SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

ONGOING EMISSIONS RESPONSIBILITY: A FRAMEWORK FOR CREDIBLE AND COMPETITIVE CLIMATE ACTION

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Disclaimer

Setting the scene

Even the most ambitious corporate decarbonization targets leave a gap — the emissions that persist along the path to net-zero. These *ongoing emissions* continue to drive warming and must be managed with integrity and purpose.

The Science Based Targets initiative (SBTi) has developed a new Ongoing Emissions Responsibility (OER) framework that defines how companies can take credible, science-aligned action on these emissions. The framework introduces a staged approach to voluntary recognition today — and a clear roadmap toward mandatory responsibility in the future.

The OER framework marks a critical evolution in the Science Based Targets initiative's work to align corporate action with climate science. By defining a clear pathway from voluntary recognition to mandatory responsibility, it ensures that every company, regardless of sector, can play a role in contributing to conserving the global carbon budget. Early adopters will not only help shape this next frontier of credible climate leadership but will also gain a head start in building resilience, trust, and advantage in a world where responsibility for ongoing emissions becomes the new norm.

By establishing transparent levels of responsibility, pricing benchmarks, and recognition tiers, the OER framework enables broad participation while rewarding leadership ambition. It signals a new era of corporate climate accountability: one in which taking responsibility for ongoing emissions becomes a defining element of credible net-zero alignment and a necessary step toward long-term business viability in a carbon-constrained world.

This explanatory document first outlines key concepts (ongoing emissions, recognition, and responsibility) before exploring the development and structure of the OER framework presented in the second public consultation draft of the Corporate Net-Zero Standard (CNZS V2).

What are ongoing emissions?

Ongoing emissions are the greenhouse gases (GHG) a company continues to release during its target timeframe on the way to net-zero. They include everything the company still emits each year before it reaches its net-zero target. Residual emissions are a subset of ongoing emissions: they are the unabated emissions that remain in the company's net-zero year after the company has implemented all feasible abatement consistent with its science-based pathway. In short, all residuals are ongoing emissions, but not all ongoing emissions are residuals.

What does recognition mean in the CNZS V2 framework?

In CNZS V2, recognition refers to the SBTi's public acknowledgment of companies that voluntarily take responsibility for their ongoing emissions ahead of their net-zero target year. Recognition is displayed on the SBTi dashboard and through the claims companies are entitled to make. It is designed as an incentive for early leadership that allows companies to:

- Demonstrate accountability beyond their own value chain targets and toward global net-zero.
- Differentiate themselves in the market.
- Build credibility with investors, customers, and policymakers.

- Build readiness for a future in which a shrinking global carbon budget will make ongoing emissions responsibility a key expectation for credible climate action.

Why does ongoing emissions responsibility matter and what does it involve?

Even with ambitious science-based targets, companies continue to emit GHG while transitioning toward their net-zero year. These ongoing emissions consume the planet's limited carbon budget and continue to drive warming.

The OER framework was developed to address this challenge: incentivizing companies to act on their ongoing emissions now, in a way that complements rather than substitutes their science-based targets. Taking responsibility means going beyond direct mitigation to contribute to global progress toward net-zero.

Companies can act through two complementary pathways:

1. Delivering verified mitigation outcomes — supporting activities that reduce emissions from sources outside their value chain; conserve, protect and enhance natural carbon sinks, or capture and store carbon, beyond what is counted toward their own target; and
2. Deploying climate finance — funding eligible activities such as advanced market commitments, low- or zero-carbon R&D, mitigation-enabling interventions, adaptation and resilience, or loss and damage response.

These two approaches serve complementary goals. The first aims to deliver additional near-term mitigation outcomes that help achieve the global milestones of peaking emissions from now and halving them by 2030. The second aims to drive finance into the scale-up of nascent climate solutions and enabling systems that will make it possible to reach global net-zero by mid-century.

How was the Ongoing Emissions Responsibility framework developed?

