

The role of corporate carbon credits in the energy transition

May 2025

Version 1.0



Energy
Transitions
Commission

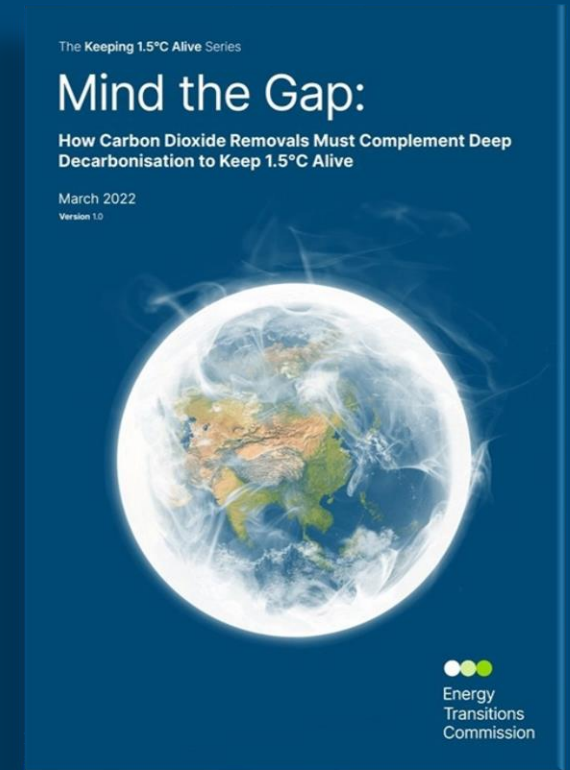
Scaling-Up Corporate Carbon Credits

In March 2025, SBTi published a draft revision of its Corporate Net-Zero Standard V2 (CNZS V2). The consultation period on this draft is currently open.

In response, the ETC is publishing a briefing based on our 2021 Mind the Gap report generally endorsing the high-ambition corporate strategies set out by the SBTi's CNZS V2.

Building on our 2021 report, this briefing note aims to clarify the role of high-integrity carbon credits in scaling up carbon dioxide removals and achieving corporate net-zero targets.

ETC generally endorses the new SBTi Standard and welcomes additional action on scaling carbon credits. In addition, we recognise an opportunity for SBTi to recognise companies that can act to be 'net-zero' ahead of the target year, including from today, as well as in that year itself.



Building on ETC analysis (2022):
[Mind the Gap: How Carbon Dioxide Removals Must Complement Deep Decarbonisation to Keep 1.5°C Alive](#)

And SBTi's draft for consultation (2025):
[SBTi Corporate Net-Zero Standard Version 2.0 – initial consultation draft with narrative](#)

Agenda

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Q&A

Context: the current landscape of corporate sustainability frameworks

Voluntary corporate participation in carbon markets currently makes up an estimated 90% or more of carbon market activity. SBTi and VCMI are two leading organisations providing corporate guidance around use of voluntary carbon credits. Meanwhile, more regulated disclosure of corporate use of carbon credits is being introduced, for example, in the EU via the CSRD.

Though overall carbon market activity has stagnated in the last few years, largely due to integrity concerns around carbon credits and global political and economic disruptions, the carbon market is evolving. Regulated corporate demand (e.g., through the EU Emissions Trading Scheme) and country demand (through Article 6 of the Paris Agreement) is expected to drive increased demand for carbon credits.



Science-Based Targets Initiative (SBTi):

SBTi is recognised as a leading body for corporate net-zero target setting and driver of corporate carbon credit demand.

- Almost 7500 companies have SBTi validated targets, of which, 1400 have net-zero targets.
- In 2023, the number of companies with SBTi validated targets represented 39% of the global economy by market capitalisation.
- SBTi companies have collectively reduced emissions by 29% between 2015 and 2020
- **SBTi's Net-Zero Corporate Standard Version 2.0 public consultation closes on June 1st, 2025.**



Voluntary Carbon Markets Initiative (VCMI):

VCMI focuses on how companies use carbon credits within the net-zero corporate strategies set by the SBTi.

- A number of companies have joined the Early Adopters Program and are helping to develop how corporates can make VCMI claims.
- **In April 2025, VCMI published its Scope 3 Action Code of Practice** (based on a consultation involving more than 600 stakeholders from 31 countries) **providing a framework to help companies reduce Scope 3 emissions, and guidance on interim use of carbon credits on their net-zero by 2050 pathway.**



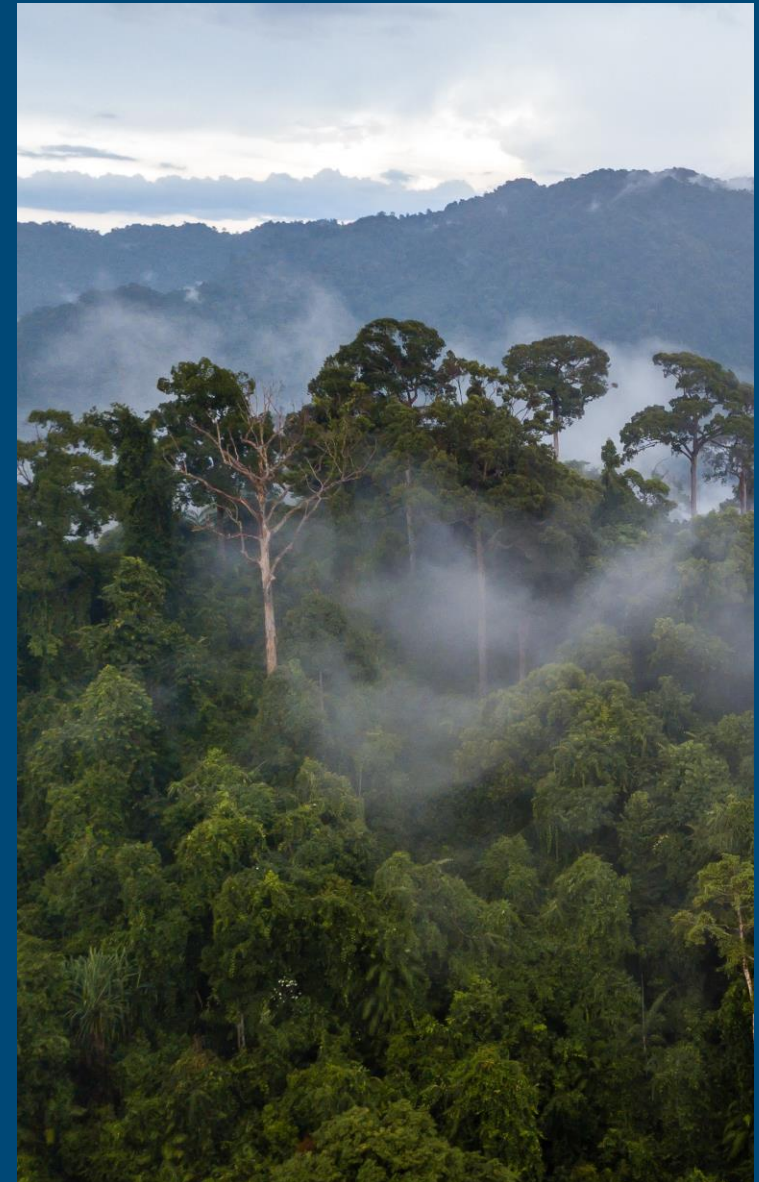
Corporate Sustainability Reporting Directive (CSRD):

