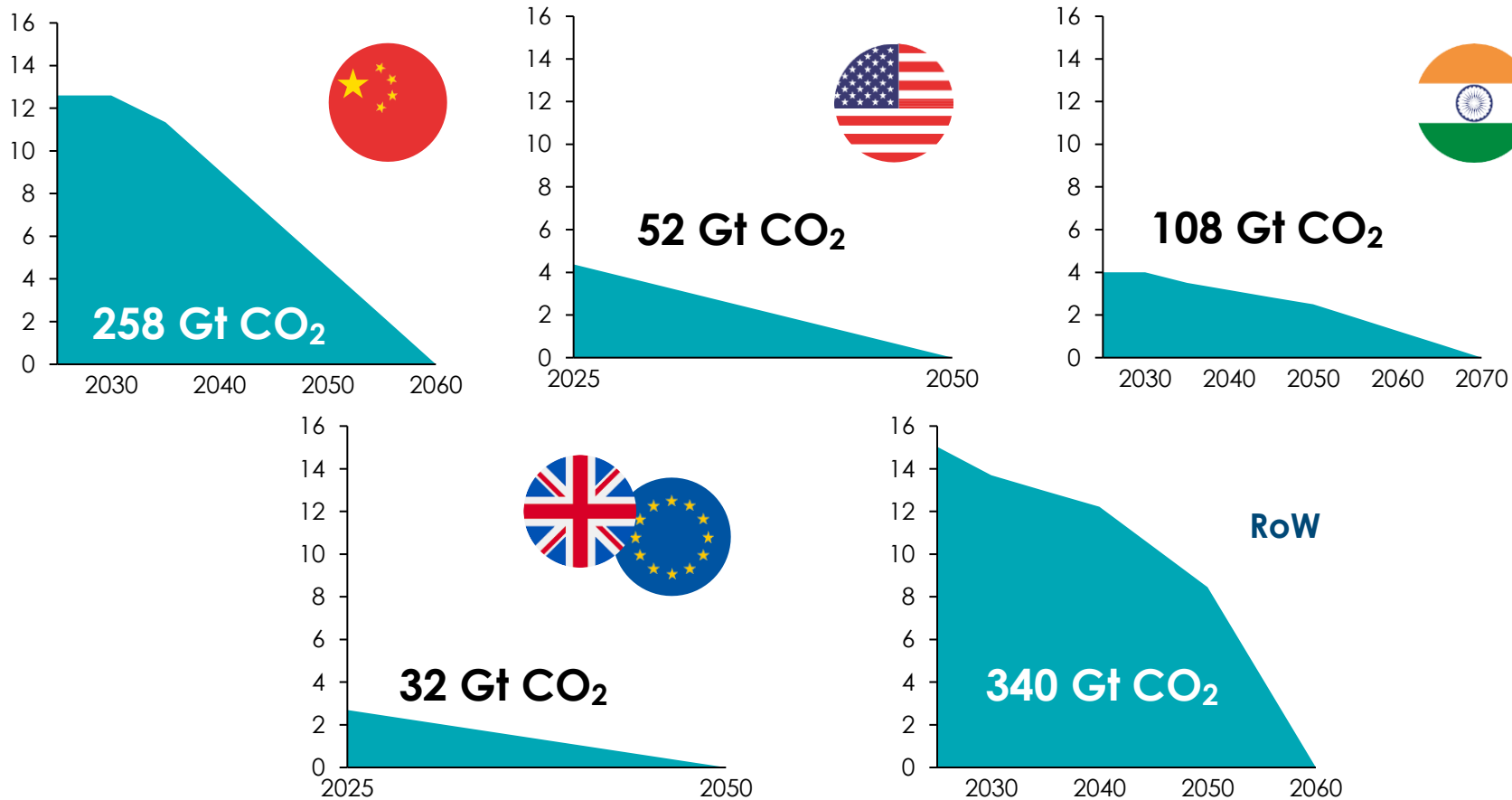
[Note: [i] The ranges reflect the scenario uncertainty taking into account the range of emissions estimates for 2030 and the variations in their extensions (UNEP [2023], section C.4.1). It illustrates the full minimum-maximum variation across assumptions for 2030 emissions and for extensions. The Emissions Gap Report typically presents the temperature projections and the avoidance of temperature limits at the 66 per cent chance level. Other levels (50 and 90 per cent) are included for completeness.]

Source: UNEP (2024) Emission Gap Report

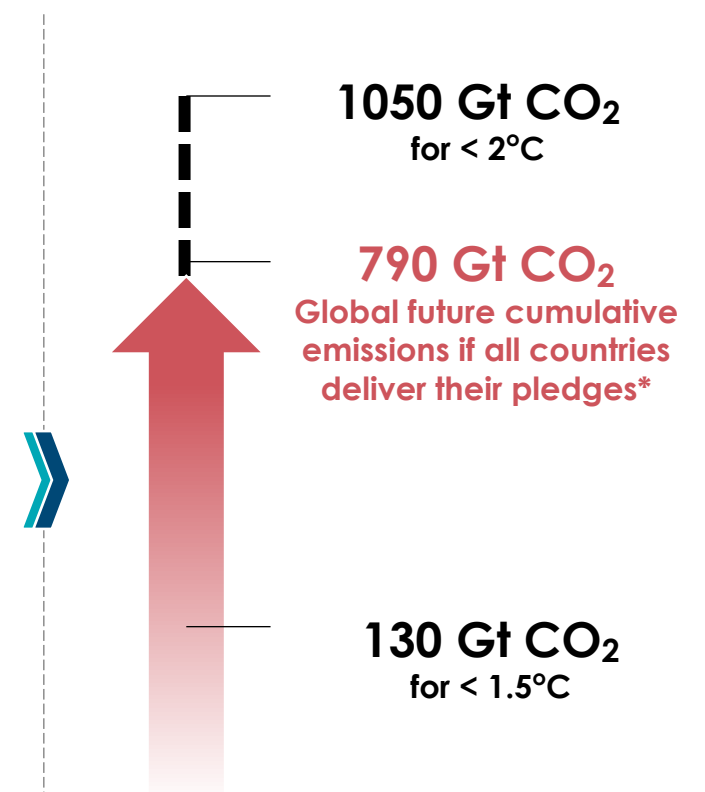


Even if all countries implement their pledges, cumulative future emissions will far surpass the carbon budget for a 1.5°C trajectory

Cumulative CO₂ emissions*, 2025-2070
GtCO₂



Remaining carbon budget in 2025 for a 50% likelihood



Note: * Accessed against the carbon budget in June of 2025, to which an equivalent of 19 GtCO₂ estimated emissions was subtracted from the total to account for emissions between January 2024 and June 2025.

