



Energy  
Transitions  
Commission

# ***Protecting Paris* – avoiding a disorderly retreat from country and corporate decarbonisation targets**

ETC Asia Chapter Meeting  
10 December 2025

# Agenda

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

- Protecting Paris: the challenge and ETC role
- 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.**”



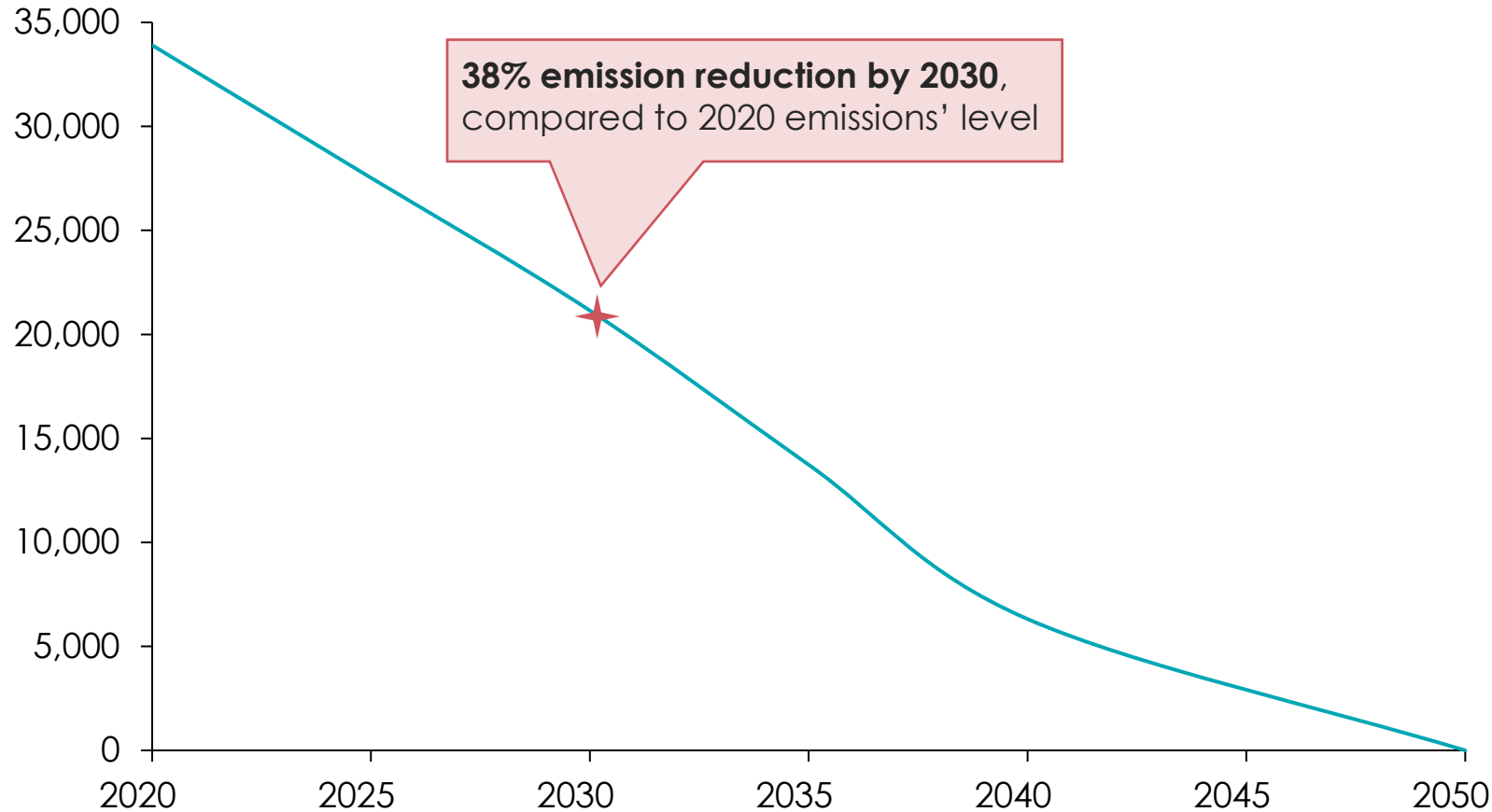
- “emphasizes the need for **urgent action and support to keep the 1.5°C goal within reach...**”
- “encourages Parties to come forward in their next **nationally determined contributions ... aligned with limiting global warming to 1.5°C**”



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

Total energy system CO<sub>2</sub> emissions  
Mt CO<sub>2</sub>

— IEA NZ 2021



“The Net Zero Emissions by 2050 Scenario describes a pathway for the global energy sector to achieve net-zero CO<sub>2</sub> emissions by 2050, **consistent with limiting the global temperature rise to 1.5°C with no or limited overshoot.**”

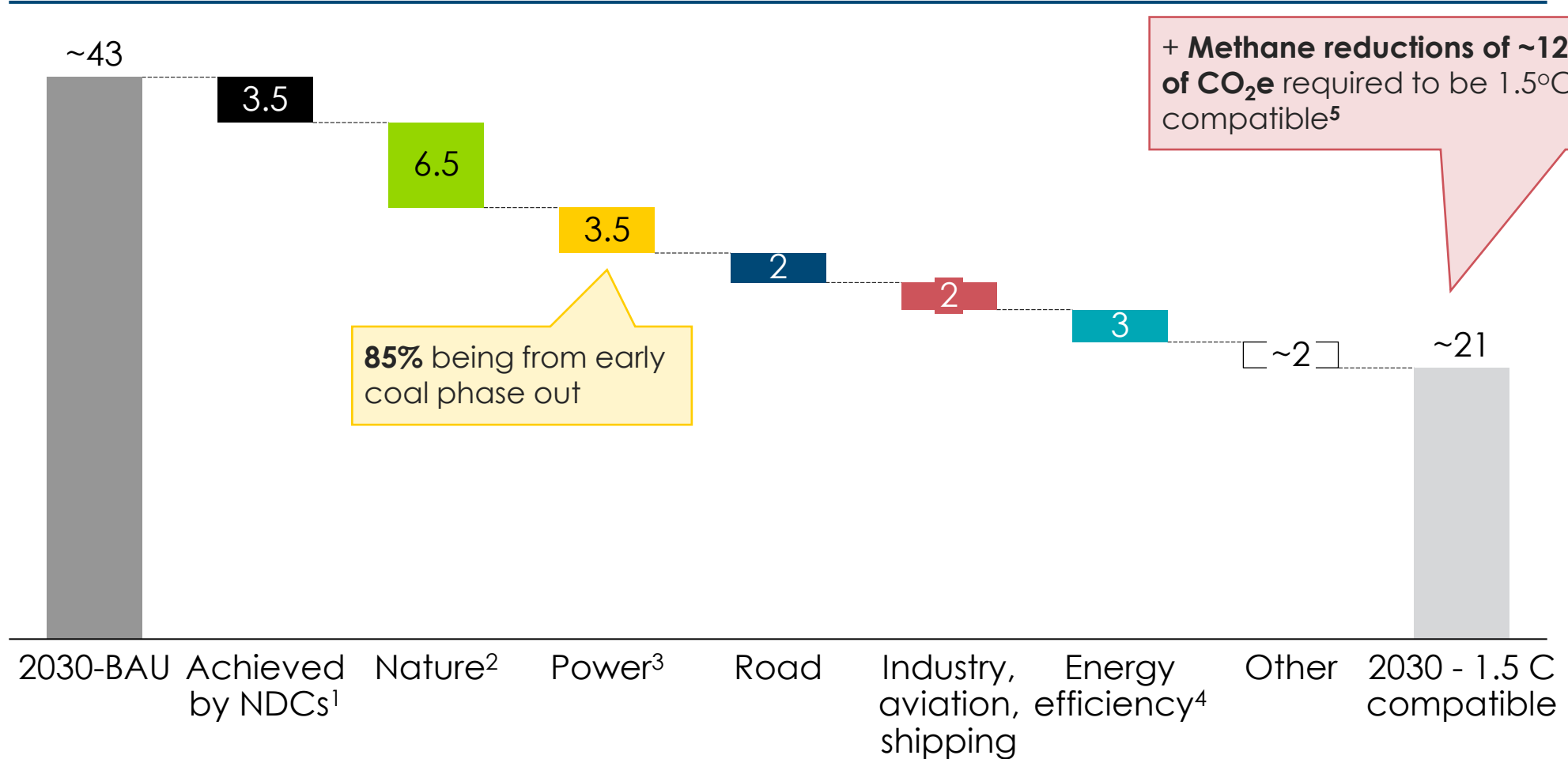
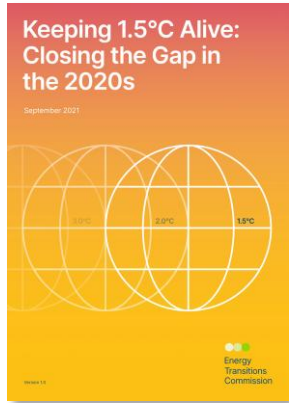


Source: IEA (2021) Net Zero by 2050; IEA (2024) A Net Zero Roadmap; IEA (2024) World Energy Outlook; IEA (2025) Global Energy Review  
Note: Emissions are interpolated between 5 year averages

# 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 CO<sub>2</sub> emissions  
Gt per annum

ETC assessment from 2021, last updated in 2023



Note: Potential of levers was scaled down not to overlap with NDCs; (1) 3.5 Gt CO<sub>2</sub> is the estimated carbon dioxide impact of the NDCs, taking the mid-point of the estimated impact range of unconditional (3.3 GtCO<sub>2</sub>e ) and conditional (4.7 GtCO<sub>2</sub>e) 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 CH<sub>4</sub>