CSRD is an EU regulatory framework aiming to standardise and improve environmental, social, and governance (ESG) reporting across all large companies and listed entities in the EU.

- It mandates comprehensive disclosure of emissions, and any carbon credits purchased, including removals from within corporate value chains or beyond.
- **The European Commission is gradually phasing this in, starting with some select large companies in 2025, then extending to listed SMEs and non-EU parent companies by 2029.**

Section 1: Carbon credits are a necessary tool to finance carbon removals and achieve the transition to a net-zero economy by mid-century and limit global warming to 1.5°C

- **There are two main categories of carbon credits which can be purchased: reductions and removals.** Both are needed for different purposes, but there should be a priority for removals credits within corporate net-zero pathways.
- **ETC projected that 150 GtCO₂ of cumulative removals would be required for a 1.5°C aligned trajectory by 2050.** However, there is a gap between current demand projections and ETC scenarios.
- **Carbon removals can be met both with natural solutions (e.g. trees), engineered solutions (e.g. DAC) or hybrid solutions (e.g. biochar). Carbon removals must have high integrity,** as defined by its permanence, leakage prevention, additionality, credibility, and quantification.
- **Carbon removals may need to account for a greater share than previously estimated** due to slower process in some decarbonisation pathways.



There are two main categories of carbon credits which can be purchased

CARBON CREDITS:

Represent a tradable unit of reductions in emissions of carbon dioxide (CO₂) or greenhouse gases made by a company, sector or economy to compensate for emissions made elsewhere in the economy.

REMOVAL:

Projects that remove carbon from the atmosphere, and therefore 'neutralise' emissions.

Nature-Based Solutions (NBS)

e.g., afforestation/restoration or improved management solutions (enhanced soil carbon sequestration)

Energy-based solutions

e.g., Direct air capture (DAC)

REDUCTION:¹

Projects that indirectly reduce emissions from entering the atmosphere outside of the buyer's value-chain.

Nature-Based Solutions (NBS)

e.g., avoided deforestation and forest degradation

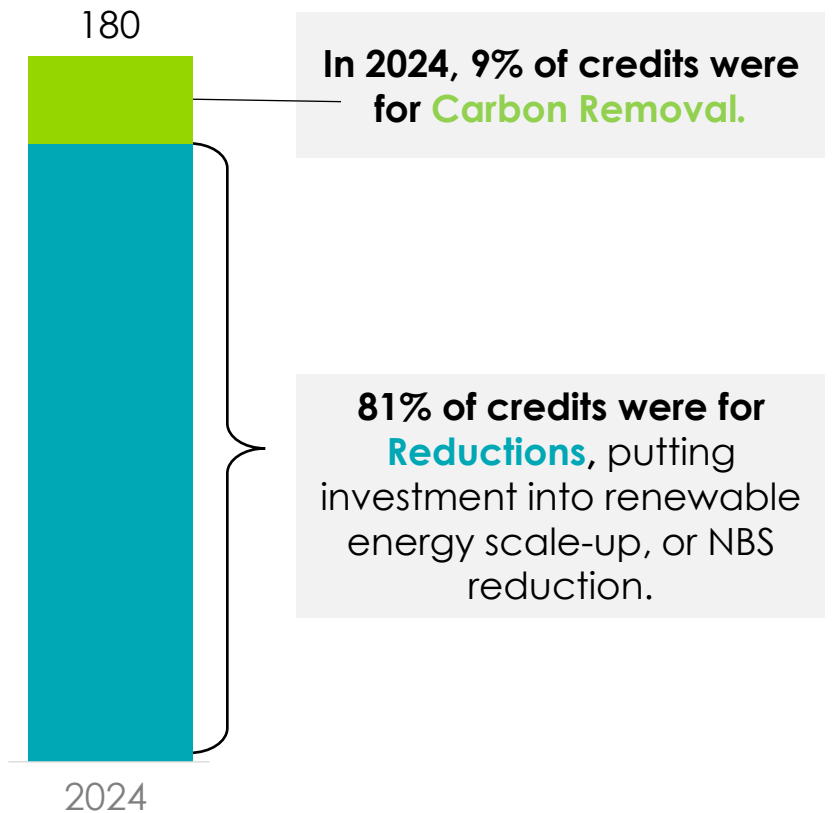
Energy-based solutions

e.g., renewable energy generation, methane capture & utilisation in low-income countries