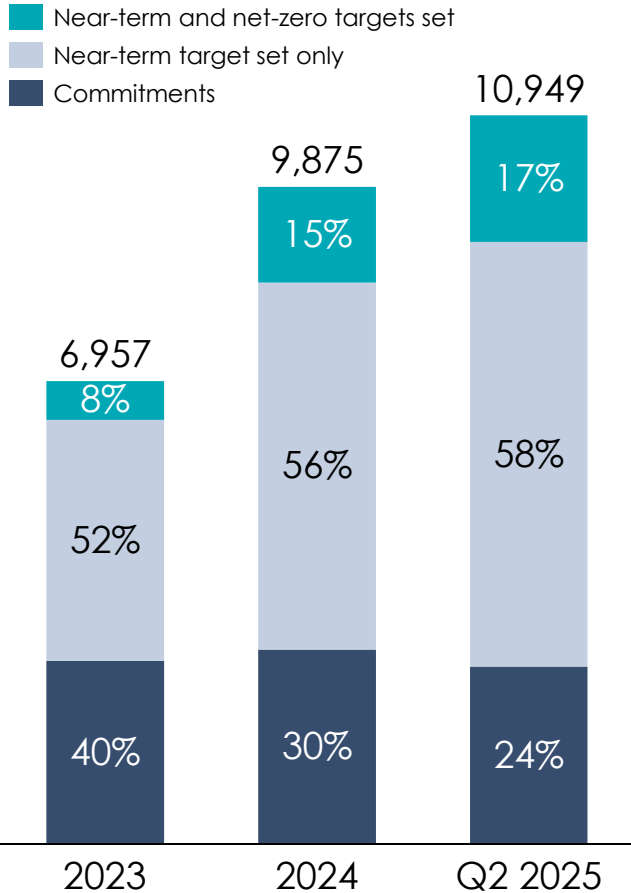
Source: IEA (2025) World Energy Review; IEA (2024) World Energy Outlook; Climate Change Tracker available at: <https://climatechangetracker.org/climate-change-progress/current-remaining-carbon-budget-and-trajectory-fill-exhaustion> [Accessed October 2025]



Corporate pledges, through SBTi targets, continue to target net-zero by 2050 but not necessarily reach 1.5°C alignment

Companies with SBTi targets

Number of companies, including SMEs and FI



At the end of 2024 SBTi covered*:

41%

of Global Market Capitalisation
(total: \$ 128 trillion)

25%

of Global Revenue
(total: \$ 130 trillion)



- Earlier in 2025, **200 high-profile companies were delisted from SBTi** including Microsoft, Unilever, Procter & Gamble, Walmart, Diageo, X (formerly Twitter), and Marks & Spencer
- However, in the past 18 months the **number of Chinese companies setting SBT doubled**
- **Original SBTi targets had companies set near and long-term targets against pathways that restrict cumulative emissions to 1.5°C.**
- **New SBTi guidance**, due next year, will stick to Net Zero by 2050 but overall **cumulative emissions are likely to exceed 1.5°C levels** – in recognition that **strict near term pathways are hard to meet** in some companies.

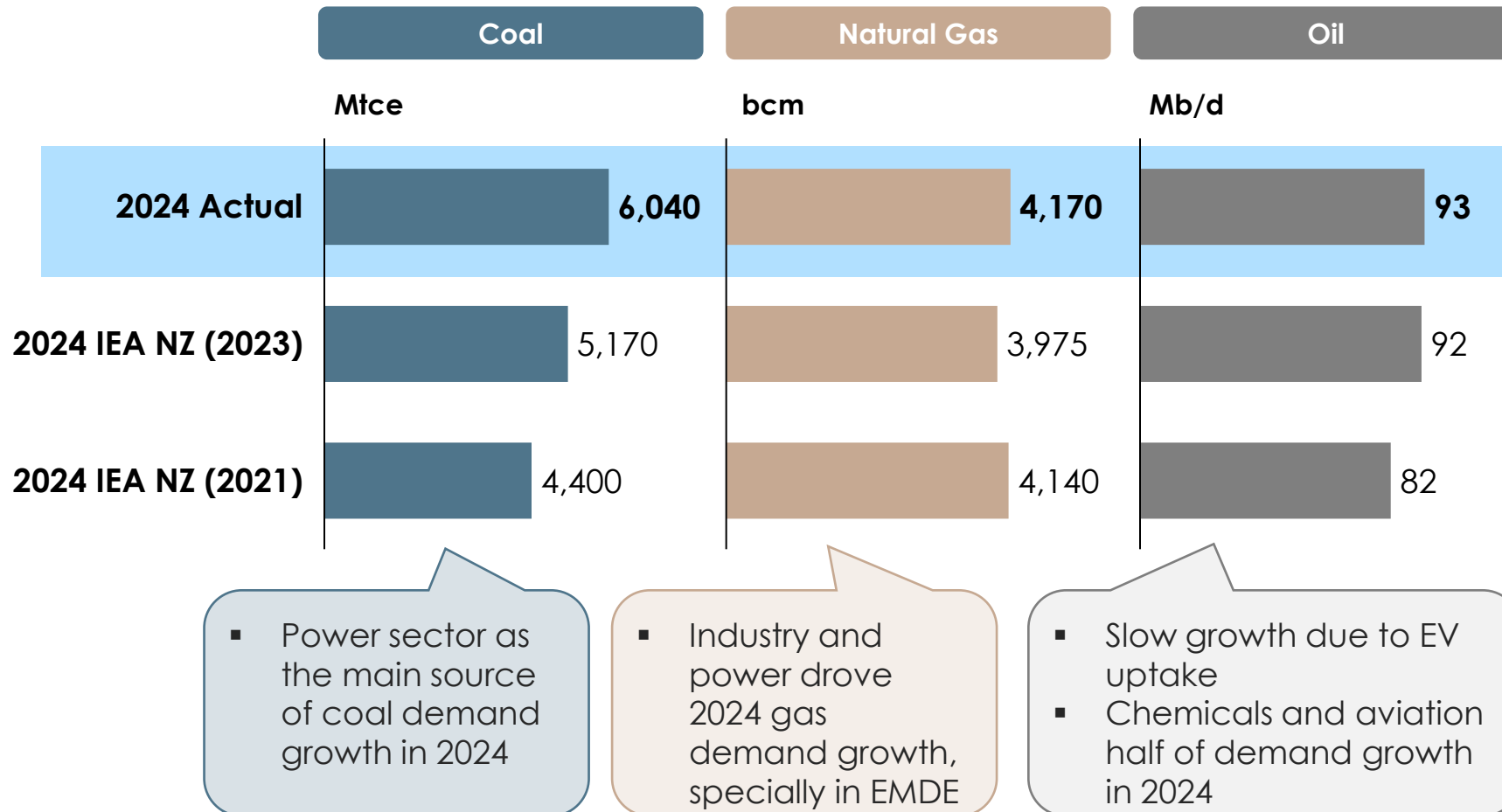
Note: * Excluding SMEs

Source: Internal interview; Sustainability Magazine (2025) Why SBTi Has Delisted More Than 200 High Profile Companies; SBTi (2025) SBTi Trend Tracker