The framework builds on years of work at the SBTi, beginning with the Above and Beyond report process launched in 2022. That research explored how companies could contribute to global mitigation efforts beyond their direct operations and supply chains.

While Above and Beyond (2024)[1] offered recommendations and best-practice guidance, consultations revealed that companies need stronger incentives to act. Survey results during the Above and Beyond report development process showed that formal recognition and credible claims are perceived as the most effective motivators for action beyond the value chain.

Building on this foundation, the CNZS V2 revision introduced a recognition framework for climate contributions. Importantly, this has evolved from a focus on contributions to "global mitigation" toward a broader framework of responsibility for ongoing emissions.

In this reframing, Beyond Value Chain Mitigation (BVCM) remains one mechanism for companies to take responsibility, but the scope has widened. The value-chain distinction proved limiting, as some mitigation actions, like removals, can occur both *inside and outside a*

[1] SBTi (2024). Above and Beyond. An SBTi report on the design and implementation of beyond value chain mitigation. https://files.sciencebasedtargets.org/production/files/Above-and-Beyond-Report-on-BVCM.pdf.

company's value chain. Moreover, companies may also wish to contribute to actions *beyond mitigation* such as adaptation or addressing loss and damage.

The emphasis is therefore placed on supplementary mitigation when discussing mitigation, while accommodating a wider set of climate contributions.

An iterative, evidence-based development process

To shape the OER framework, the SBTi convened Expert Working Groups (EWGs) and conducted multiple public consultations — the first from March to May 2025 and the second launching in mid-November 2025. Feedback from these processes has been instrumental in refining the framework to ensure it is credible, grounded in climate science and actionable.

The second consultation draft therefore represents an evolution from exploratory research to a structured recognition system that connects corporate climate action, accountability, and global mitigation outcomes.

How has the OER framework changed since the first CNZS V2 public consultation?

The OER framework in the second public consultation draft combines what was previously presented as two distinct frameworks in the first public consultation:

- Interim removal targets to proactively address residual emissions — we consulted on whether these should be required or recognized (detailed in Chapter 3.4)[2].
- Recognition for taking responsibility for ongoing emissions (detailed in Chapter 4).

In the second public consultation draft, these elements are now combined into a single, integrated framework for ongoing emissions responsibility. This change reflects findings from the first public consultation feedback, alongside additional feasibility and implementability analyses conducted by the SBTi.

Roughly 60% of respondents from the first public consultation indicated that mandatory interim removal targets could create barriers to entry — particularly for hard-to-abate sectors. Feasibility assessments confirmed this, showing that such requirements could impose disproportionate costs on lower-margin industries. As a result, the SBTi identified a voluntary recognition model as a more effective near-term mechanism to incentivize early action while maintaining broad corporate participation in decarbonization efforts.

Discussions with the Expert Working Groups (EWGs) on Beyond Value Chain Mitigation (BVCM) and Carbon Dioxide Removals (CDR) supported an integrated recognition approach on the basis that if interim removal targets were optional rather than mandatory, maintaining two overlapping recognition frameworks would add unnecessary complexity, risk confusing users, and could unintentionally disincentivize participation in one or both.

Conceptually, integration also strengthens coherence of the framework: in the first public consultation, removals addressed residual emissions while ongoing emissions responsibility addressed ongoing emissions. Because residual emissions are a subset of ongoing emissions,

[2] SBTi (2025). SBTi Corporate Net-Zero Standard. https://files.sciencebasedtargets.org/production/files/Net-Zero-Standard-v2-Consultation-Draft.pdf.

merging these frameworks allows companies to take responsibility across their entire decarbonization journey, dealing with impacts in real time rather than focusing solely on end-point projections.

What is the structure of the OER framework presented in the second public consultation draft?

The OER framework in the second public consultation draft defines how companies can take responsibility for their ongoing emissions both before and after 2035. It is designed to scale from voluntary recognition in the near term to mandatory responsibility over time — ensuring that all companies progressively align with global net-zero pathways.