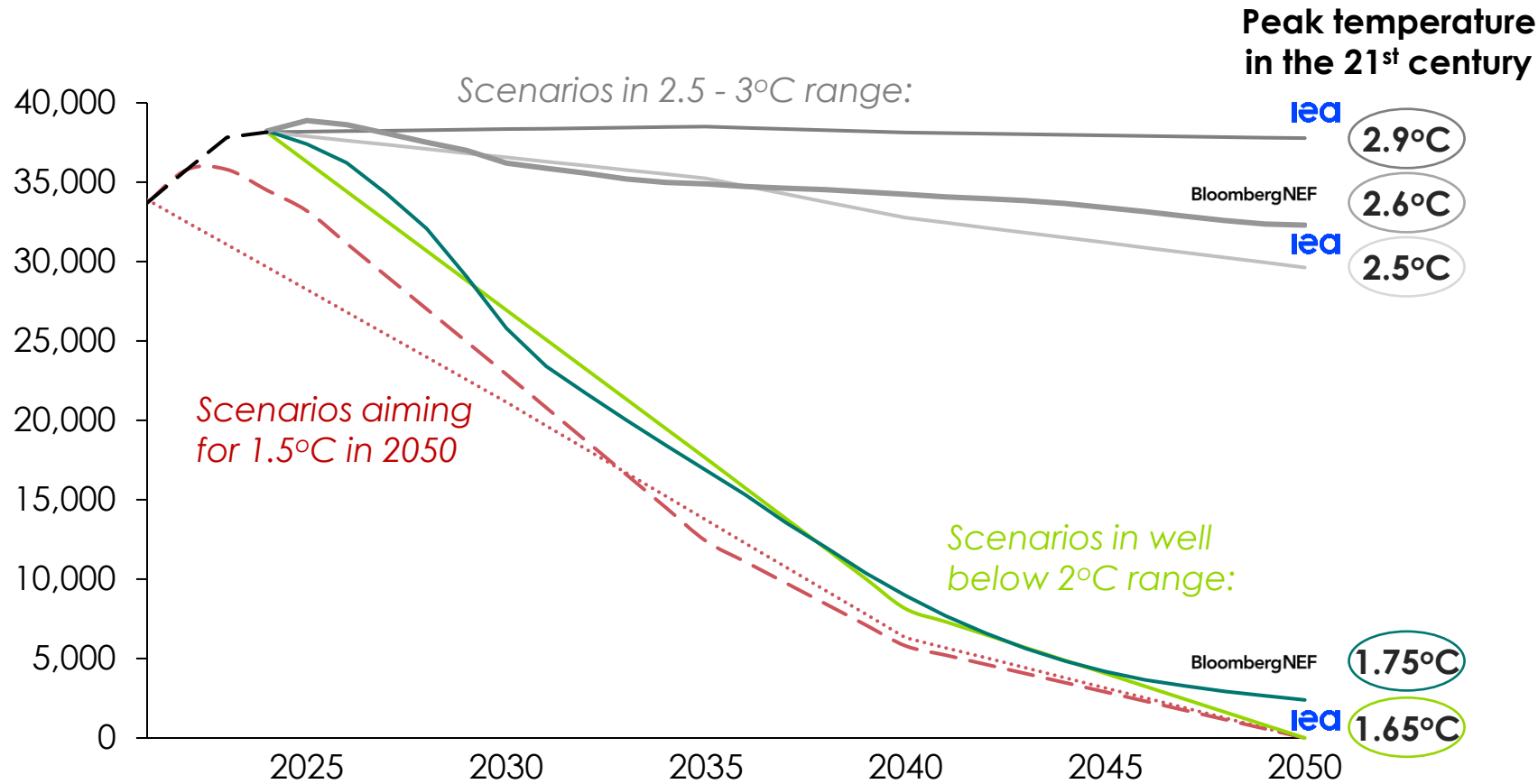


# Latest projections no longer limit temperatures to 1.5°C in 2050, but well below 2°C still possible

## Energy related CO<sub>2</sub> emissions

Mt CO<sub>2</sub>

— Historical    — BNEF NZ 2024    — IEA CPS 2025    - - IEA NZ 2024  
 — BNEF ETS 2025    — IEA STEPS 2025    — IEA NZ 2025    ····· IEA NZ 2021



## Scenario overview

### Current Policy iea

Unambitious trajectory of emissions from enacted policy only

### Economic Transition BloombergNEF

Technology cost driven transition

### Stated Policy iea

Stated policy only, with no additional climate ambition

### Net Zero BloombergNEF

Net zero by 2050 with no reliance on removals post-2050

### Net Zero iea

Net zero by 2050 with overshoot managed by removals post-2050 to bring temp. back at 1.5°C

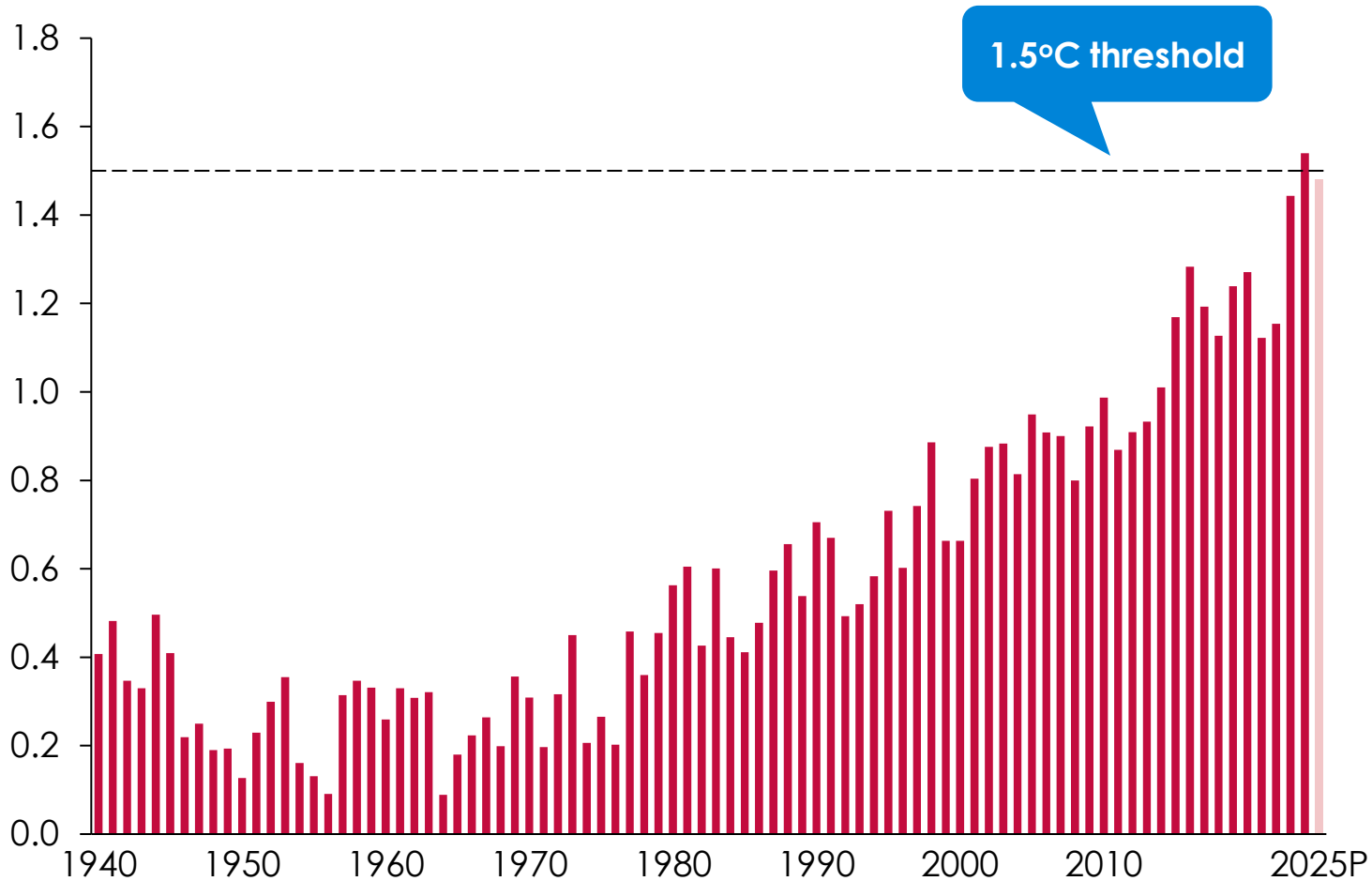
Source: IEA (2021) Net Zero by 2050; IEA (2024) A Net Zero Roadmap; IEA (2024) World Energy Outlook; IEA (2025) Global Energy Review; BNEF (2025) New Energy Outlook  
 Note: IEA Scenarios have emissions interpolated between 5-10 years; BNEF scenarios only accounts for Energy Sector and Industrial process emissions, to compare against IEA's scenarios, remaining emissions from comparable scenarios from IEA were added to BNEF scenarios (i.e. BNEF ETS 2025 was adjusted according to IEA STEPS 2025, and BNEF NZ 2024 was adjusted according to IEA NZ 2025) \* IEA NZ 2025 scenario assumes several decades of temperature overshoot, reaching peak at 1.65°C by 2050.



# 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, Copernicus, etc.) as **a period of 20-30 years**



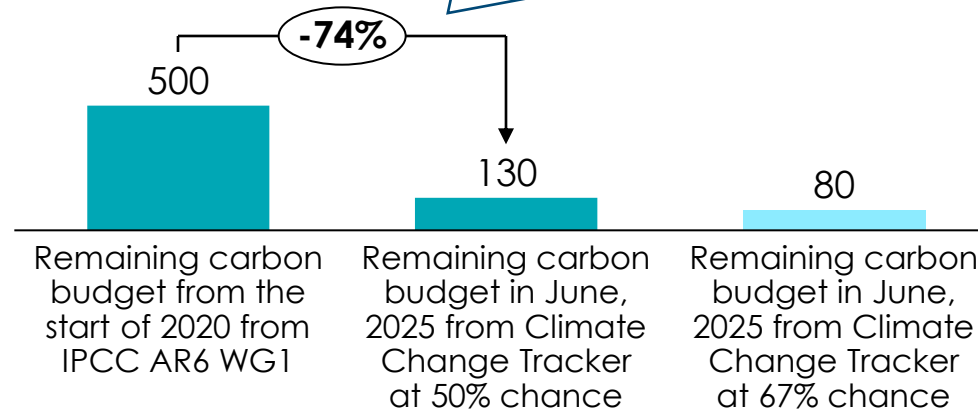
# The remaining emission budget to contain temperature rises to 1.5°C is less than 3 years of current annual emissions