Demand for oil and especially gas, has not decreased as much as net-zero scenarios projected, making O&G companies dial back climate targets

Fossil fuel demand by scenario, 2024

Mtce for coal; bcm for natural gas; Mb/d for oil



Shell's 2024 Energy Transition Update removed its target to decarbonize emissions from its products by 45% by 2035 (though maintaining 15-20% commitment by 2030)



BP removed production targets to 2030 (initially aiming to reduce production by 40%) and ramp-up fossil fuel investments through 2027 by 2% while decreasing investments in the energy transition by 45%



Source: IEA (2023), World energy outlook 2023; IEA (2025) World Energy Review; BP (2022) Approximate conversion factors; Shell (2024) Shell Energy Transition Strategy 2024; Press Releases

Note: Supply estimates for oil and gas are higher due to energy consumed in production and processing.

Pressures on financial institution commitments

Original commitments - 2019-2021

Reduce financed emissions at pace compatible with 1.5°C limit with IEA NZ scenario often formally referenced

Reality 2023-25

IEA NZ scenario resets: early reduction paths for fossil fuel use not credible; policies not aligned with 1.5°C

Implication

Continued adherence to changing IEA NZ scenario lacks credibility

...and is only deliverable by surrendering share to other lenders/investors

... with no certain impact on emissions



Alliance exits and weakening of commitments*

- **GFANZ** *Over 700 members in 2024*
 - Restructure: dropped requirement to be Paris aligned & publish targets and progress;
 - Members leaving sub-alliances (i.e. NZBA)
- **NZ Bankers' Alliance** *over 140 members in 2025*
 - 11 banks have left: 6 largest U.S. banks, 4 Canadian & 1 Australian
 - **HSBC also left, but will** remain engaged with GFANZ. The bank is reviewing its interim financed emissions targets, and has delayed its NZ operations target to 2050.
- **NZAMI (Net Zero Asset Managers Initiative)** *325 signatories as of Jan 2024*
 - Major companies have left e.g., Blackrock in 2025, Vanguard in 2022
 - Suspended activities to track signatory implementation and reporting in January 25



Note: *As of March, 2025

Multiple experts, including supports of energy transition, are now calling the 1.5°C target unattainable

Dan Yergin, Atul Arya and Peter Orszag
The Troubled Energy Transition – how to find a pragmatic way forward



Key points

Growing energy demand, energy security concerns and very large transition costs make rapid transition impossible; fossil fuels still essential to prosperity and will take long time to replace

Temperature assumption

~2.4°C

Lindy Fursman/Tony Blair Institute
The Climate Paradox: Why We Need to Reset Action on Climate Change



Varun Sivaram
It's time for climate realism

"The profile of current emissions, ..., shows that without a fundamental change in our approach, we don't have a chance of limiting temperature rise to 1.5 degrees."

>2°C , with likely 3°C

"well below" 2°C (3.6°F) will almost certainly be breached, ... net-zero emissions by 2050 is utterly implausible" ..

Michael Liebreich
The pragmatic climate reset



1.5°C was always impossibly costly objective – adopted without analysis
 "It's time to switch back to the hard 2°C target which was at the heart of the Paris Agreement "

1.8°C-3.5°C
 But ideally <2°C

Bill Gates
Three tough truths about climate



"we should measure success by our impact on human welfare more than our impact on the global temperature, and that our success relies on putting energy, health, and agriculture at the center of our strategies."

No chance of <2°C,
 can deal with consequences of 3°C



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The Credible Targets Challenge



Key condition for success

Targets only work if they are perceived to be achievable and likely to be achieved

....and if commitments to achieve them are believed



Theory of self reinforcing fly wheel



The challenge is to achieve a Credible Reset which increases rather than decreases effective action to reduce emissions



NOT

Setting a new higher target which most people assume will also be missed

... and which therefore takes all pressure off countries, companies and FIs to deliver



BUT

A credible reset package which combines

- A new higher temperature target which countries agree can and must be achieved e.g. reiteration of the Paris "well below 2°C" commitment
- Clear analytical underpinning which illustrates how it can be achieved in a credible fashion
- Stronger NDC or other processes to translate top level commitments into detailed policy action

To be discussed



An alternative approach would focus on specific deliverable actions rather than a defined temperature objective



Current hypothesis

Vital to define, agree and achieve multiple other specific objectives

But without an agreed overall temperature objective, national policies will be less ambitious

The NDC process is imperfect, but it could be made more effective if focused on credible objectives

.. and it would be important to understand what temperature limit is still feasible even if there were less focus on one specific figure



Possible alternative approach

Accept that 1.5°C is impossible, and abandon 1.5°C linked targets, but focus on important achievable objectives e.g.



Global / national

- Achieving net zero by 2050 (developed countries) and 2060 (developing)
- Tripling (and then more) Renewables
- Doubling energy efficiency



Corporate

- Achieve net zero by 2050 – with intermediate targets reflecting economic feasibility