Exhibit 3

Demand for voluntary carbon credits 2024

MtCO₂e



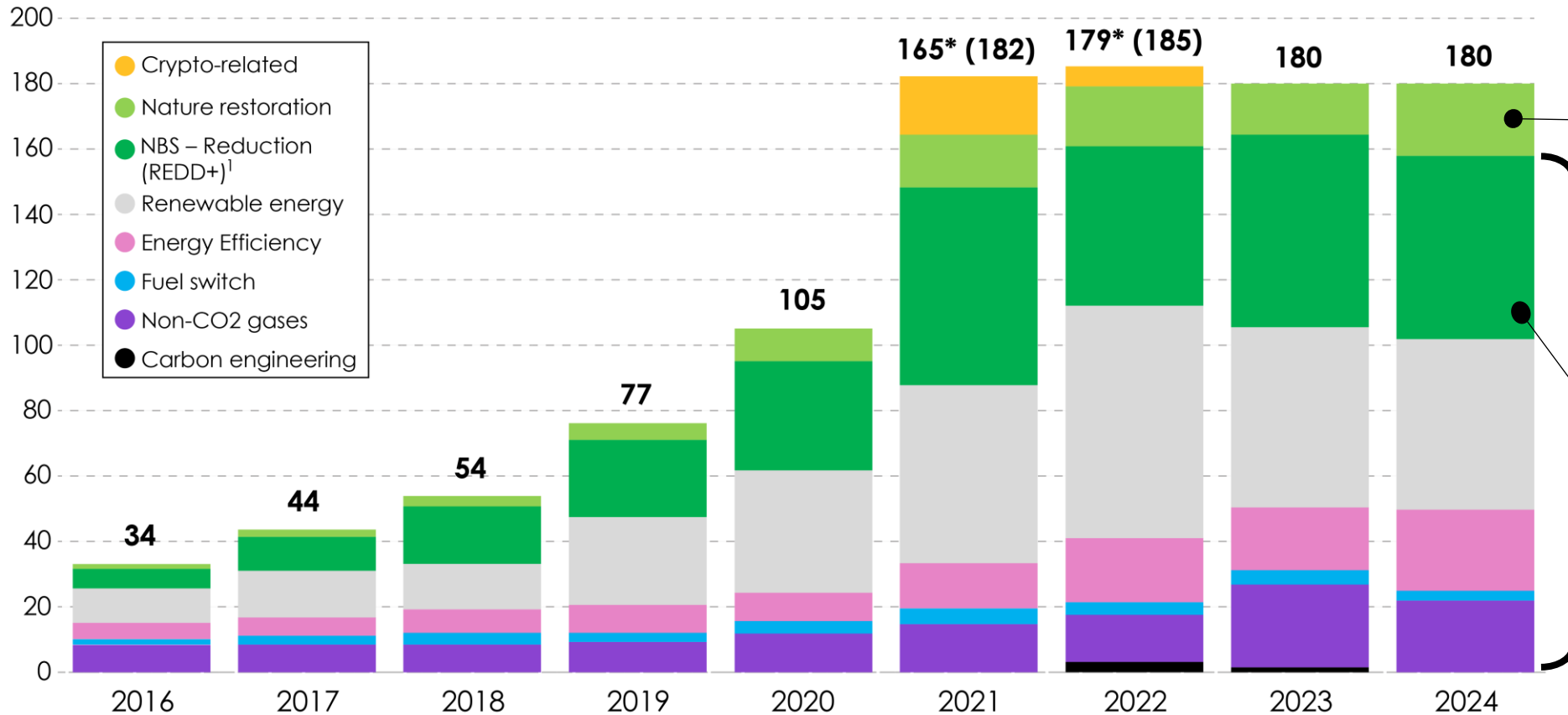
Source: MSCI (2025), [Frozen Carbon Credit Market May Thaw as 2030 Gets Closer.](#)

[1] Some use a subset of reductions which include avoidance credits and reductions credits.

The vast majority of voluntary carbon credits purchased today are ‘reduction’ credits, not ‘removals/neutralisation’

Demand for voluntary carbon credits 2016-2024

MtCO₂e



In 2024 9% of credits were for Carbon Removal.

The majority of credits are reduction offset credits, putting investment into renewable energy scale-up, or NBS reduction.

REDD+ refers to **avoided deforestation** as well as sustainable management of forest carbon stocks. These credits are NBS reductions.

[1] REDD+ refers to Reduced Emissions from avoided Deforestation and forest Degradation, as well as the sustainable management and enhancement of forest carbon stocks.

Source: MSCI (2025), [Frozen Carbon Credit Market May Thaw as 2030 Gets Closer](#).

There are significant concerns about the integrity of carbon credits

TIME

Bogus Carbon Credits are a 'Pervasive' Problem, Scientists Warn

DIE ZEIT

Phantom Offsets and Carbon Deceit

Grist

Carbon offsets are 'riddled with fraud.' Can new voluntary guidelines fix that?

Le Monde

Brazil: Three carbon offset projects accused of being scams

The Guardian

Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows

POLITICO

Bogus carbon offsets increased emissions

The role of Reduction credits should be limited due to concerns about integrity and additionality; Removals should be prioritised

Reduction Credits

Trade in carbon reduction (or avoidance) credits can help to finance emissions reductions faster elsewhere, when countries and companies face high costs to reduce their own emissions.

- **Some specific high-integrity reductions can play a useful role in addition to ambitious internal emissions reductions.** (e.g., early coal phase-out and ending deforestation) where crucial emissions reductions will only occur if supported by a financial flow from developed to developing countries.
- **However, major concerns have been raised about additionality of reduction credits sold in some markets**, suggesting their use should be limited:
 - Credits might support progress (e.g., towards renewable energy) that may have occurred in any case and are therefore not additional.
 - Project credits, such as those for avoided deforestation, have been calculated and sold against baselines that overrepresent the actual threat to forests – leading to lack of additional, as well as integrity issues.

Removals Credits

Removals credits are also required for a different purpose: closing the gap to net-zero by mid-century and fully offsetting residual gross emissions.

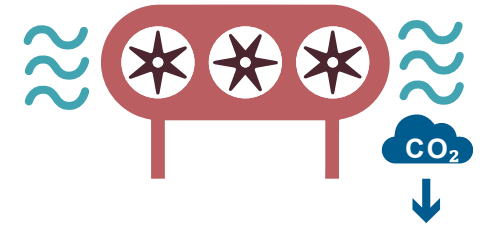
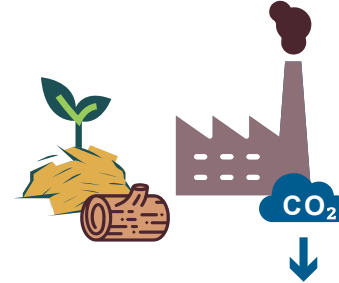
- **Removals credits can help fund many categories of removals which will only occur if someone pays for them**, for example, direct air capture and storage or reforestation projects.
- **Removals solutions vary in cost and permanence**; a portfolio of high-integrity solutions should be deployed on the route to net-zero.

There are several types of carbon removals solutions. Deploying a portfolio of these solutions is the most appropriate way to scale removals.

NATURAL CLIMATE SOLUTIONS

HYBRID/BIOMASS WITH CARBON REMOVAL STORAGE

ENGINEERED SOLUTIONS



'RESTORE'

'MANAGE'

BIOCHAR

BECCS

DACCS

WHAT?