## Carbon budgets for a given temperature rise

GtCO<sub>2</sub>

### Budget for staying within 1.5°C

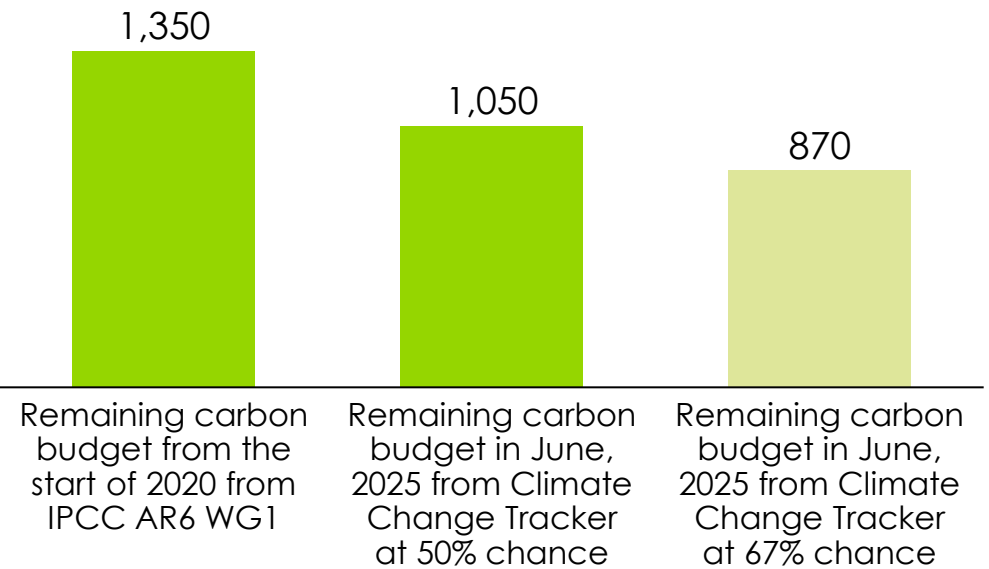
5.5 years of human induced emissions, and improved measuring, have reduced global carbon budget by  $\frac{3}{4}$



Number of years until budget exhaustion at current annual emission



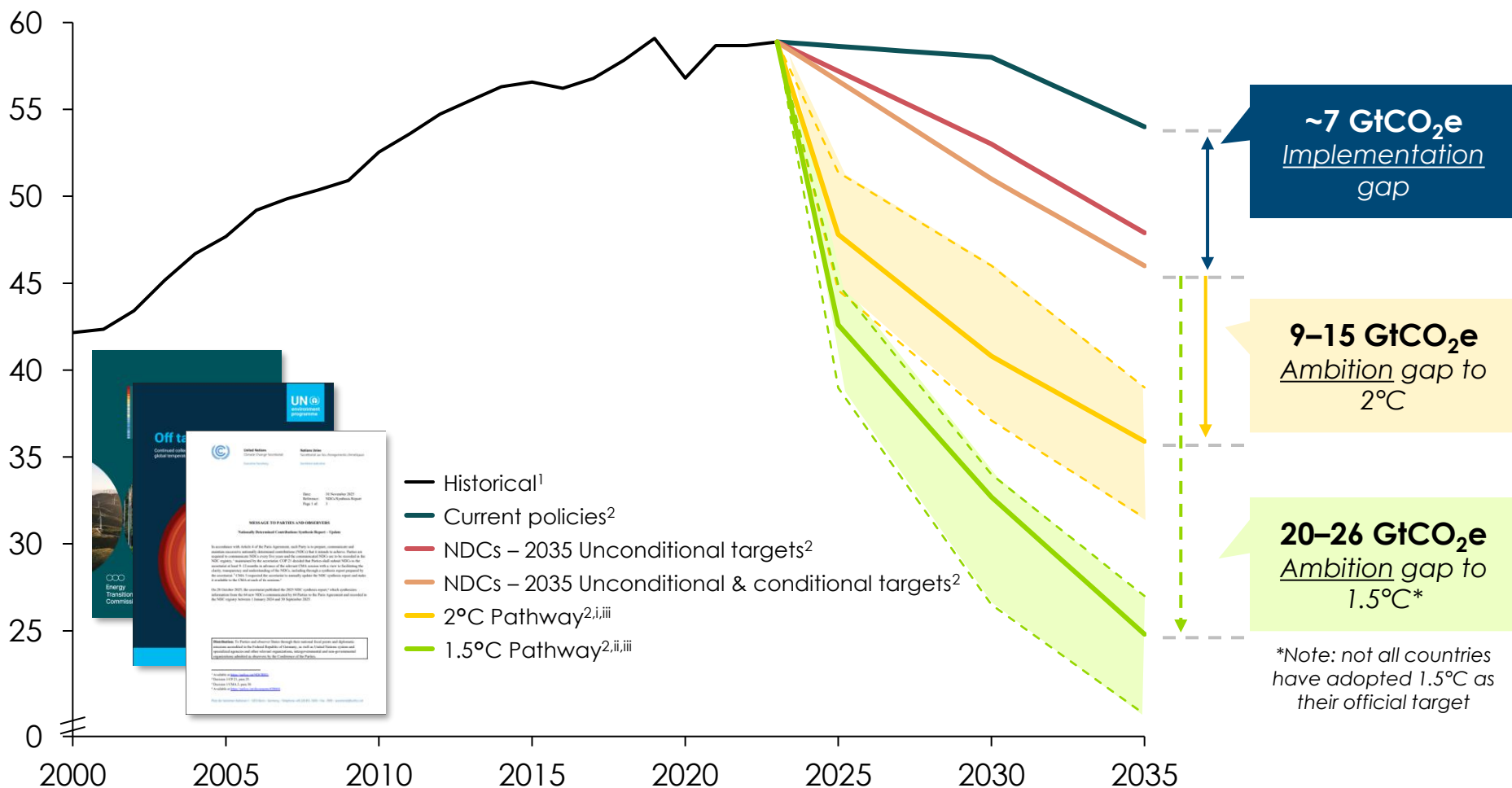
### Budget for staying within 2.0°C



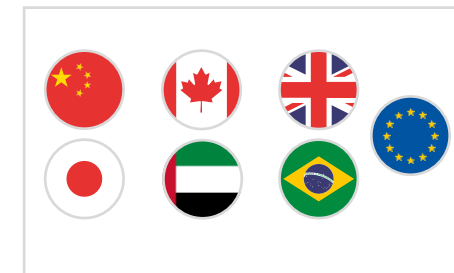
Source: Climate Change Tracker available at: <https://climatechangetracker.org/climate-change-progress/current-remaining-carbon-budget-and-trajectory-till-exhaustion> [Accessed October 2025]

# The 113 (of 197) new Nationally Determined Contributions submitted so far are not filling the ambition gap

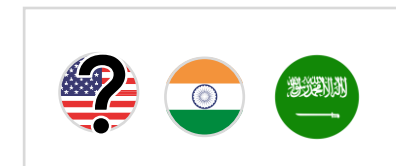
## Global GHG emissions



### Main submissions



### Key missing submissions

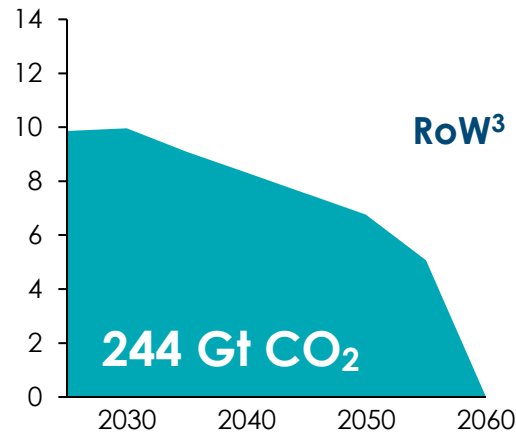
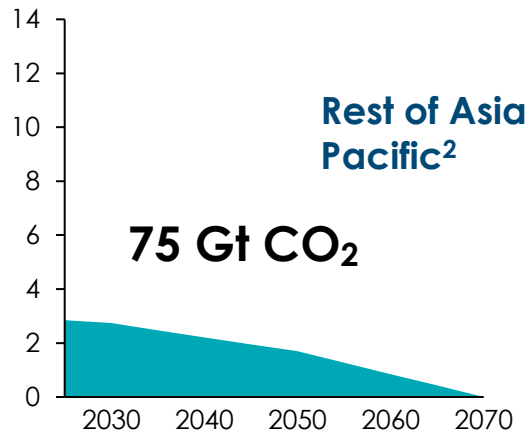
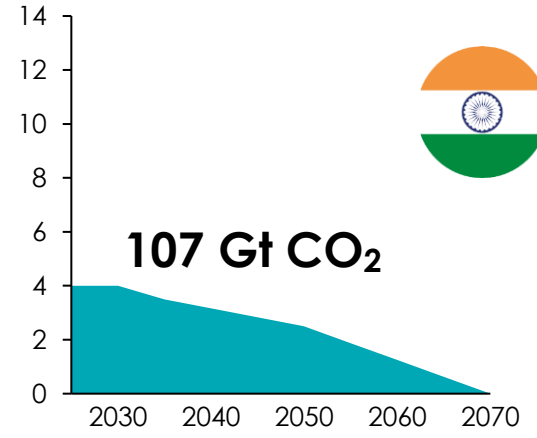
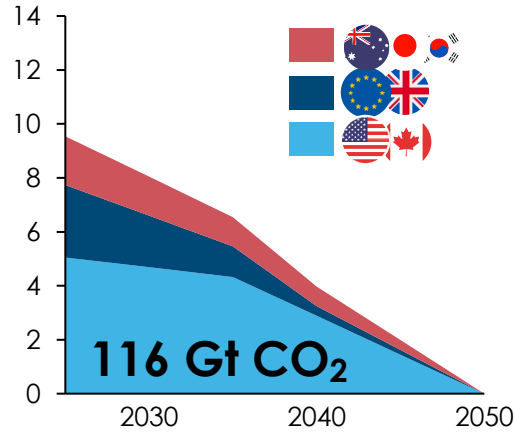
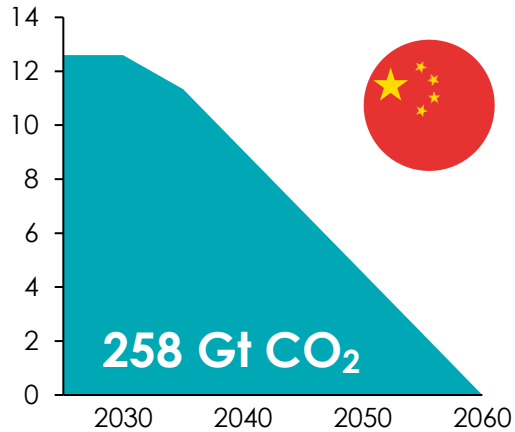


Notes: [i] Based on IPCC Working Group III Sixth Assessment Report scenario class c1 (limit warming to 1.5°C (>50%) with no or limited overshoot). [ii] Based on IPCC Working Group III Sixth Assessment Report scenario class c3 (limit warming to 2°C (>67%)). [iii] Range corresponds to range between tenth and ninetieth percentile, central line corresponds to median.