Financial Institutions

- Targets for rising % of finance devoted to low/emission investments

... but without a specific defined temperature objective



David Kennedy

SBTi CEO



Q&A

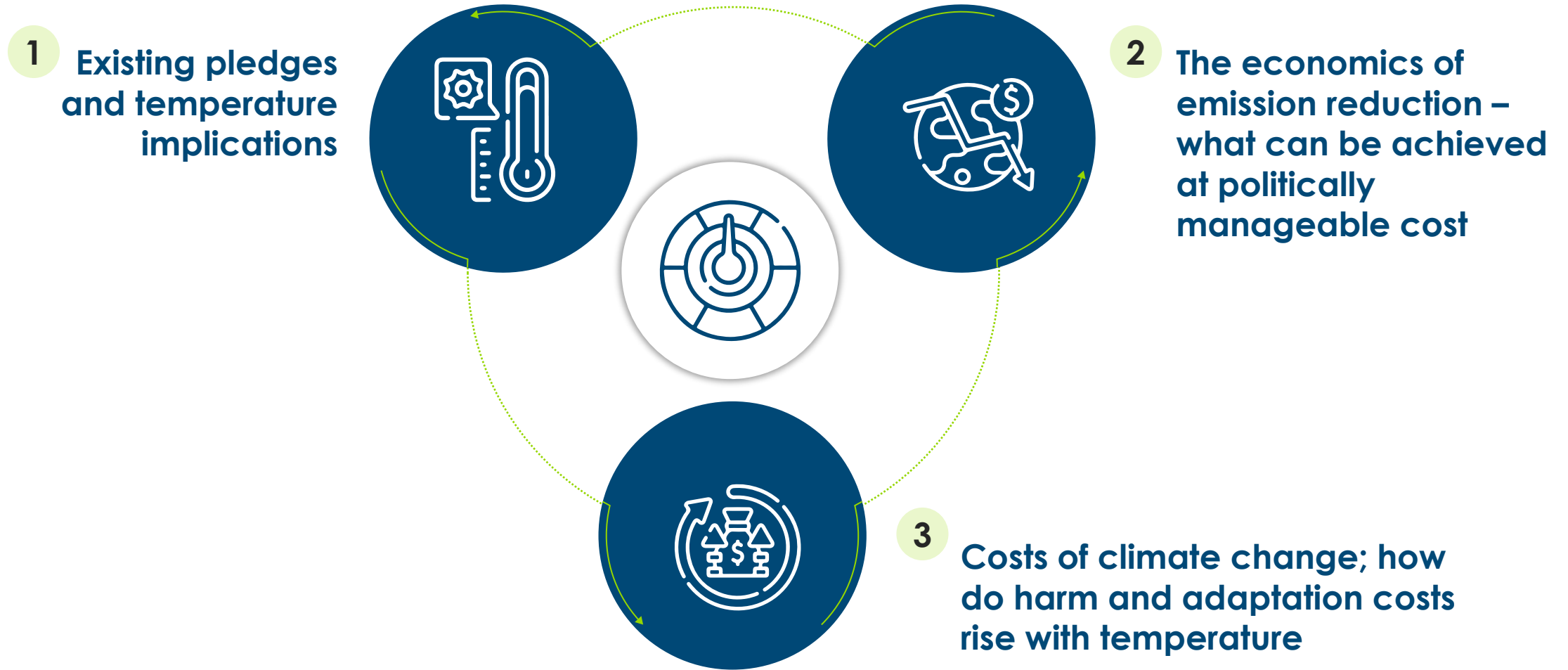


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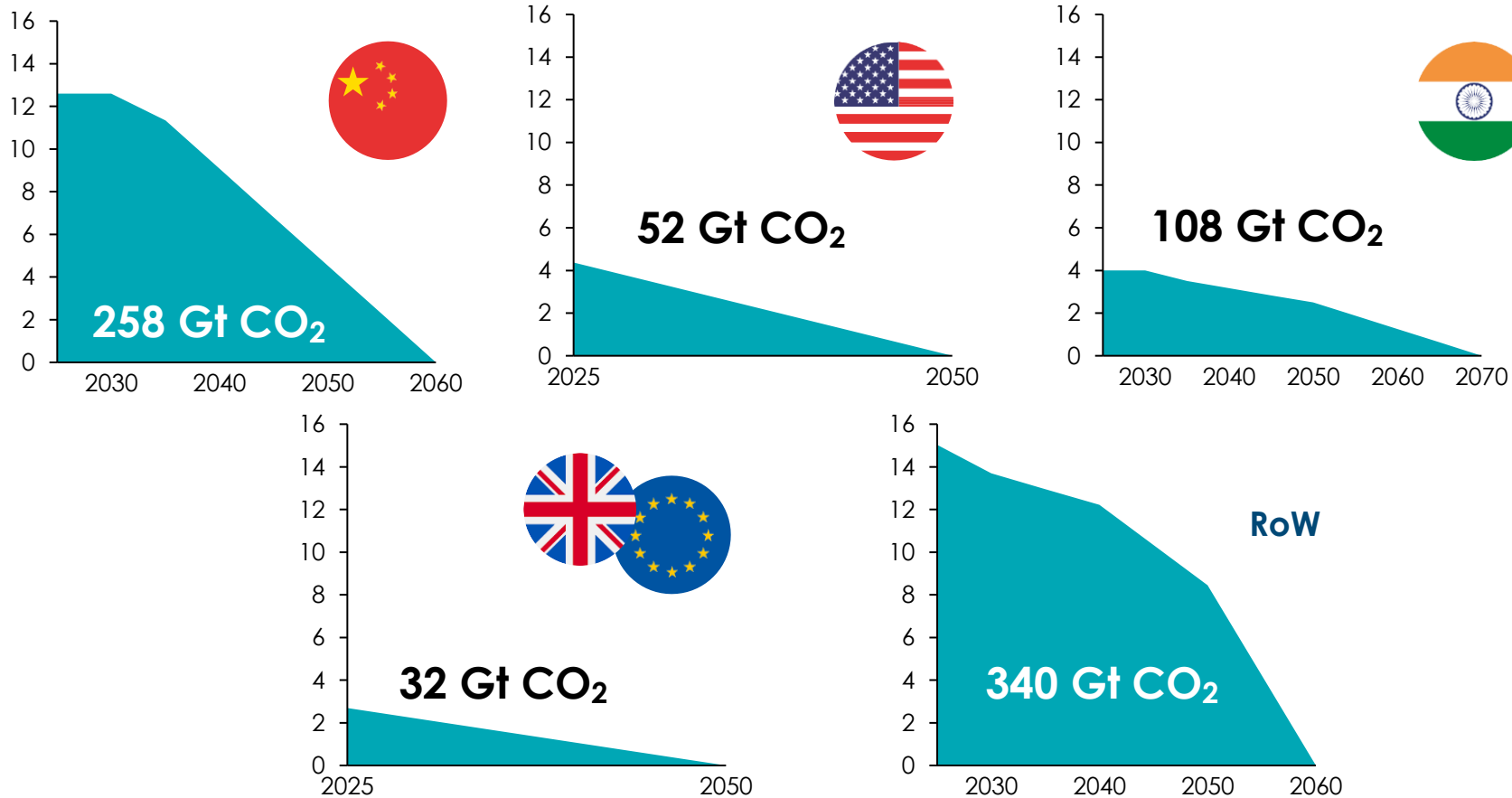