Restore natural ecosystems (e.g., forests, peatlands)

Better manage current use of land

Burn biomass in absence of oxygen to slow decomposition

Produce energy from biomass then capture CO2 produced

Capture CO2 direct from air and store underground

RISKS

Permanence: carbon stored in biosphere is short-term

Permanence: carbon stored in biosphere is short-term

Feedstock: biomass feedstock not sourced sustainably

Feedstock: biomass feedstock not sourced sustainably

Moral hazard: clean power insufficiently available

CO-
BENEFITS*



Biodiversity; clean water; community economic return



Biodiversity; clean water; community economic return; soil health



Clean water; soil health



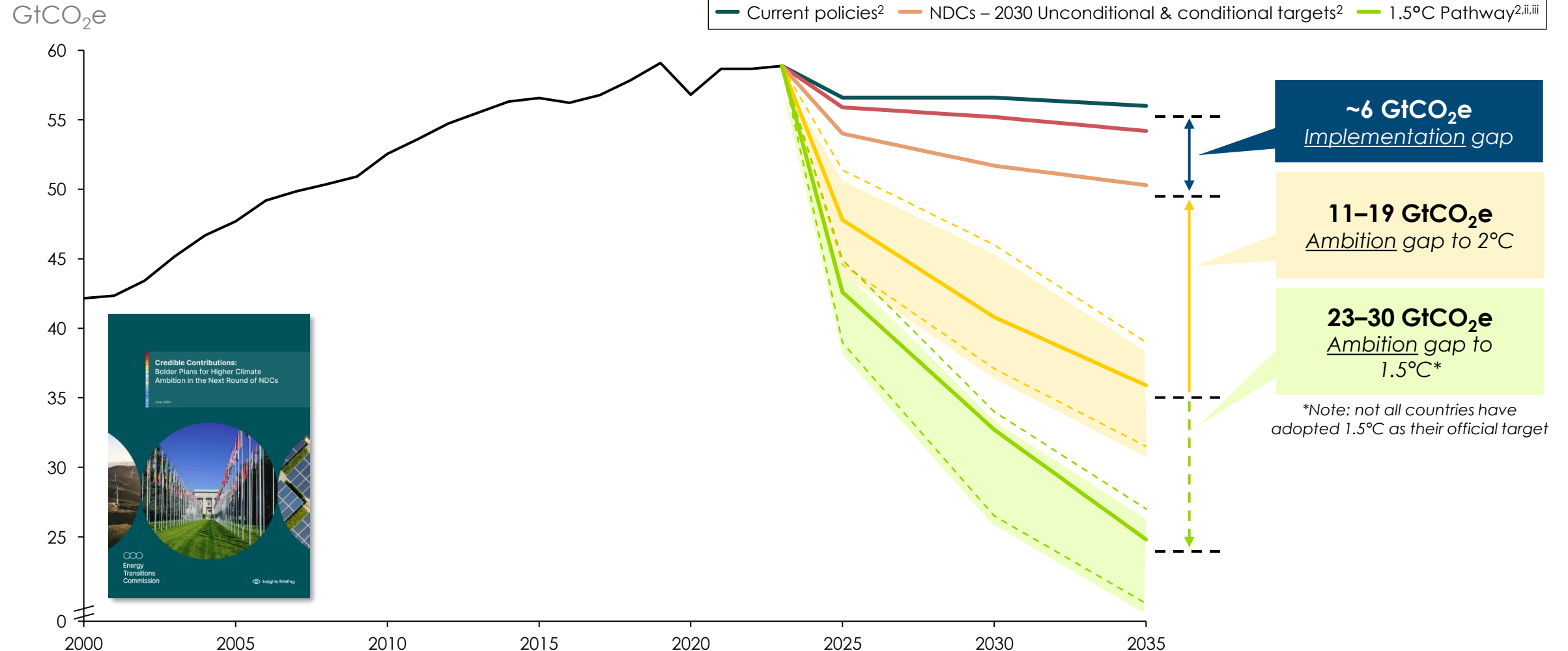
Fossil free energy



Skilled jobs

Current global trajectory is far from reaching a 1.5°C pathway; carbon removals may therefore need to play an even bigger role to reach climate targets

Global GHG emissions



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 (2023), *Emissions Gap Report: Broken Record*.

Section 2: Corporate purchases of high-quality carbon removal credits should scale rapidly, as part of ambitious corporate net-zero targets

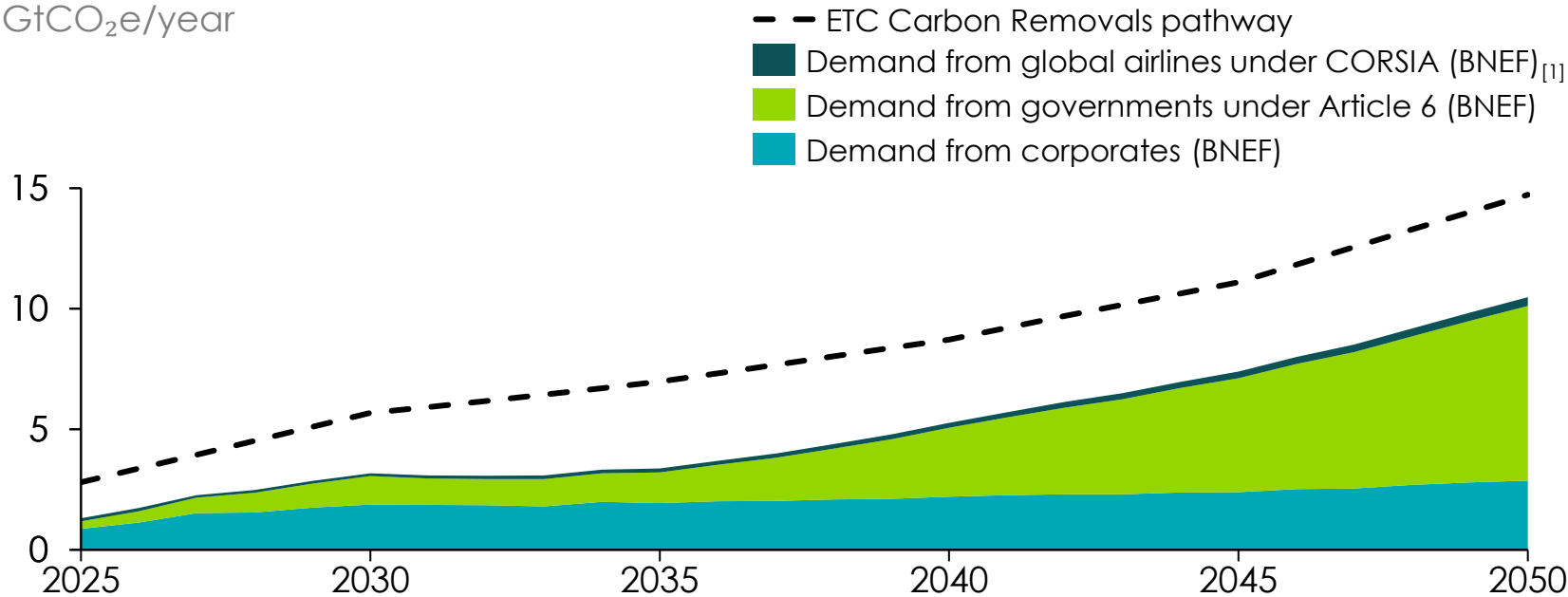
- **Government and philanthropic spend on carbon credits is currently limited.** Corporate purchases of carbon credits form a significant portion of the market and are key to scaling it further in the near-term.
- The SBTi's CNZS V2 draft proposes new corporate guidance for consultation. ETC generally endorses its high-ambition proposals, recognising the role of carbon credits:
 - **Within the corporate net-zero pathway** addressing Scope 1, 2 and 3 emissions, particularly residual emissions.
 - **Beyond corporate net-zero pathways**, such as purchase of removals to be 'net-zero' today, particularly for companies with a low cost of decarbonising their own value chain (as a proportion of revenue).