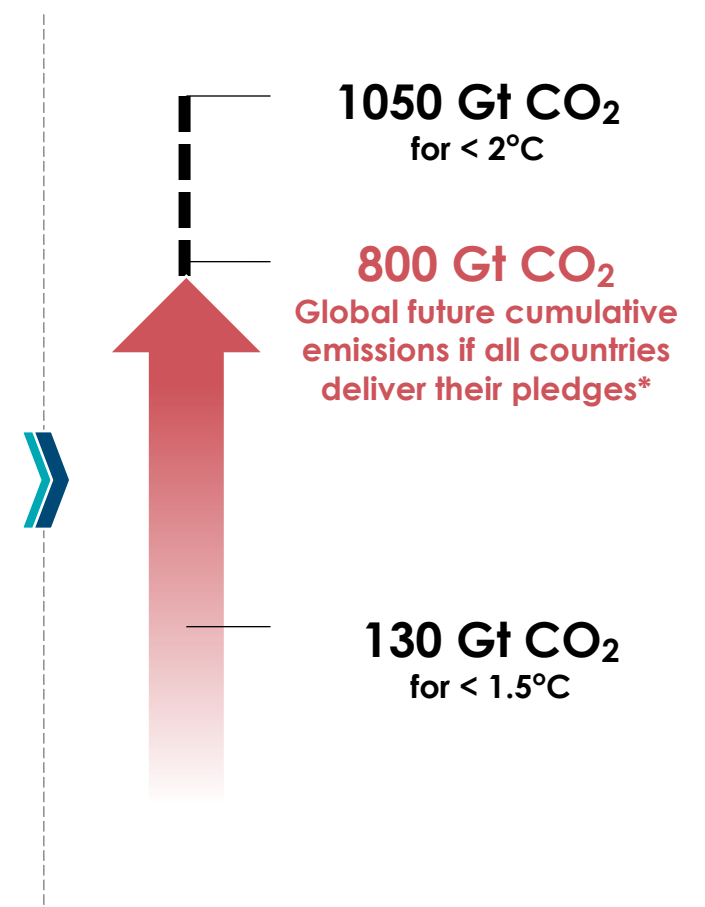
Sources: ETC (2024), [Credible Contributions: Bolder Plans for Higher Climate Ambition in the Next Round of NDCs](#). Systemiq analysis for the ETC based on [1] IPCC (2022), Metadata Browser: Data for Figure SPM.5 - Summary for Policymakers of the WGIII Contribution to the IPCC AR6, [2] UNEP (2025), Emissions Gap Report 2025: Off target; Climate Watch NDC Tracker [accessed November 2025]; UN (2025) Nationally Determined Contributions Synthesis Report – Update

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

Cumulative energy-related CO<sub>2</sub> emissions<sup>1</sup>, 2025-2070  
GtCO<sub>2</sub>



Remaining carbon budget in 2025 for a 50% likelihood



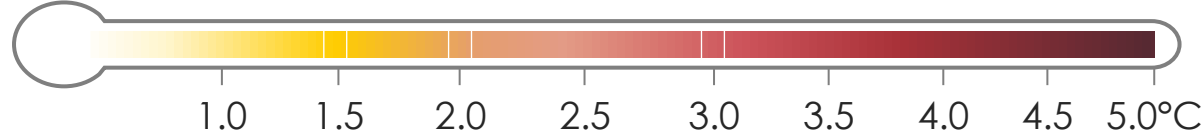
Note: 1. Accessed against the carbon budget in June of 2025, to which an equivalent of 19 GtCO<sub>2</sub> estimated emissions was subtracted from the total to account for emissions between January 2024 and June 2025.; 2. Estimated based on IEA's Stated Policy Scenarios from 2025; 3. Estimated based on IEA's Announced Pledges Scenario from 2024  
Source: IEA (2025) World Energy Review; 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 November 2025]



# UNEP's 2025 Emission Gap report places current NDC pledges at a 50% chance of increasing global temperatures between 2.1 to 2.3°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














2025 update showed a 0.2°C improvement from 2024 assessment, but still not sufficient to reach 1.5°C – key NDC from 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



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

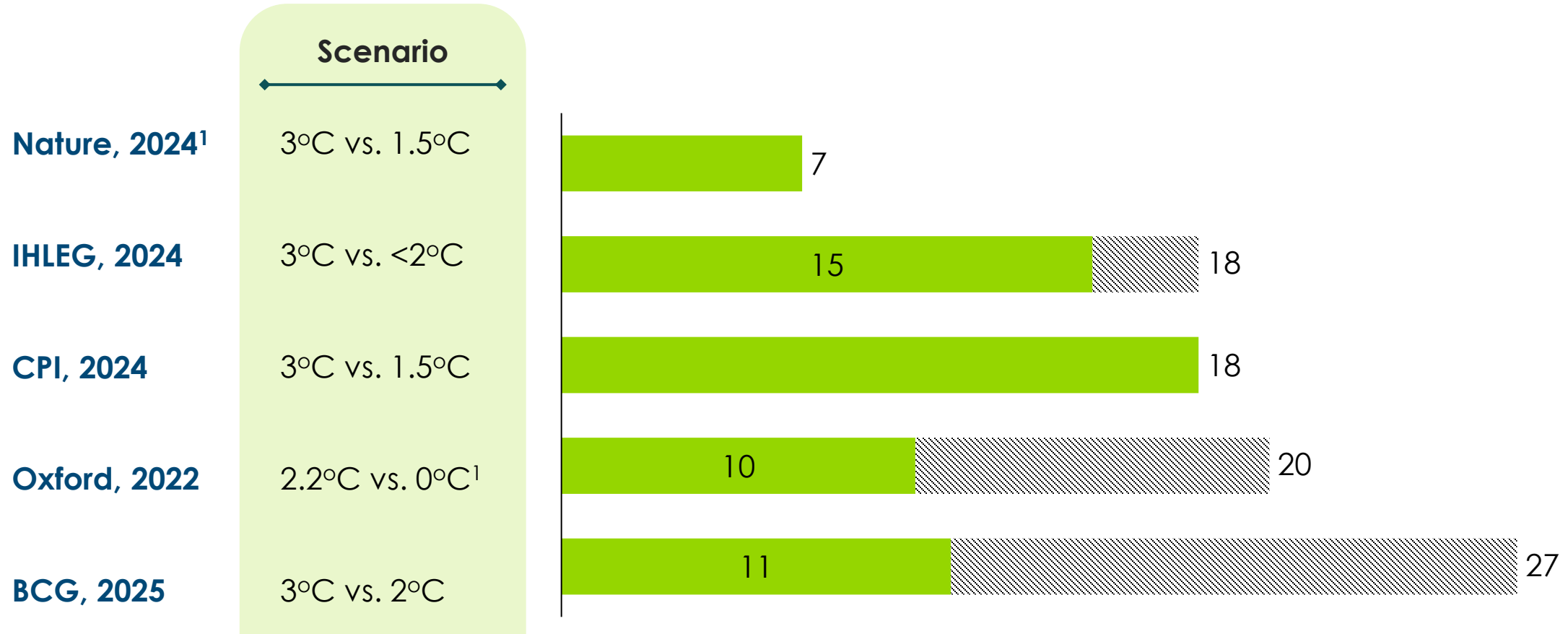
 <b>Climate disturbances</b>	1.5°C	2°C	Impact of 2°C compared to 1.5°C
 <b>Loss of Plant Species</b>	<b>8%</b> of plants will lose ½ their habitable area	<b>16%</b> of plants will lose ½ their habitable area	 <b>2x worse</b>
 <b>Loss of Insect Species</b>	<b>6%</b> of insects will lose ½ their habitable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

# Climate inaction will compromise economic activities around the globe

## Estimates of additional harm of additional temperature increase

% of global GDP

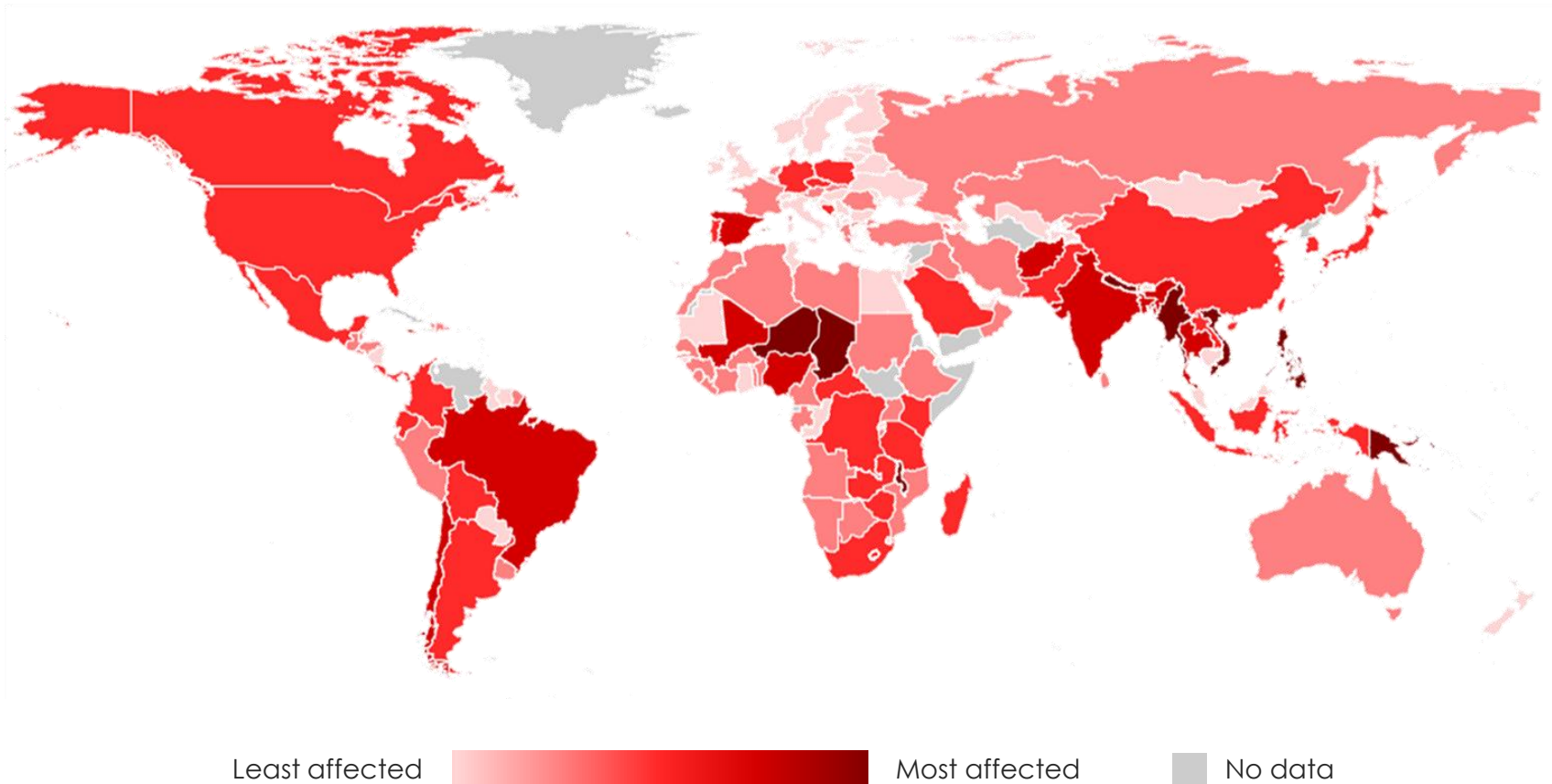
■ Lower estimation    ▨ Upper estimation