Setting a new temperature target: 3 key analytical inputs

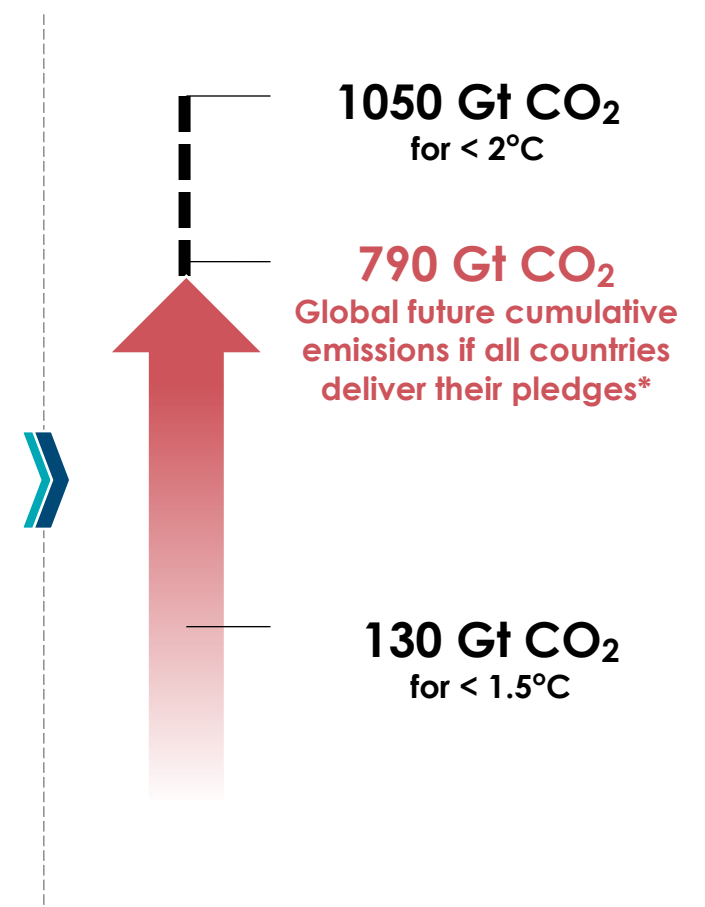


Existing pledges are not compatible with a 1.5°C limit, but if fully met they could keep temperature rise “well below 2°C”

Cumulative CO₂ emissions*, 2025-2070
GtCO₂



Remaining carbon budget in 2025 for a 50% likelihood



Note: * Accessed against the carbon budget in June of 2025, to which an equivalent of 19 GtCO₂ estimated emissions was subtracted from the total to account for emissions between January 2024 and June 2025.
Source: IEA (2025) World Energy Review; IEA (2024) World Energy Outlook; Climate Change Tracker available at: <https://climatechangetracker.org/climate-change-progress/current-remaining-carbon-budget-and-trajectory-fill-exhaustion> [Accessed October 2025]



...And it should be noted that China official position has always been that they are committed to “well below 2°C” not to a 1.5°C limit



Xie Zhenhua
China Climate Envoy
2015-2025

"China is committed to the Paris climate objective of "well below 2°C " and will aim to reduce emissions in a way compatible with that - but not specifically in line with 1.5°C . Though I personally believe that if we all aim for well below 2°C we might unleash technological progress that makes it possible to get back to 1.5°C later "

China's current NDC commitment – "cut emissions 7-10% by 2035" is in fact insufficient to be compatible with well below 2°C
... but feasible further tightening could make it compatible"



Our parallel workstream on the Economics of the Energy Transition will provide input to our assessment of the cost consequences of different targets

Economics of the Transition: Blocks of Analysis



Costs at the end point

- Update of ETC 2021 estimates of costs to consumers as % GDP once transition complete
- By sector/application and with more detailed analysis of food and agriculture



Costs in transition

- Update of ETC 2023 analysis of investment requirements
- Early-stage subsidy costs and resulting legacy contracts
- Costs of accelerated closure of existing capital assets - e.g. coal power plants
- Implications for consumer costs of slower/faster emissions reduction



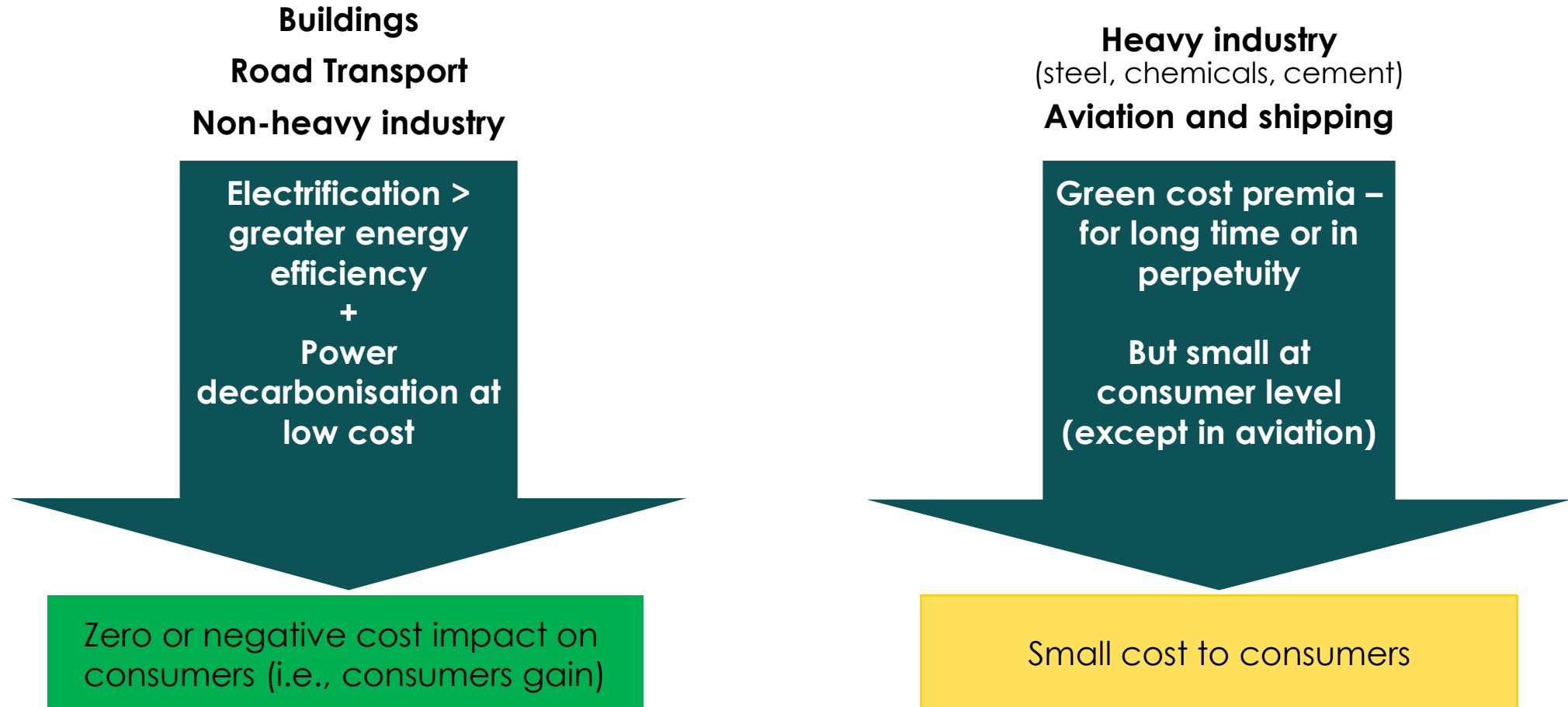
Distributional issues between and within countries (example based)