Carbon credit demand is expected to increase as governments and corporates deliver on net-zero targets, but gap still exists with ETC Carbon Removals pathway

Global demand for carbon credits to 2050 compared to ETC removals pathway

GtCO₂e/year



Accelerated corporate action – and the introduction of near-term removals targets – could help to further scale Carbon Removal deployment

ETC scenario emphasizes a portfolio approach to removals deployment, with a shift towards higher permanence removals over time :

- Total cumulative removals reaching up to 150 GtCO₂ over the period of 2020 to 2050.
- Nature-based solutions providing almost all the pre-2030 removals, and most removals up to 2040.
- But with BECCS and DACCS growing rapidly in the 2030s and 2040s, and with removals via DACCS reaching 2–3 GtCO₂ per annum by 2050

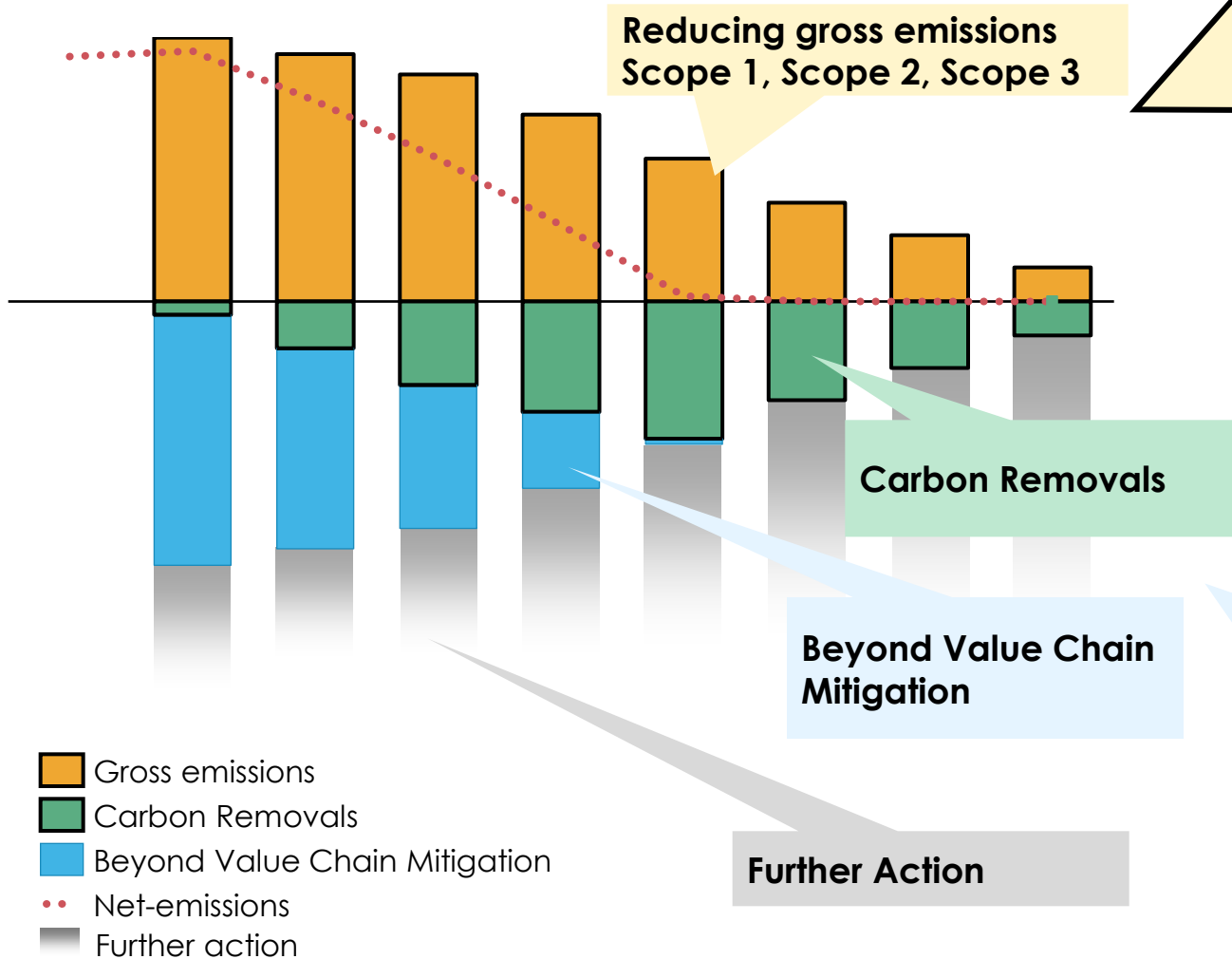
[1] Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is a global market-based measure developed by the International Civil Aviation Organization (ICAO) to address carbon emissions from international flights.

Source: BNEF (2025), *Long-Term Carbon Credit Demand Outlook 2025*. Corporate demand is BNEF's 'price elastic' scenario.

Corporate net-zero pathways are based on several key elements, including removals

A high-ambition corporate net-zero pathway

Emissions (tCO₂e)



Within the Net-Zero Pathway

- **Greenhouse gas emissions (GHGs):**
 - **Scope 1:** Direct emissions, mostly resulting from combustion of fossil fuels.
 - **Scope 2:** Indirect emissions from electricity use.
 - **Scope 3:**
 - Indirect emissions from the production of purchased materials (upstream – e.g., use of steel).
 - Indirect emissions from the distribution or use of produced assets (downstream – e.g., transportation of goods to consumer).
- **Carbon removals** to offset any residual emissions (that cannot be reduced from company value chains), thereby neutralising remaining emissions on the path to achieve net-zero.