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

# World Meteorological Organization has reported that Asia is already warming nearly twice as fast as the global average, fueling more extreme weather

## Climate Risk Index: Most Affected Countries in 2024



### 2025 extreme weather events headlines

-  Typhoon Fung-wong leaves Philippines with 10 dead, 1.4 million displaced
-  Climate crisis made 'bonkers' central Asia heatwave up to 10C hotter
-  Natural disasters cost Australia's economy \$2.2bn in first half of 2025, new Treasury analysis shows
-  Floods in Indonesia, Sri Lanka, Thailand and Vietnam Have Killed Over 1,200
-  Losses Top \$20 billion in Asia Floods as Climate Risks Grow

Note: The CRI methodology involves analysing extreme weather events' impacts via three hazard categories: hydrological, meteorological, and climatological. The index draws on data from the EM-DAT international disaster database, World Bank, and International Monetary Fund (IMF); and considers absolute and relative impacts, using six key indicators: economic loss, fatalities, and affected people – each in absolute and relative terms.

Source: Germanwatch; google news search; WMO (<https://wmo.int/news/media-centre/rising-temperatures-and-extreme-weather-hit-asia-hard>)



# Some financial institutions move away from net-zero and corporates move away from near term targets, despite record year for SBTi validations

## Finance

### Alliances updates



- Over 700 members in 2024
  - Restructure: dropped requirement to be Paris aligned & publish targets and progress;



- 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



- Over 140 members in 2025
  - 11 banks have left (mostly U.S.)
  - **HSBC also left, but** remained engaged with GFANZ. Reviewing interim targets, and delayed NZ to 2050.

## Corporates

### Commitment updates



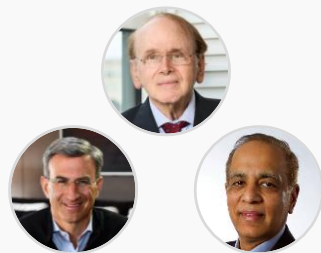
- ~11,000 companies, 25% of global revenue
  - 200 high-profile companies delisted (e.g. Microsoft, Unilever)
  - **Doubling of Chinese companies in 18 months**
  - New guidance, due next year, to stick to Net Zero by 2050 but no temperature pathway
- Major O&G dialling back on climate targets due to a slow phase out of FF
  - **Shell's 2024 Energy Transition Update** removed 2035 target to reduce products emissions by 45% (though maintaining commitment of minus 15-20% by 2030)
  - **BP** removed targets to 2030 and ramp-up fossil fuel investments



# Multiple experts in the west, including supporters 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

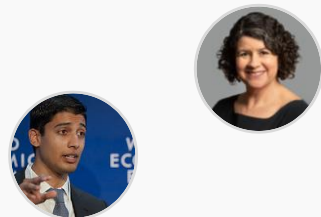
Growing energy demand, energy security concerns and very large transition costs make rapid transition impossible; fossil fuels still essential to prosperity and will take long time to replace

## 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."*

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

>2°C , with likely 3°C

**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

**Antonio Guterres**

*Secretary-General's remarks at the Belém Climate Summit*



*"From those [NDCs] received until now, there is an expectation of a reduction of emissions of 10%. We would need 60% [to stay within 1.5C]. So overshooting is now inevitable."*

No chance of <1.5°C,



# China's official position has always committed to "well below 2°C" not to a 1.5°C limit



***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.\****

*Xie Zhenhua  
China Climate Envoy  
2015-2025*

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

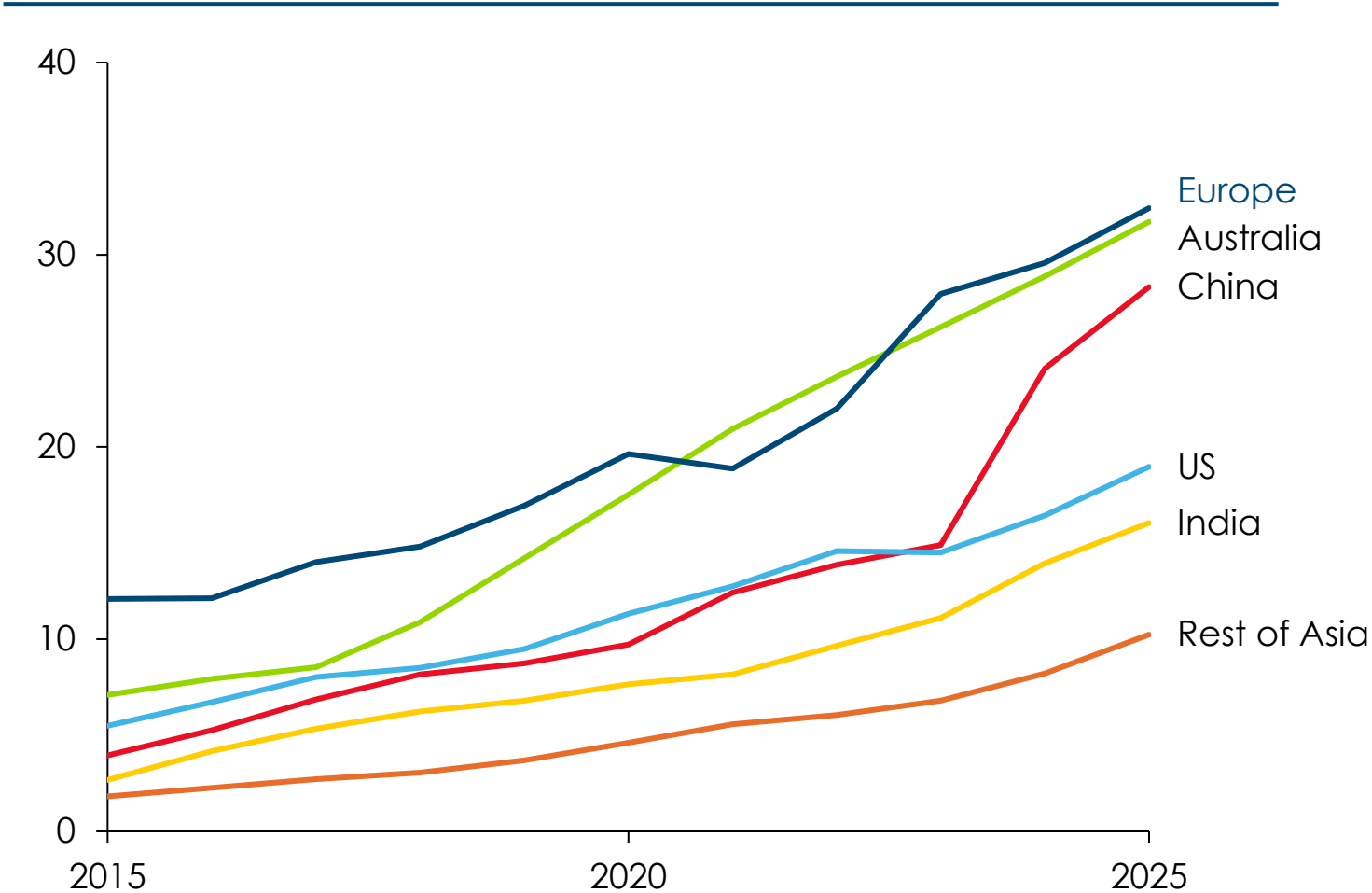
Other countries with Net Zero targets after 2050, indicating that urgency of Net Zero action is less

- India
- Indonesia
- Thailand

# And in much of Asia, pace of transition falls behind leading actors

Solar and wind share of total generation

%



Note: Rest of Asia is Asia excluding China, India, and Australia  
Source: BNEF NEO 2024

**Despite narrative and ambition differences, the required actions remain broadly aligned: massive electrification, increased efficiency gains, and decarbonization of the power sector**

# Agenda

- The problem: 1.5°C is now out of reach
- **Protecting Paris: the challenge and ETC role**
- Proposed process, engagement and timetable



# Voices today are proposing we let Paris slide... ETC aims to shore up commitment to action, reinforcing Paris's well below 2°C objective

*Calling for a decrease in ambition*

## Net Zero..ish at 2-3°C

- 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).
- **Negative climate change effects** are likely to be manageable



**Risk of 'disorderly backsliding' on climate commitments**

*Calling for re-anchoring in ambition*

## Net Zero well below 2°C

- Focus on **identifying the credible set of actions, and the target implications**, which responsible companies and countries should pursue.
- Provide concise evidence on transition costs and distributional impacts, clarify the collective effect of targets, and ground the work in the latest science on climate risks.
- ETC favorable positioning on this debate:
  - ✓ Trusted technical and economic analysis
  - ✓ Forum for objective debate
  - ✓ Extensive global reach



# Progress on cost reduction and deployment relative varies by sector – but progress expectations suggest well below <math>2^{\circ}\text{C}</math> still possible

## Low/zero carbon power



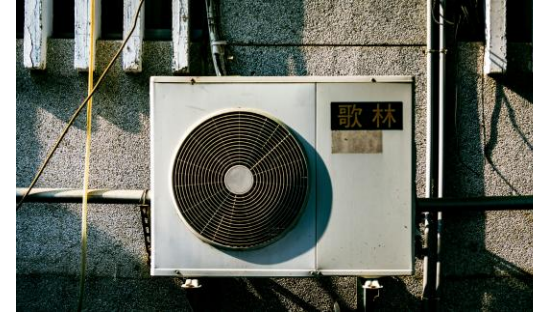
- **Renewables and nuclear** accounted for **80% of electricity growth in 2024** – with renewables growth outpacing global electricity demand in 1<sup>st</sup> half of 2025
- **Renewables overtake coal** as the world's largest source of electricity
- ETC " Power system transformation" report confirms the potential for low-cost decarbonisation, particularly in the global sunbelt

## Road transport electrification



- **EVs** set to account for **25% of all car sales in 2025**
- EVs are already cheaper than ICE comparable models in China
- Rising sales in emerging markets: sales more than doubling in Brazil and almost tripling in Indonesia.