- Higher costs vs. lower cost renewable resources
- Cost of capital differences by country - e.g for African solar development
- Cost of capital differences by household - e.g for low-income household heat pump investment

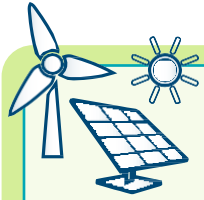


In the long-run, some sectors/applications are likely to delivery energy services at lower cost than fossil fuels, but in others there will always be a green cost premium

Cost once the transition is complete; current hypothesis



Progress on cost reduction and deployment relative varies by sector – but progress expectations suggest well below 2°C still possible



Low/zero carbon power

- **Renewables and nuclear** accounted for **80% of electricity growth in 2024** – with renewables growth outpacing global electricity demand in 1st half of 2025
- ETC "Power system transformation" report confirms the potential for low-cost decarbonisation, particularly in the global sunbelt



Road transport electrification

- **EVs** accounted for **20% of all car sales in 2024** – with outlooks projecting EVs to be over 25% of passenger's sales in 2025
- EVs are already cheaper than ICE comparable models in China
- US expectations are behind ETC projections, but momentum is growing elsewhere – with EV sales more than doubling in Brazil and almost tripling in Indonesia.



Residential heat electrification

- **Heat pump** sales **fell by 1% in 2024** mostly due to slow down in Chinese market; but outsold gas boilers in the US by 30%
- The next decade will be vital for electrical heating to reach widespread deployment in key markets



Hard to abate sectors


- **Significant announcements for ammonia and aviation** but too slow in aluminium, cement and steel. Over half of new projects now in EMDEs, driven by cheap renewables and national incentives.
- ETC expectations was always that major **emission reductions would occur after 2030** but to achieve 2030 and 2040 goals, projects must be financed and begin construction within the next two years.

... and with 4 important areas where progress in the 2020s is nowhere near what is necessary to “keep 1.5°C alive”

Required action in 2020s for 1.5°C limit

2030 Reduction expectations based on COP26 assessment

Reality



Early run down of existing coal generation




- Electricity demand accounts for 2/3 of coal demand – coal power generation only just peaking/not yet falling
- China, India, and Southeast Asia lead global coal consumption despite increase in renewables



End of deforestation




- COP 26 commitments to end deforestation by 2030 not on track - global deforestation slowing but 65% higher than rate needed.



Methane emission reduction



- Dramatic reductions in fossil fuel methane emissions not on target - methane intensity decreased by only 8% in 3 years
- No progress on reducing bio and agriculture related emissions - emissions only decreased by 2% in the past 3 years














Carbon removals



- Massive gap between CDR demand vs. need
- A higher cost of DAC than previously though can hinder implementation

* Methane emissions expectations only account for NDCs and Global Methane Pledges commitments
 Source: ETC (2021) Assessing the commitments from COP26; ETC(2021) Keeping 1.5°C Alive; WRI (2025) Deforestation and Restoration Targets Tracker (Beta)

Climate ambition is critical: “Every 0.1°C matters”

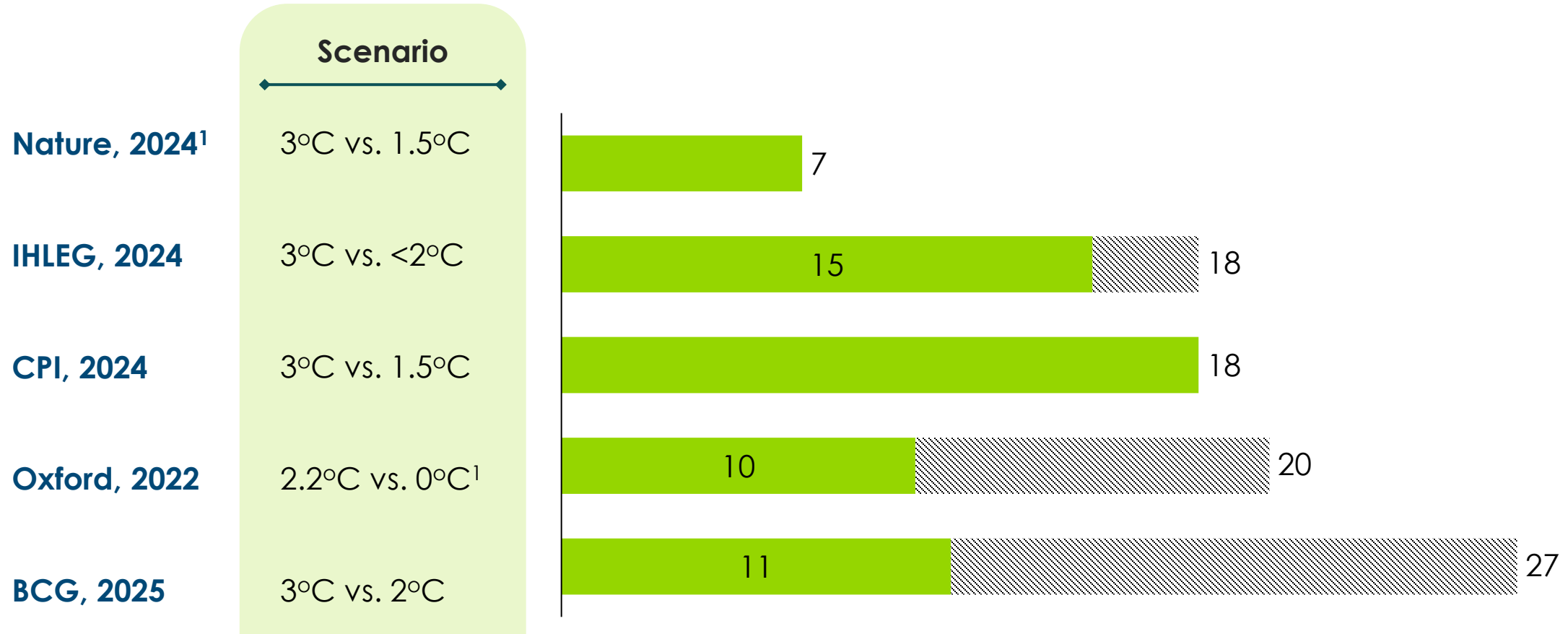
 Climate disturbances	1.5°C	2°C	Impact of 2°C compared to 1.5°C
 Loss of Plant Species	8% of plants will lose ½ their habitable area	16% of plants will lose ½ their habitable area	 2x worse
 Loss of Insect Species	6% of insects will lose ½ their habitable area	18% of insects will lose ½ their habitable area	 3x worse
 Further decline in Coral Reefs	70% to 90%	99%	 Up to 29% worse
 Extreme Heat	14% of the global population exposed to severe heat every 1 in 5 years	37% of the global population exposed to severe heat every 1 in 5 years	 2.6x worse
 Sea-Ice-Free summers in the Arctic	At least once every 100 years	At least once every 10 years	 10x worse