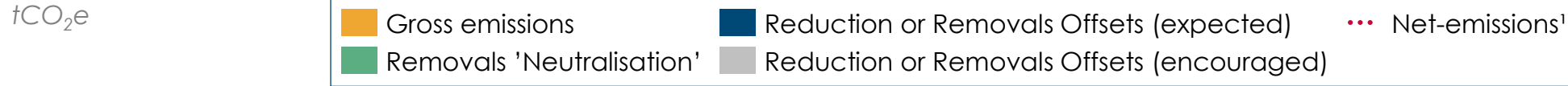
Beyond the Net-Zero Pathway

depends on the type of company and its ability to pay

- **Beyond Value Chain Mitigation (BVCM)** to offset ongoing corporate emissions. E.g.,
 - High-integrity carbon credits (removals, or reductions from early coal phase-out or stopping deforestation).
 - Investment in low-carbon tech R&D.
- **Even further action** beyond corporate pathways.

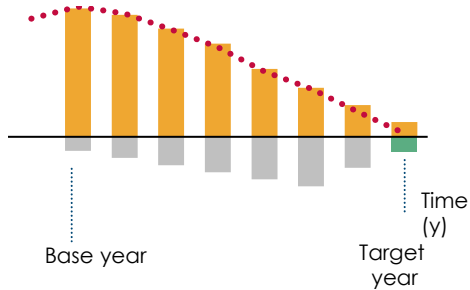
Multiple strategies have been set out for corporate net-zero pathways

Corporate net-zero strategy pathways



STBi NZCS v1

Emissions abatement in line with science

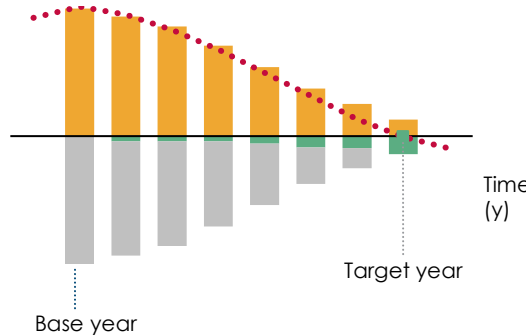


Firms curtail GHG emissions at a pace and scale consistent with 1.5°C emission pathways– for most sectors, this means reaching zero positive emissions.

Any remaining emissions after 1.5°C reductions should be neutralised. BVCM is also recommended.

SBTi NZCS v2

Emissions abatement in line with science. With proposed near-term removals requirements and optional BVCM.



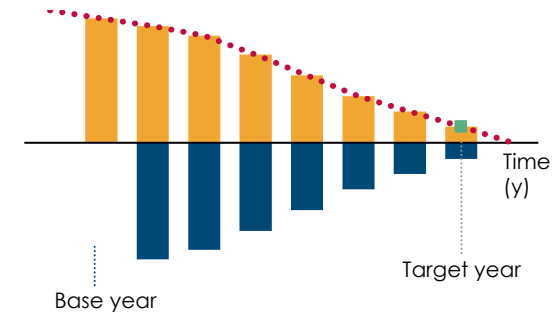
While reducing emissions at a pace and scale consistent with 1.5°C, remove CO₂e now (nature-based removal) or as soon as possible (through technology-based removal).

Neutralise some residual Scope 1 emissions by purchase of removals credits ahead of target date. And optionally, be recognised for further action with BVCM.

VCMI

Platinum Claim

Accelerating corporate engagement with voluntary carbon markets



First, set near term reduction targets and demonstrate progress towards them.

Then, select a claim (silver, gold platinum) and retire CCP-approved credits (reduction or removals) equal to a % of remaining emissions. Platinum covers 100%.

[1] Net emissions as defined by IPCC (remaining emissions neutralised with removals)
 Source: Adapted from WEF Alliance Carbon Removal; SBTi Net Zero paper 2020; BCG Analysis

It is recognised that addressing Scope 3 emissions is challenging

Each company's indirect emissions are someone else's direct emissions. Traceability can be challenging in global supply chains with multiple levels of suppliers/distributors. Also, year-on-year Scope 3 emissions fluctuate based on company's activity, and when viewed in isolation, can conceal actions aligned with long-term emission reduction strategies.

However, making companies accountable for their scope 3 emissions has potential to make the most significant impact towards reducing emissions.



SBTi's NZCS V2 Scope 3 Proposal (2025):

Places greater emphasis on targeting the most emission-intensive activities and greatest influence potential within company value chains.

- **“High-impact potential emissions”** are defined as either:
 - > 1% of total Scope 3 emissions or >10,000 tCO₂e per year
 - on the SBTi's list of emissions-intensive activities in any tier of the value chain
 - Significant categories of emissions from Tier 1 suppliers
- **“Low-impact potential emissions”** are emissions that fall outside of high-impact categories e.g., low emissions intensity within value chain (%) and low traceability suppliers.
- **Proposes greater target setting optionality:** encouraging companies to set transition metric/alignment targets.
- **Allows greater flexibility for achieving and measuring progress,** recognising the use of “indirect mitigation” approaches (e.g., book-and-claim commodity certificates) where persistent barriers prevent mitigation at the source.



VCMI

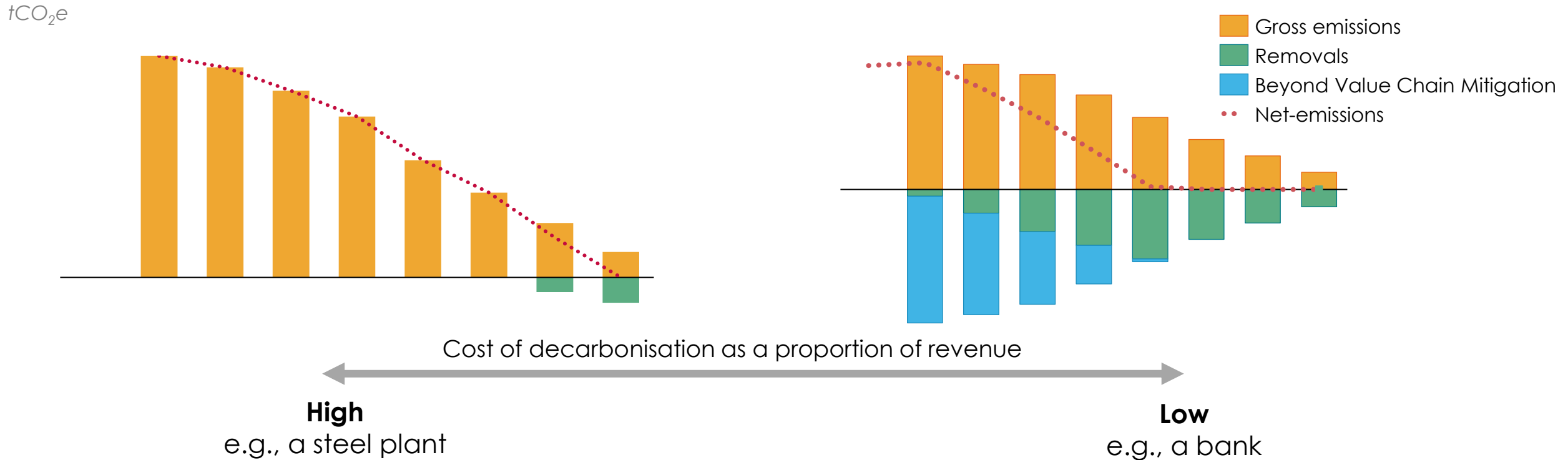
VCMI's Scope 3 Action Code of Practice (2025):