## Residential heat electrification



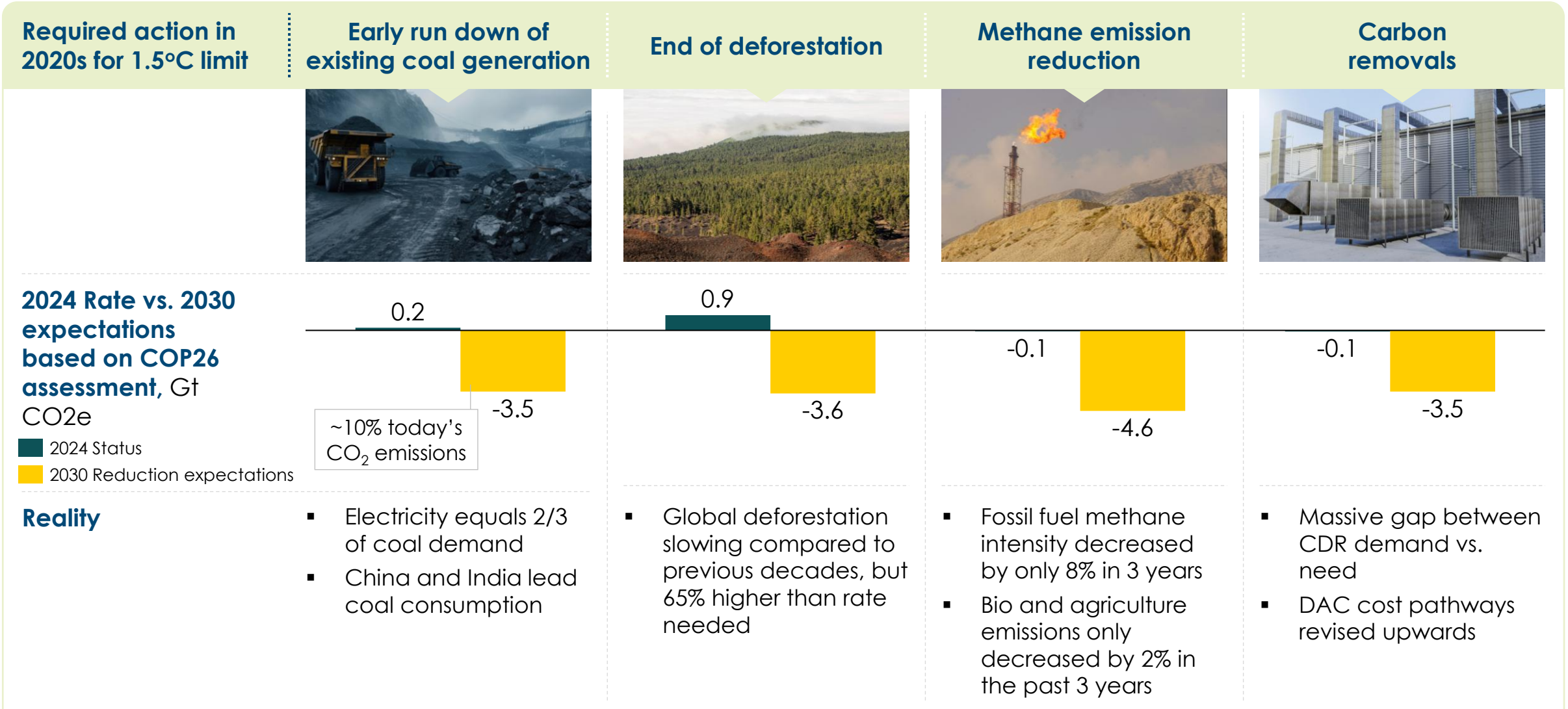
- **Heat pump** sales **fell by 1% in 2024** mostly due to slow down in Chinese market; but outsold gas boilers in the US by 30%
- The next decade will be vital for electrical heating to reach widespread deployment in key markets

## 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 Sunbelt (including EMDEs), driven by cheap renewables, national incentives.
- To achieve 2030 and 2040 goals, projects must be financed and begin construction within the next two years.

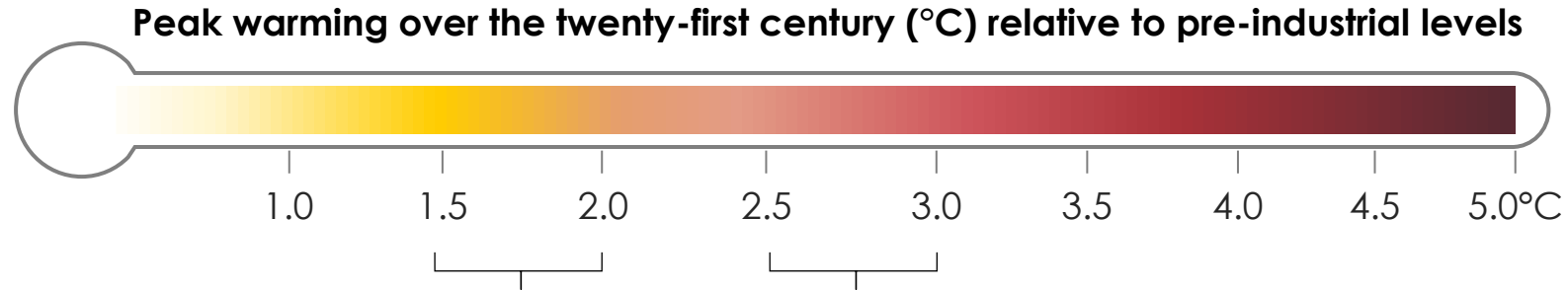
# 4 “misses” in the 2020s; progress has not been fast enough for 1.5°C



Notes: Methane emissions expectations only account for NDCs and Global Methane Pledges commitments; MSCI CDR credit volume calculated by multiplying projected market size (\$) by ETC average cost of carbon removal in each year (\$/tCO<sub>2</sub>). Source: ETC (2021) Assessing the commitments from COP26; ETC(2021) Keeping 1.5oC Alive; WRI (2025) Deforestation and Restoration Targets Tracker (Beta); IEA (2025) world Energy Outlook; MSCI Carbon Markets (2025), [Frozen Carbon Credit Market May Thaw as 2030 Gets Closer](#); Crippa M., Guizzardi D., Pagani F., Banja M., Muntean M. et al., GHG emissions of all world countries - 2025 Report, Publications Office of the European Union, Luxembourg, 2025, doi:10.2760/9816914, JRC143227; Global Forest Watch [Accessed Nov 2025].



# ETC will dissect the difference between a transition led by decreasing costs of technologies and a faster transition to remain well below 2°C



Well below 2°C range due to a faster transition

Likely range of warming of a transition led by economics alone

5 key areas of mitigation potential to be explored

Core areas of opportunity

- (AI) Turbocharging clean electrification
- (AII) Accelerating power decarbonization
- (B) Accelerating action across the harder-to-abate (HTA) sectors
- (C) Reducing methane and N<sub>2</sub>O emissions
- (D) Reducing emissions in LULUCF\*



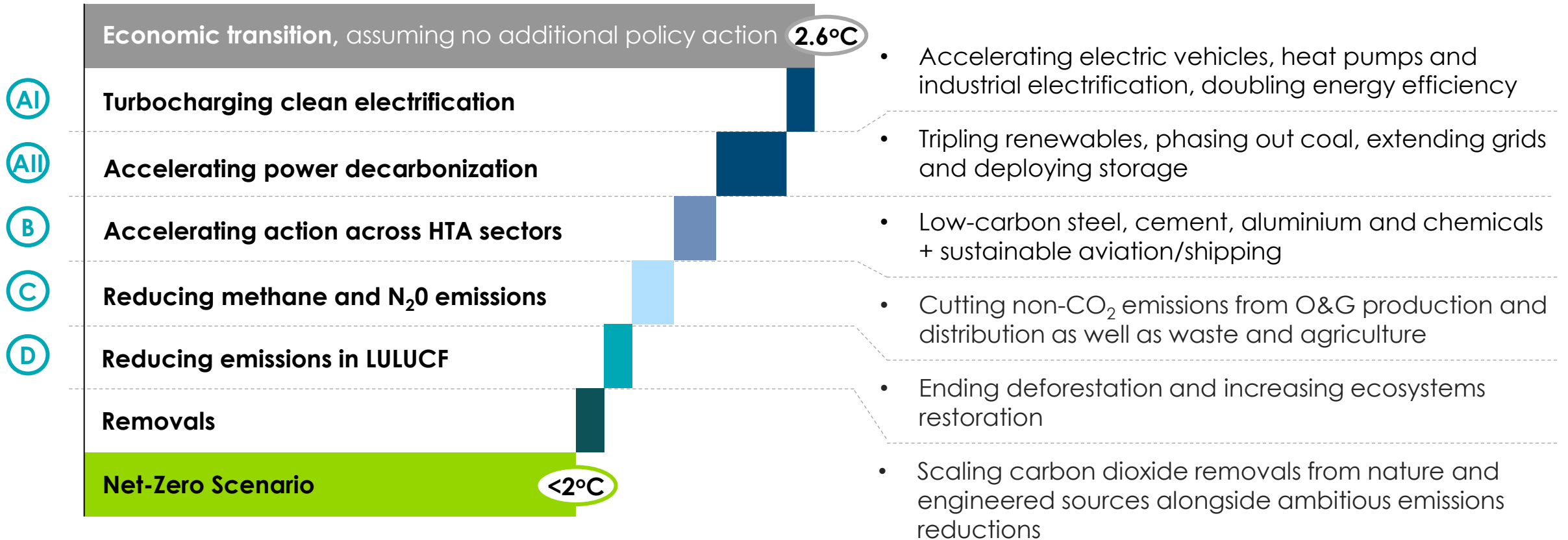
Note: LULUCF = Land Use, Land Use Change and Forestry