Climate inaction will compromise economic activities around the globe

Estimates of additional harm of additional temperature increase

% of global GDP

■ Lower estimation ▨ Upper estimation



1. 0°C indicates average temperatures at pre-industrial levels
Source: As cited in the exhibit

Bringing the factors together: does the world need a new temperature target?



Reality of existing pledges and feasible tightening



Rising mitigation costs as pursue of lower temperature target



Rising harm /adaptation costs as temperatures rises



Judgement on credible and acceptable target

Implications, e.g for adaptation, which will have to be managed

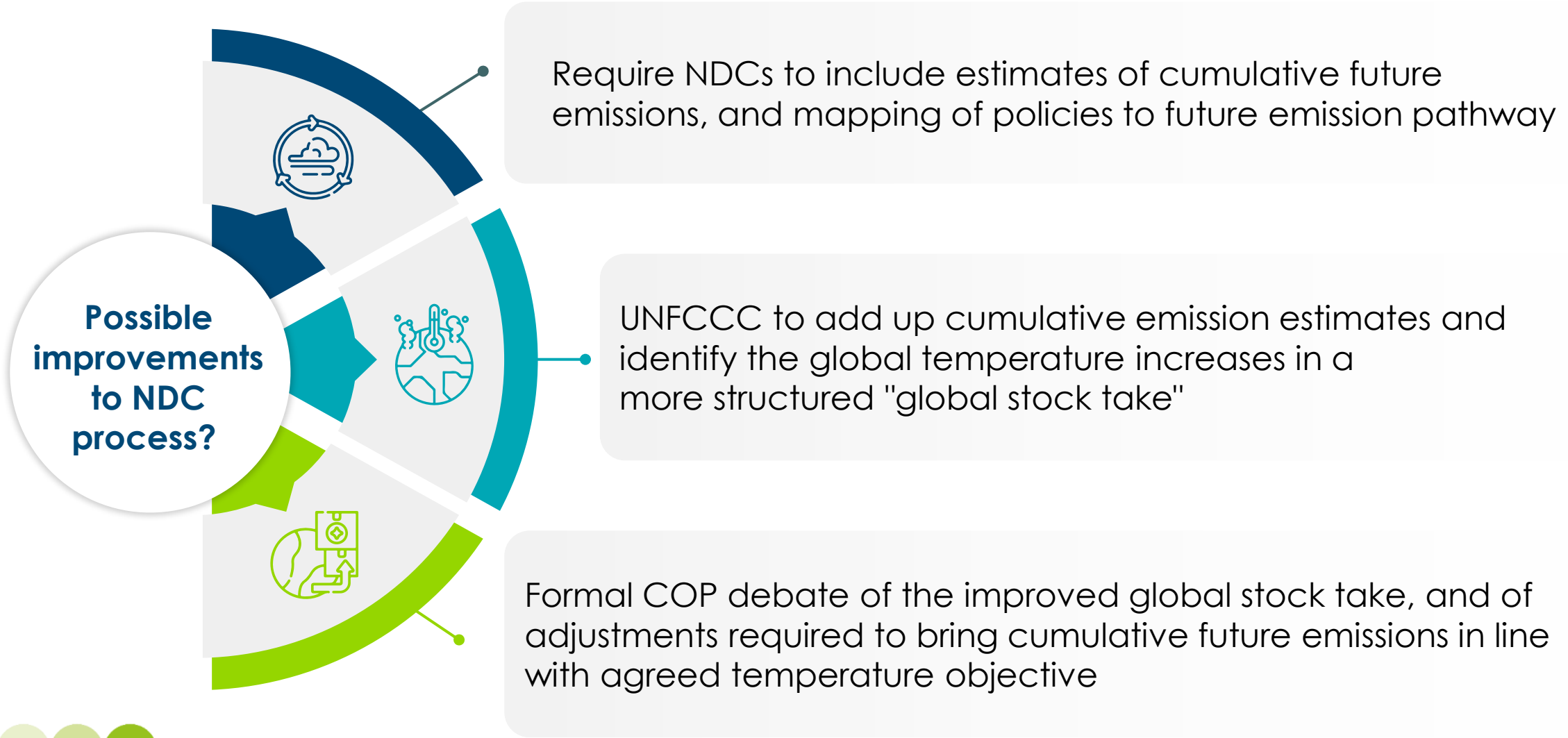


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A Credible Reset should combine a more realistic temperature objective with improved processes and policies to increase the likelihood of meeting it



Proposed changes to NDCs could build on the ETC's 2024 assessment of the current coverage and quality

Category	Sub-category	What an NDC would ideally include	Country-level assessments					
			 EU	 Brazil	 China	 Gambia	 Ethiopia	
Format and coverage	Target type	Absolute emissions target or equivalent	✓	✓	~	✓	✓	
	Target coverage	Coverage of all sectors and GHGs	✓	✓	✓	~	~	
	Target granularity	Sector-specific targets	X	X	~	✓	✓	
		GHG-specific targets	X	X	X	X	X	
	Article 6 mechanisms	Quantified contribution of Article 6 to overall target	✓	~	X	✓	✓	
	Conditionality	Clear definition of external support needed				~	✓	

Legend:  Fully aligned with ideal NDC  Partially aligned with ideal NDC  Not aligned with ideal NDC

Note: countries shown in this table are deemed representative of defined archetype, exceptions can occur in given archetypes.
Source: Systemiq analysis for the ETC

We should also assess if changed approaches to corporate / FI target setting and reporting could ensure disciplined pursuit of realistic targets



From in some cases

Emissions/financed emission pathways reaching net zero by 2050 and with cumulative emissions compatible with global 1.5°C temperature limit



To?