The second public consultation OER framework comprises four core elements:

1. **Mandatory disclosure** of ongoing emissions responsibility;
2. **Optional recognition** for companies demonstrating proactive responsibility;
3. **A post-2035 responsibility requirement** for Category A companies; and
4. **Neutralization at the net-zero target year**, consistent with CNZS V1.

Mandatory disclosure and optional recognition take effect with the launch of CNZS V2, while post-2035 responsibility requirement and neutralization will become operational later. Their inclusion in V2 provides early visibility of future expectations, enabling companies to plan mid- and long-term strategies for compliance.

This section introduces what companies are required to do under the OER framework — and the analytical, scientific, and economic basis on which those requirements are built. It focuses on elements (2)–(4), which cover the recognition and responsibility phases.

Recognized status (CNZS-C23)

What is required?

Companies that take responsibility for at least 1% of their ongoing scope 1–3 emissions through supplementary climate contributions are eligible for “Ongoing Emission Responsibility Recognized” status.

They can choose one of two approaches:

- **Ex-post mitigation (“ton-for-ton”)** — Deliver verified, measurable mitigation outcomes equal to at least 1 % of ongoing emissions.
- **Carbon pricing (“money-for-ton”)** — Apply an internal carbon price to at least 1 % of ongoing emissions and direct the resulting budget toward eligible climate actions.

A minimum internal carbon price of USD 20 per tCO_2e is recommended for companies following the carbon price approach.

What is the basis?

The 1% threshold is designed for accessibility and feasibility.

- It was derived from cross-sector modeling of corporate profits, emissions intensity, and carbon-credit price data.
- Results indicated that a 1% contribution represents a meaningful but accessible starting point — high enough to create a signal of responsibility, but low enough to be feasible across diverse sectors and company sizes.

The USD 20 per tCO_2e benchmark is based on the SBTi research into current corporate internal carbon pricing, voluntary market averages, and compliance market prices.

Research into corporate carbon pricing practices focused on internal carbon fees, which involve applying a real monetary charge, either as a levy on business units or a ring-fenced budget allocation, to generate funds that are deployed toward mitigation. The SBTi focused on this category of carbon pricing, rather than shadow carbon pricing which is used to stress-test or cost optimise decisions in future carbon-constrained scenarios. This focus reflects the goal of the OER framework, which is to ensure that carbon pricing results in tangible financial flows towards climate action rather than serving as an instrument for internal analysis of carbon policy scenarios. In practice, only a minority of companies currently apply such budget-linked internal fees, but where they do, the rates were found to most commonly fall between USD 10 and USD 50 per tCO_2e, informing the feasibility of the USD 20 benchmark as an entry-level standard.

The minimum USD 20 carbon price recommendation was also found to sit within the lower band of compliance market prices[3] and broadly represents an average between low-cost reduction credits (typically around USD 5 per tCO_2e) and the prices of the most widely available removal credits today, such as afforestation and reforestation, which generally range between USD 15 and 40 per tCO_2e.[4]

This price is not intended to reflect best practice but is recommended as a minimum price to establish a consistent, feasible benchmark that can scale across sectors, offering an achievable starting point that still incentivizes meaningful action.

Leadership status (CNZS-C24)

What is required?

Companies that fully internalize the cost of climate change will receive the “Ongoing Emissions Responsibility Leadership” status.

To qualify, companies must:

- Apply a carbon price at least USD 80 per tCO_2e to 100% of ongoing emissions to determine a financial contribution budget, and
- Use this budget to support activities that deliver mitigation outcomes equivalent to 40% of ongoing emissions. The remaining financial budget can be used toward funding further tCO_2e outcomes or a wider range of eligible activities.

[3] For example, EU ETS (≈ EUR 75 per tCO2e), California Cap-and-Trade auction reserve price (≈ USD 25.87) and Regional Greenhouse Gas Initiative (≈ USD 18).
[4] Ecosystem Marketplace, State of Voluntary Carbon Market, 2025; CDR.fyi 2024 year in review.