# Key output: An overarching comparison of emissions pathways that pushes the ambition level closer to Paris objectives

Illustrative

Peak warming in the 21<sup>st</sup> century and key mitigation areas  
°C

Key levers of change



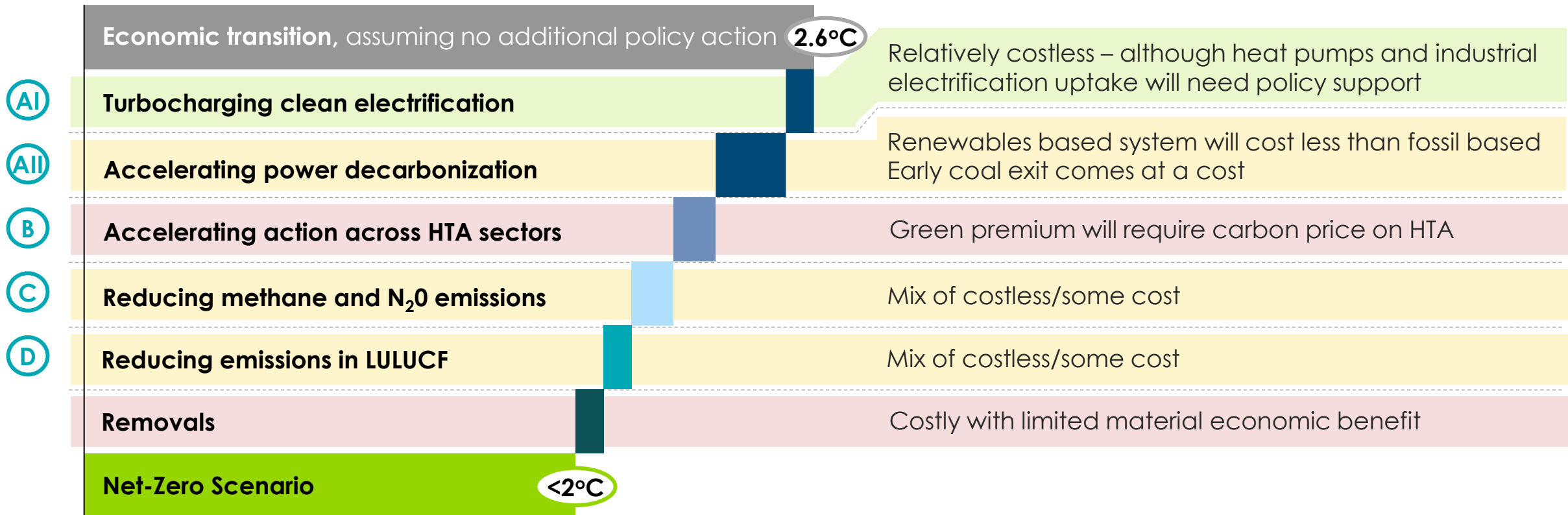
Note: <2°C implies Well Below 2°C.

# In the analysis we will also explore where mitigation is costless but will need accelerated investment or will have a cost premium to be absorbed

Illustrative

Peak warming in the 21<sup>st</sup> century and key mitigation areas  
°C

Relative cost of action



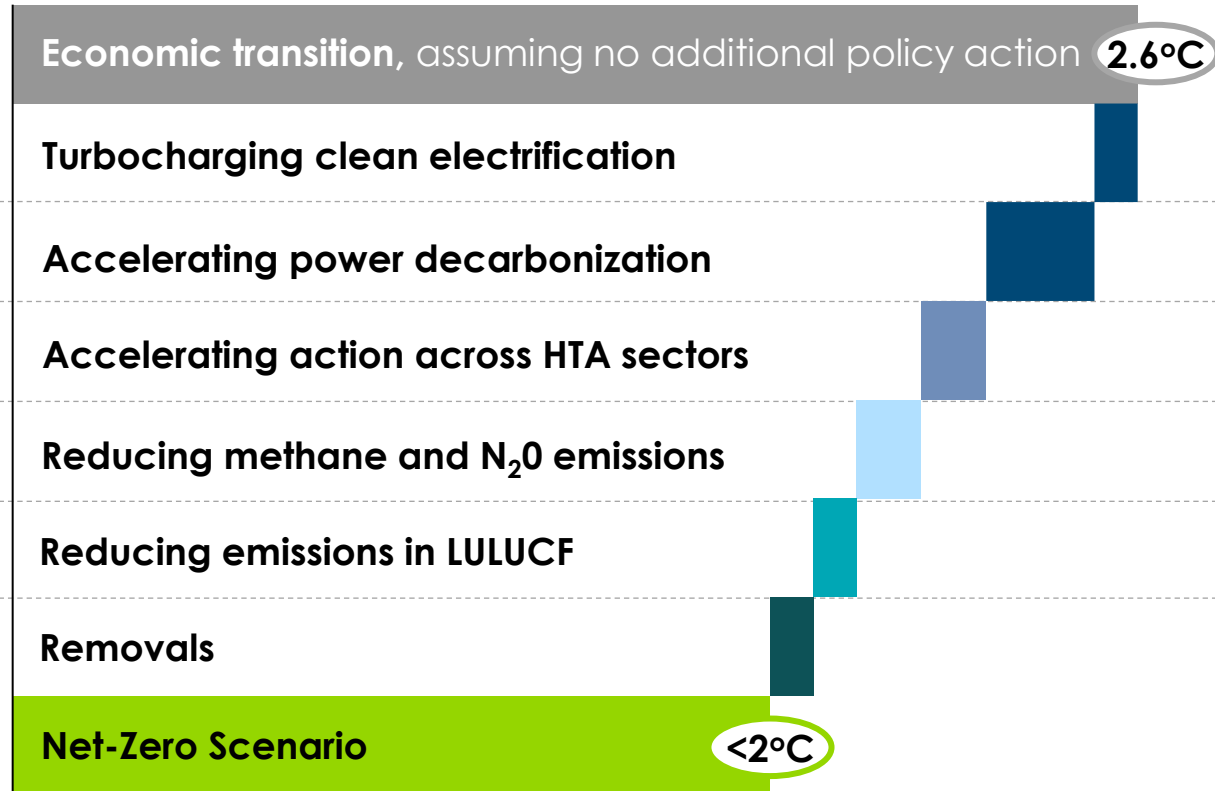
Note: <2°C implies Well Below 2°C.

# ...and what are the necessary actions that will require new climate policy

Illustrative

## Peak warming in the 21<sup>st</sup> century and key mitigation areas °C

## Key actions to analyse



- ICE bans, heat pump incentives, gas to electricity price parity, increase access to electricity
- Early coal exit, grid reinforcement, market mechanism (e.g. distributed generation, demand side flexibility)
- Pace of progress and assessment of required green premium/carbon price to level the playing field
- Reduction in emissions from O&G, diet change, and, possible, offset of residual emissions from agriculture
- End deforestation, increase ecosystem restoration
- Increase demand for carbon credits in mandatory and voluntary markets



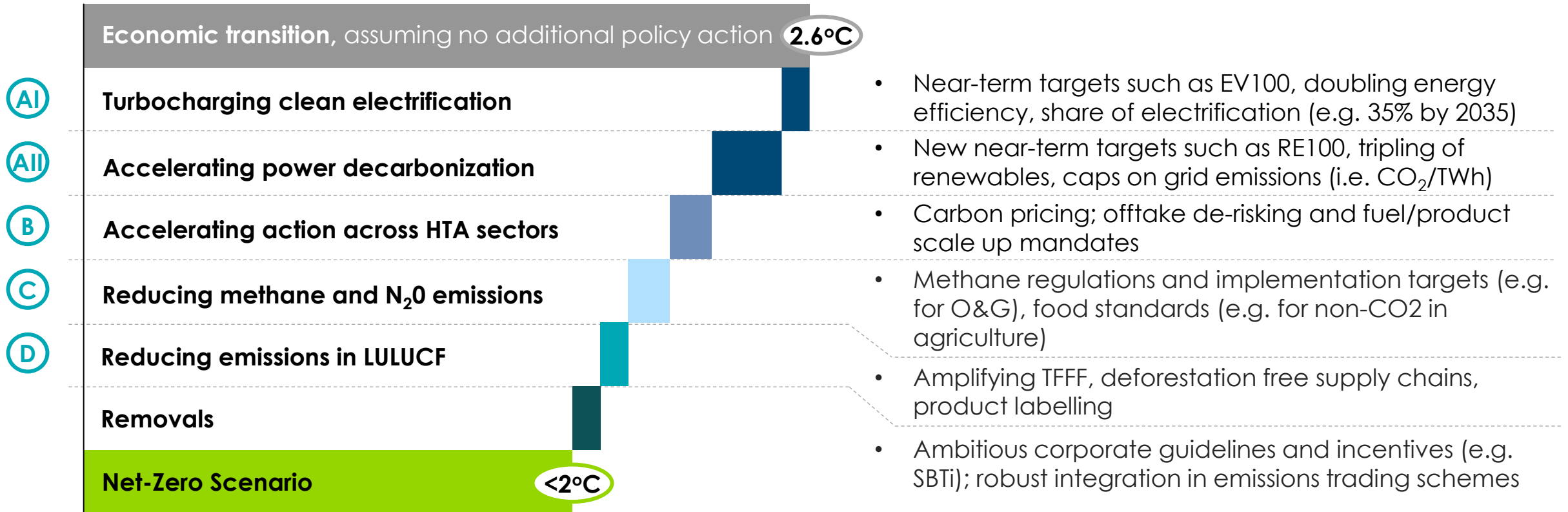
Note: <2°C implies Well Below 2°C.

# ... Finally, we will set the required near-term targets that will effectively put the world back on track for well below 2°C

Illustrative

## Peak warming in the 21<sup>st</sup> century and key mitigation areas

## Required targets (to be developed further)



Note: <2°C implies Well Below 2°C.  
TFFF = Tropical Forests Forever Facility

# There will be trade-offs to continue in a 'well below 2°C' trajectory, but the alternative cost of non-transitional scenarios could be far worse