- Reduction pathways with cumulative emissions in line with new temperature target e.g 1.7°C ?
- Commitments to achieve net zero by 2050 at defined technically and economically feasible pace, but without an explicit link between cumulative emissions and a specific temperature objective ?
- FI commitments to lend/ invest defined \$bn or % of total assets in clean tech deployment ?
- New emissions reporting rules – going beyond voluntary TCFD approach ?



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ETC approach differ from other by proposing a pathway for emissions reductions that is based sensible assessment of costs, and achievable action

A conservative Climate Reset proposal

- Focus on **economically viable solutions** – with a strong focus on **electrification** which enables 80% of emissions reduction.
- People should **not accept a cost impact** of:
 - I. Accelerating clean electricity;
 - II. Reducing emissions from the HTA sectors (i.e. green premiums).
- If this results in a temperature **increase above 2.0°C so be it** – negative climate change effects are likely to be manageable

ETC approach for the Climate Reset

Defining overall objective

Describe pathways for **feasible and necessary emission reductions** which reflect:

- Rising adverse costs as temperature rises
- Potential for low cost decarbonisation in many sectors
- Extent of green cost premium by sector
- Consumer costs of going faster than least cost pace of reduction
- Economic feasibility of large removal assumptions (costs and who pays)

Explicit debate on **whether the world/countries/companies should accept some cost** to go faster/further than implied by least cost; and on how to make that cost politically manageable

Achieving overall objective: actions, targets and commitments which could help...

- Achieve accelerated deployment of inherently competitive electrification technologies?
- Overcome green cost premia in hard to abate sectors?
- Address the 3 big disappointments since COP26 – deforestation, early coal exit, methane?

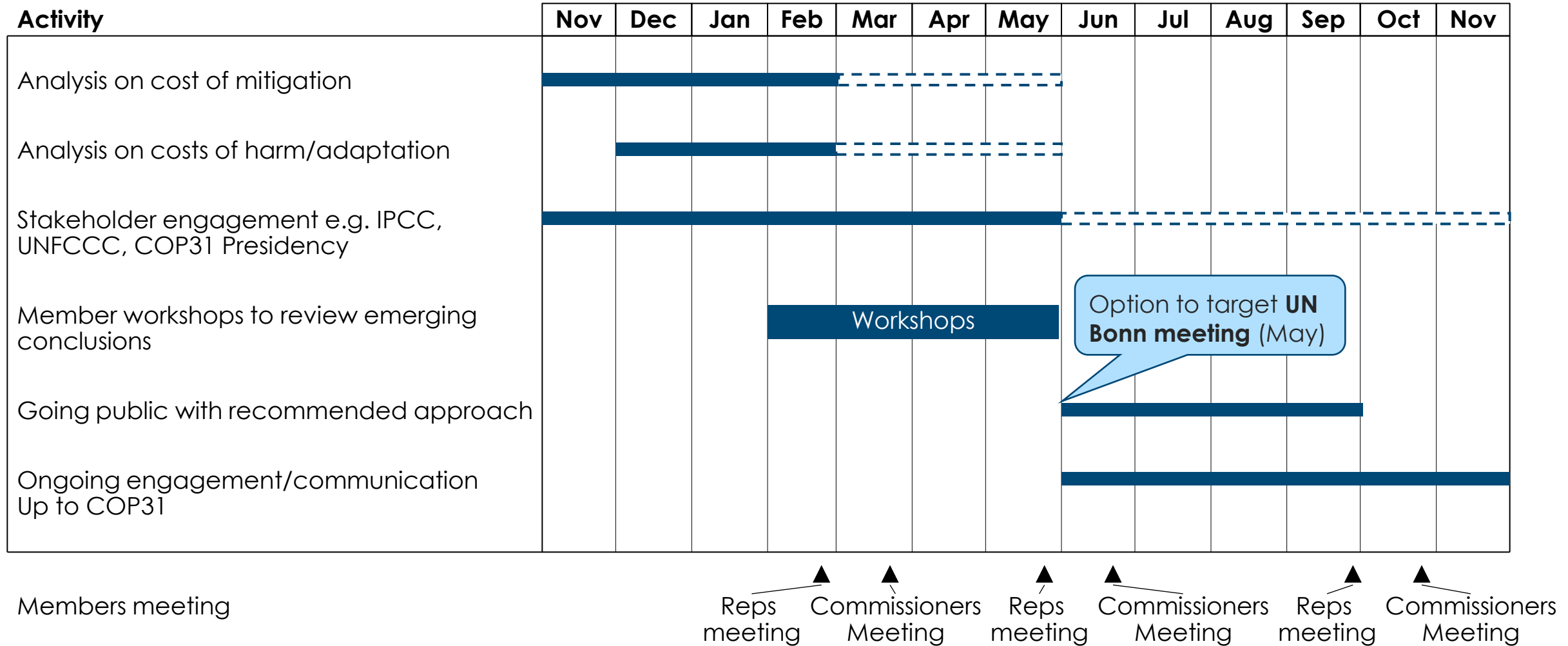
...and role of country, corporate and financial institution actors within this.

Agenda

- The problem: 1.5°C is now out of reach
- The credible reset challenge
- Setting a new temperature target: hypothesis and analysis
- Stronger mechanisms and policies to ensure new target is met
- ETC's distinctive impact in this debate
- **Proposed process, engagement and timetable**



Proposed approach and timescale



Member workshops and review

Precise pattern of timing / topic to be decided but will cover:

- Detailed review of costs of mitigation by sector (and distributional issues by type of country/consumer group) building on the Economics of Transition workstream
- Review of adverse/adaptation costs of increased temperature limit
- Feasible scenarios and link to temperatures
- Implications of current country commitments
- Actions, targets and commitments to achieve overall objective

And be discussed through:

- 2-3 dedicated workshops, at least one of which one overlaps with Economics of Transition workstream
- Spring Representatives and Commissioners meetings



Q&A