What is the basis?

The 40% threshold for mitigation outcomes reflects the median ratio of cumulative carbon dioxide removals to cumulative emissions in filtered IPCC 1.5°C consistent pathways with no or limited overshoot. In other words, across these modelled pathways, around 40% of total emissions through the end of the century are balanced by removals. The SBTi uses this ratio as a proxy to establish the portion of ongoing emissions that companies should take responsibility for through verified mitigation outcomes.

The eligibility of activities that reduce emissions from sources outside companies' value chains and activities that protect, conserve and enhance natural carbon sinks, in addition to carbon removal activities, at this stage is intentional. Within a finite-budget framing, early and additional reductions and protection and enhancement of natural sinks can meaningfully conserve the remaining global carbon budget and lower the scale of removals required later to stabilize temperatures. Activities that result in outcomes quantified relative to counterfactual baselines rather than actual atmospheric changes for example, certain projects to protect natural carbon sinks - are subject to greater uncertainty and verification challenges. Their inclusion is justified only where baselines are robust, transparent, grounded in observable evidence and conservative, ensuring that claimed climate benefits correspond to real and additional mitigation.

The USD 80 benchmark draws on a literature review[5] where we assessed two carbon pricing approaches: the social cost of carbon (SCC) and marginal abatement cost (MAC) approaches (also known as the target-consistent approach).

The SCC estimates the economic damages from emitting an additional tonne of CO_2. Values vary widely depending on methodological assumptions such as the discount rate and time horizon, for example meta-analysis from Wang et al. (2019) finds that SCC estimates range from under USD 0/ tCO_2e to over USD 8,000/ tCO_2e.[6] while a recent study (Rennert et al., 2022)[7] suggests a central estimate of around USD 185 /tCO_2e.

The MAC approach estimates the carbon price required to achieve temperature-aligned pathways. The *High-Level Commission on Carbon Prices* (2017)[8] found prices of USD 50–100 /tCO_2e by 2030 consistent with "well-below 2°C" pathways, while 1.5°C-consistent scenarios typically imply prices above USD 200 /tCO_2e by 2030 (IPCC AR6 WG III; NGFS Net Zero 2050).

Positioning the minimum carbon price requirement at USD 80 /tCO_2e anchors the SBTi's *Leadership level* within a credible range for Paris alignment. While 1.5°C-consistent pathways generally imply higher future prices, setting the threshold near the upper bound of the 2°C-consistent range provides an actionable and evidence-based floor for corporate internal pricing. This ensures that participating companies apply a level of ambition that reflects both current feasibility and the direction of travel implied by the transition to a 1.5°C-aligned economy. This carbon price will be periodically reviewed to remain consistent with evolving 1.5°C-aligned carbon-price evidence, and inflation adjustments.

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[5] SBTi (2024). Above and Beyond: An SBTi report on the design and implementation of beyond value chain mitigation.
[6] Wang, P., Deng, X., Zhou, H. & Yu, S. (2019). Estimates of the social cost of carbon: a review based on metaanalysis. J. Clean. Prod. 209, 1494–1507. https://doi.org/10.1016/j.jclepro.2018.11.058.
[7] Rennert, K., Errickson, F., Prest, B. C., Rennels, L., Newell, R. G., Pizer, W. A., & Kingdon, C. (2022). Comprehensive evidence implies a higher social cost of CO_2. Nature, 610, 687–692.
[8] Carbon Pricing Leadership Coalition. (2017). Report of the High-Level Commission on Carbon Price.

Post-2035 Responsibility (CNZS-C28)

What is required?

From 2035, mandatory responsibility for ongoing emissions will be introduced for all Category A companies. These companies must take responsibility for a portion of their ongoing emissions through ex-post mitigation outcomes that reduce or remove carbon from the atmosphere and store it in either short-lived or long-lived reservoirs.