The Scope 3 Action Code of Practice proposes an interim use of carbon credits on the pathway to achieving scope 3 emissions reductions targets:

- **Companies must qualify by demonstrating progress towards ambitious Scope 1 and Scope 2 targets** on the pathway to reaching net-zero emissions by no later than 2050.
- **It must publicly disclose barriers to reducing Scope 3 emissions** and actions taken to remove current and remaining barriers.
- **It must calculate the emissions gap:** the difference between the company's Scope 3 emissions in the most recent reporting year and where they need to be on their near-term science-aligned target.
- **Companies are required to retire high-quality carbon credits in an equal amount to at least their entire scope 3 emissions gap;** however this must be no more than 25% of the company's Scope 3 trajectory emissions.

What should a responsible company do? There could be a continuum of action

Decarbonisation Pathways to Net-Zero



For firms with higher decarbonisation costs money may be better spent on decarbonising own operations, rather than investing in carbon credits to compensate emissions.

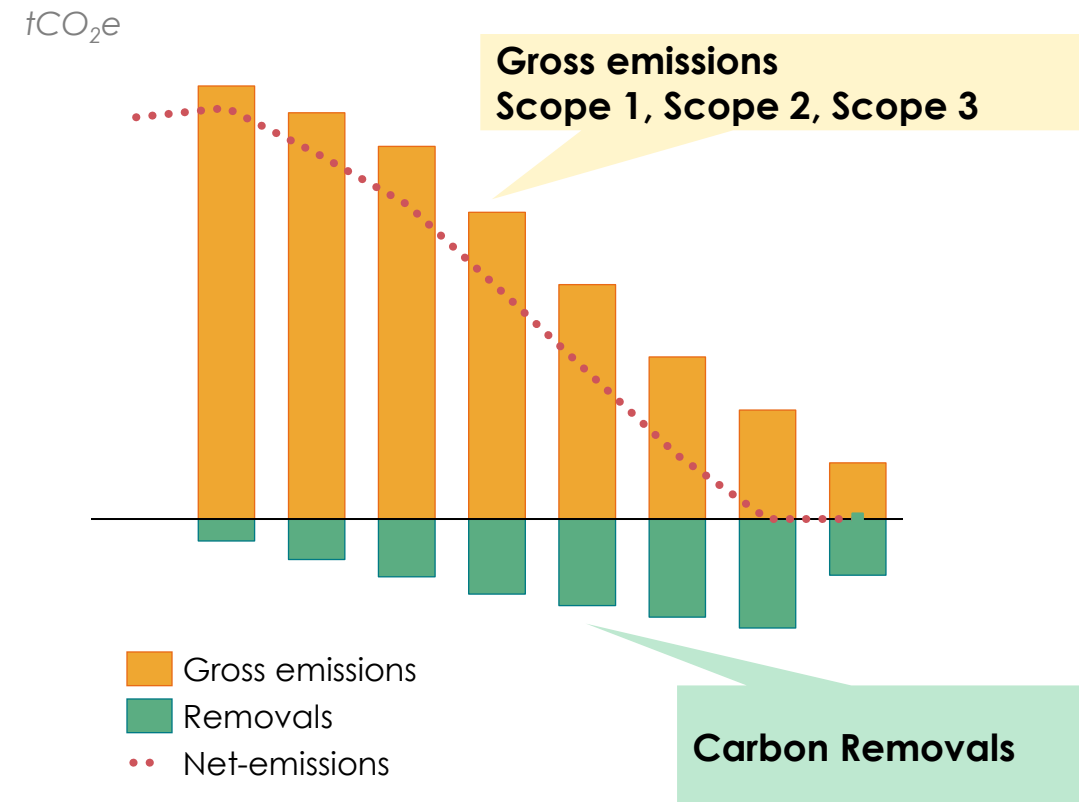
For firms with low decarbonisation costs (as a proportion of revenue) **or with high Scope 2 and 3 emissions**, high impact strategies should focus on emissions removals alongside decarbonising own operations.

Ambitious corporate net-zero pathways should focus on reducing within value chain emissions as much as possible & neutralising residual emissions by 2050

Scope 1 & 2	Set Scope 1 and Scope 2 emissions reduction targets aiming to achieve net-zero as quickly as possible.	Covers 100% of scope 2 emissions
	Set near-term Scope 1 neutralisation targets to address some residual emissions ahead of the net-zero target year.	Covers 100% of scope 1 emissions

Scope 3	Set scope 3 emissions reduction targets that cover all "high-impact"* scope 3 emissions on a net-zero pathway.	Covers 100% of scope 3 emissions
	Large companies should take responsibility for all Scope 3 emissions by the target year and thereafter , through mitigation by value chain partner or neutralisation.	
	ETC builds on this , supporting additional near-term Scope 3 neutralisation targets for companies that can pay for carbon removals credits ahead of the target year.	

A high-ambition corporate net-zero strategy



*"High-impact potential emissions" are defined as either: > 1% of total Scope 3 emissions or >10,000 tCO₂e per year; on the SBTi's list of emissions-intensive activities in any tier of the value chain; or significant categories of emissions from Tier 1 suppliers.