Negative effects of a **faster** transition

Negative effects of a **delayed** transition



**Higher transition costs** e.g. early phase out of coal assets



**Acceleration of distributional impacts** i.e. uneven costs of capital

**Costs of inaction** i.e. loss of global productivity



**Increasing costs of adaptation**



**Physical risks** and stranded assets

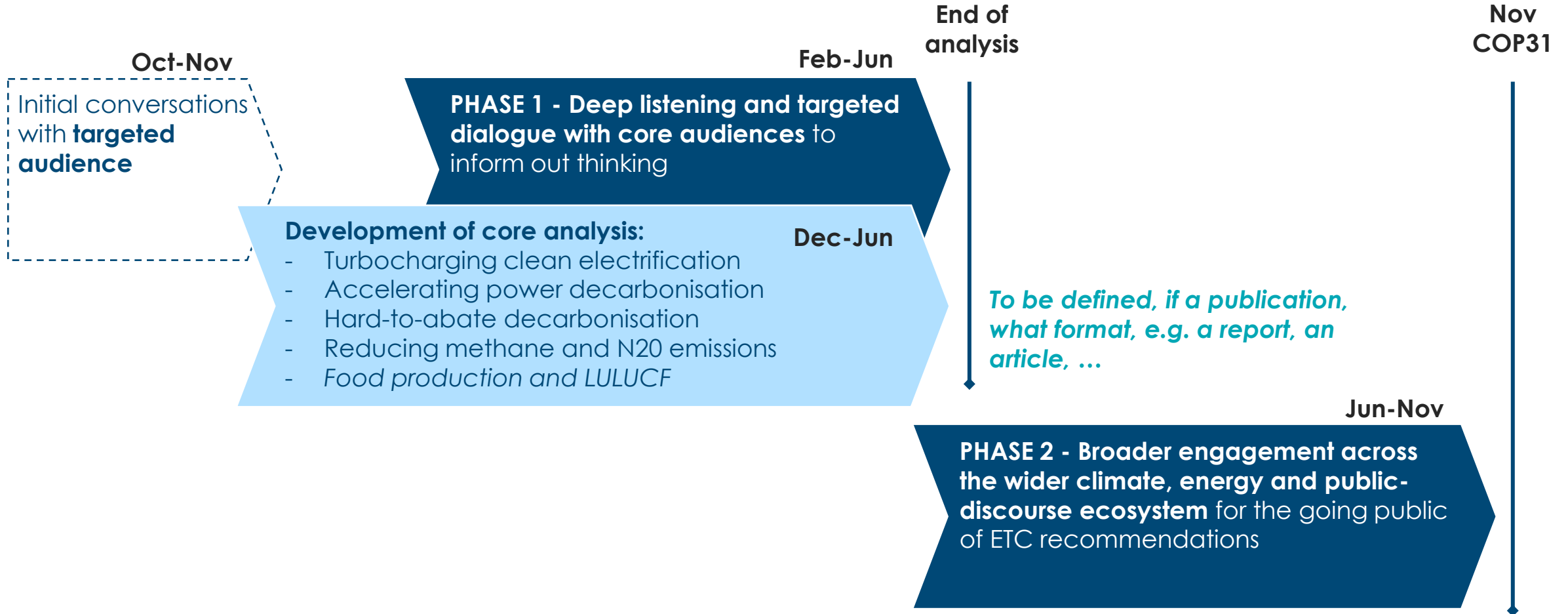
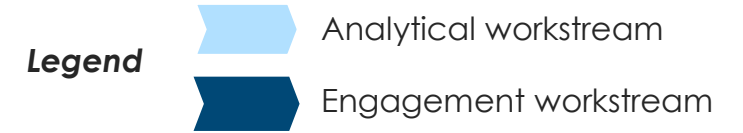


# Agenda

- The problem: 1.5°C is now out of reach
- Protecting Paris: the challenge and ETC role
- **Proposed process, engagement and timetable**



# Workplan overview



# Engagement strategy will be considered, not provocative.

**Core objective:** *Protecting Paris:* defending against disorderly backsliding in world moving beyond 1.5°C without overshoot.

## What we will promote:

*Ambition well <2°C*

*Understanding of scenarios and recommendations grounded in technical and economic realities  
Actions to accelerate – electrification as key lever  
Focus on implementation, accountability, systems linkages and political feasibility to ensure new targets drive real progress.*

## What we won't promote:

*Need for explicit new temp objective > 1.5°C  
Discussion of transition pathways without recognising detrimental climate impacts*



Considered engagement plan to *Protect Paris*, led by business voices acting in support of the transition, recognising limits of progress to date



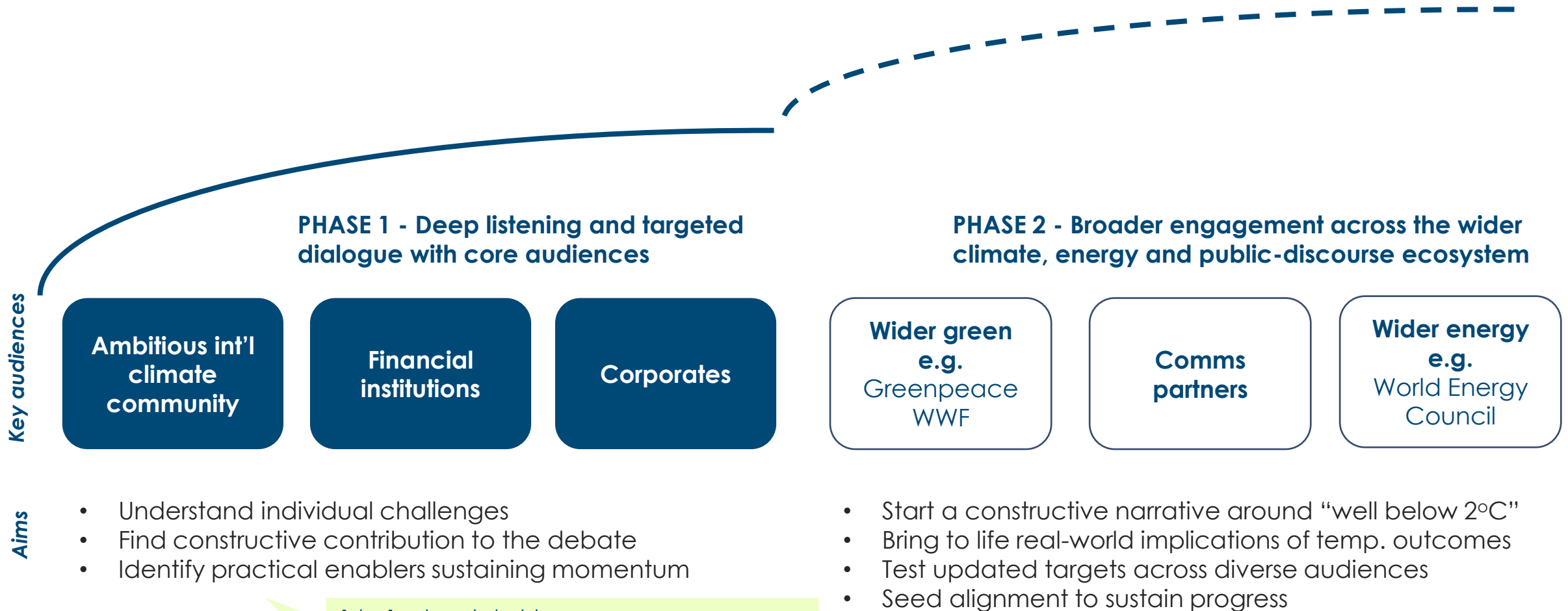
Action-oriented recalibration of global, national, corporate and financial institution targets, focusing on effort required to maintain <2°C

Build wider alignment among stakeholders who can reinforce and accelerate <2°C action



THE MECHANICS OF THIS STRATEGY WILL BE REFLECTED IN A 2 STEP ENGAGEMENT PLAN...

# Two phase engagement plan, with insights from 1<sup>st</sup> phase informing and defining the 2<sup>nd</sup> phase



# Phase 1 conversations tailored to understand current challenges and best route forward to protect and enhance ambitious climate action

**Ambitious int'l climate community**, and core ETC interlocuters

**Financial institutions**, incl. current and former GFANZ/NZBA community

**Corporates**  
Including ETC membership but also beyond

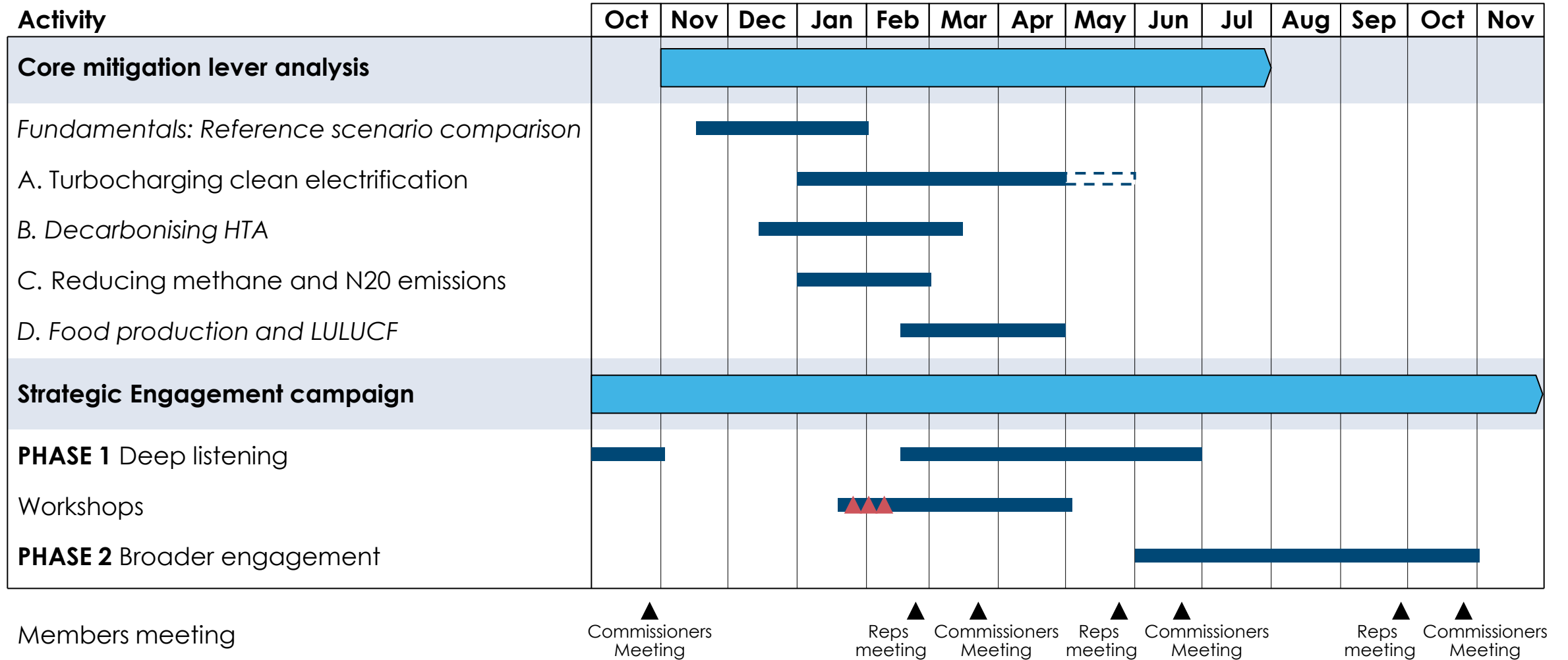
**Engagement to understand** how different groups perceive the current challenges with the 1.5°C framing, and specifically:

- how **policymakers** best think a restatement of climate goals can contribute to renewed momentum
- understanding from **financiers and corporates** the challenges they have faced in implementing these targets
- and which **practical enablers** (finance, policy, technology, sector pathways) all groups consider **essential to sustaining momentum**.



# Detailed Workplan

Lectures at LSE 



# 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