**"residual scope 3 emissions" are emissions that fall outside of the "high-impact potential emissions" categories.

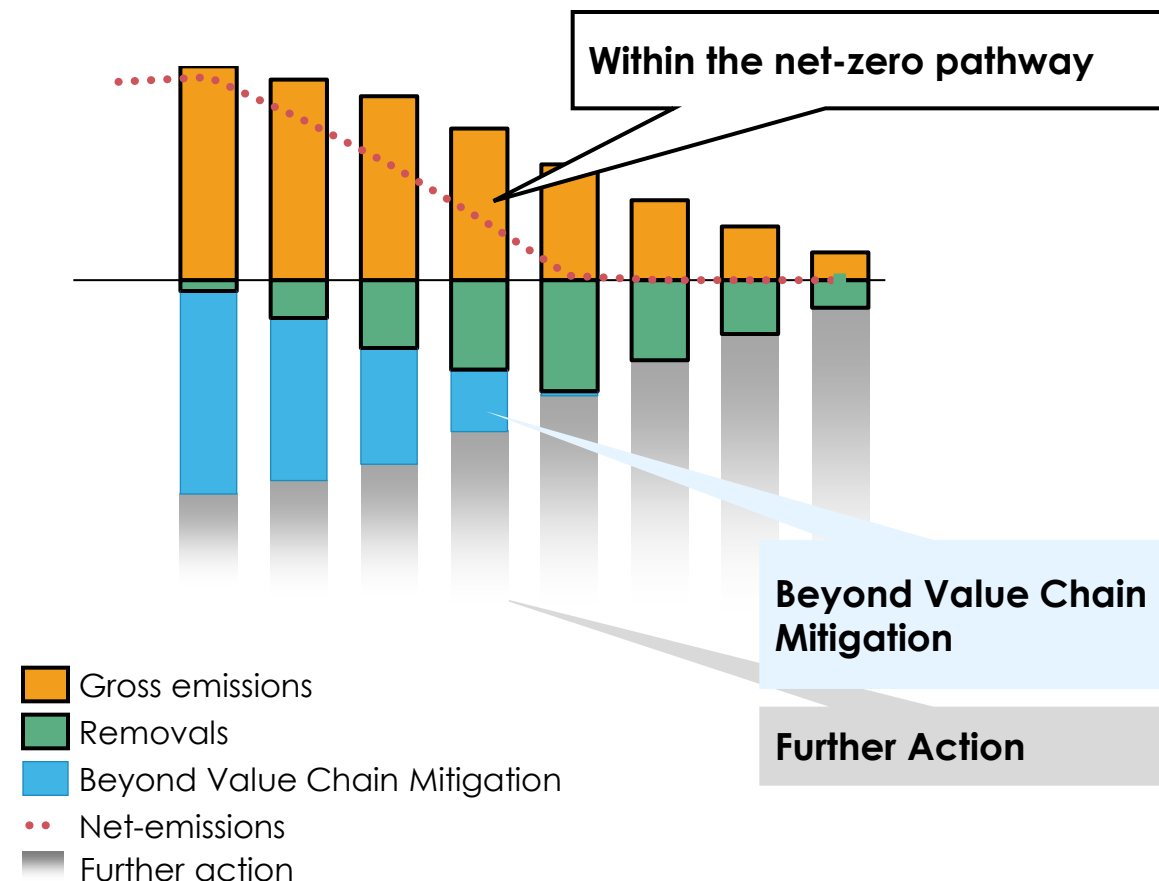
Beyond corporate net-zero pathways, corporates with the ability to pay can take further action to be 'net-zero' today

If possible, go beyond pathway Scope 1, 2 and 3 targets by setting “beyond value chain mitigation” (BVCM) targets, which can include use of high-quality removals credits, to offset ongoing emissions.

- **Companies can go above and beyond their net-zero corporate targets by addressing ongoing emissions** by providing additional finance to climate action beyond their own value chains e.g.,
 - funding carbon removals;
 - funding clean technology innovation;
 - funding restoration or conservation projects.
- **This can allow companies to be 'net-zero' today**, and not just at their target date
- **Recognition for BVCM efforts alongside reductions and neutralisation of value chain emissions** can give corporates reputational benefits as a leader in action towards reducing GHG emissions.
- **VCMI's Platinum Claim is similar**, requiring companies to account for 100% of its ongoing emissions with BVCM to achieve recognition.

A high-ambition corporate net-zero strategy


tCO₂e



Recognition of corporation action outside of net-zero pathway (BVCM) was not previously included in SBTi's CNZS V1.2. V2 proposes companies should gain additional recognition as an incentive for this effort.

ETC generally welcomes and endorses the proposals set out in the SBTi's Corporate Net-Zero Standard V2 for setting high-ambition corporate targets

ETC's view on SBTi's consultation

 1) Provisions for ambition <u>within</u> net-zero aligned pathway to reduce emissions	
Scope 1 & 2	<p>Set Scope 1 and Scope 2 emissions reduction targets to achieve net-zero as quickly as possible and compensate for any emissions overshoot on the pathway with both high-integrity carbon removals credits and a steeper pathway to net-zero targets.</p> <p>Set near- and long-term Scope 1 neutralisation targets based on a portfolio of carbon removals to address residual emissions ahead of the net-zero target year.</p>
Scope 3	<p>Set scope 3 emissions reduction targets that cover all "high-impact"* scope 3 emissions on a net-zero pathway.</p> <p>Large companies should take responsibility for all Scope 3 emissions by the target year and thereafter, either through mitigation by the value chain partner, or through neutralisation</p>


ETC suggests companies can go further by being 'net-zero' on the pathway to 2050 as well as at the target date

Scope 3

ETC supports additional near-term Scope 3 neutralisation targets for companies that have the ability to pay for carbon removals credits ahead of the target year. However, a company with high decarbonisation costs may drive more impact by prioritising reducing emissions within value chain, reaching 'net-zero' in target year.

Beyond the net-zero pathway

ETC supports that companies which can achieve net-zero today with BVCM should be encouraged and recognised for doing so. ETC recommendations in "Mind the Gap" previously laid out the need for this action. Companies may also go beyond this (e.g. by purchasing removals credits to account for historical emissions).

 2) Provisions for ambition <u>beyond</u> net-zero aligned pathway to reduce emissions	
<p>If possible, go beyond with pathway targets by setting "beyond value chain mitigation" (BVCM) targets, which can include use of high-quality removals credits, to counterbalance ongoing emissions.</p>	

Source: SBTi (2025) [SBTi Corporate Net-Zero Standard Version 2.0 – initial consultation draft with narrative](#).

*"High-impact potential emissions" are defined by SBTi as either: > 1% of total Scope 3 emissions or >10,000 tCO₂e per year; on the SBTi's list of emissions-intensive activities in any tier of the value chain; or significant categories of emissions from Tier 1 suppliers.