This marks the transition from voluntary recognition to binding responsibility. Companies will be required to deliver quantified mitigation outcomes, including a defined share of long-lived removals (capable of storing carbon for centuries to millennia).

The specific proportion of long-lived removals will be defined in future revisions of the Standard, informed by emerging science and updated feasibility analysis prior to 2035.

What is the basis?

The responsibility level will be determined through public consultation and pilot testing. Initial feasibility analysis, including estimates of the future cost of removals and sectoral affordability modelling indicate that 1% of ongoing scope 1-3 emissions could serve as a meaningful starting point.

The long-lived removals requirement reflects current climate-science consensus that durable carbon storage will be essential to neutralize residual emissions after 2050. As this requirement is operational from 2035, this version of the Standard does not specify the required share of long-lived removals, which is expected to change in line with emerging science over the coming decade.

Why 1% could be a meaningful starting point

The responsibility threshold by 2035 is under exploration as part of the consultation process. SBTi conducted a preliminary feasibility assessment that combined sector-average emissions and financial data with market-average removal cost estimates to gauge affordability across industries, emphasizing adoption feasibility rather than climate science as the primary rationale for determining the minimum responsibility requirement.

Early results from this analysis indicate that the 1% responsibility level could be a measured starting point, as it is small enough to be achievable, yet significant enough to matter. Even at this level, the financial implications would be material across sectors.

In emissions-intensive sectors such as chemicals, applying sector-average emission and financial estimates indicates that meeting a 1% responsibility level would already require allocating roughly 0.4% of annual profit, around USD 15 million under conservative price assumptions. Raising responsibility to 5% or 10% increases this to about 1.7% and 3.5% of profits, or USD 77–153 million per year.

In contrast, for a non-emissions-intensive sector such as food, drink and tobacco, the same 1% requirement would equate to roughly 0.1% of profit, or USD 5 million, a meaningful contribution that would scale as responsibility levels rise.

The aim is to establish a responsibility level that balances feasibility with ambition, ensuring broad participation across sectors and beginning to internalize the financial cost of ongoing emissions.

A linear scale-up from 1% to 100% by 2050 will provide a steady, predictable trajectory allowing companies and markets to build capacity, mobilize finance, and avoid cost shocks on the path toward full responsibility

Net-zero target year (CNZS-C29)

What is required?

At their net-zero target year, all companies — regardless of category — must neutralize 100 % of residual emissions across scopes 1, 2, and 3.

At this stage, companies are required to adhere to the following storage durability requirements:

- 41% of residual emissions must be removed and stored in long-lived reservoirs, and
- 59% may be addressed through short-lived reservoirs, additional long-lived removals, or a combination of both.

What is the basis?

This neutralization requirement reflects the scientific definition of net-zero: anthropogenic emissions of greenhouse gases must be balanced by anthropogenic removals over a specified period, stabilizing global temperatures. This 41:59 ratio mirrors the mix of carbon dioxide removals found in the subset of 1.5°C-consistent IPCC AR6 pathways, filtered for sustainability, feasibility, and technological readiness, aligning with the rationale described in the SBTi Pathways Appendix[9].

The neutralization rules are not intended to enforce a strict like-for-like correspondence between the source and sink of each emission and removal, but rather to maintain alignment with the scientific assumptions embedded in IPCC mitigation pathways. The Integrated Assessment Models underlying these pathways, treat all CO_2 removals as durably stored, whether in the biosphere or in geological reservoirs. These models apply simplified representations of the carbon cycle and generally do not capture biological turnover processes (e.g., decomposition of biochar or soil carbon), natural disturbance risks, or feedbacks between climate change and biospheric carbon stability.

The framework therefore defines neutralization in terms of achieving a portfolio of removals consistent with the long-lived and short-lived storage mix observed in those scenarios, rather than prescribing individual storage durations. This ensures coherence with the modelling basis of the SBTi target setting framework, while recognizing that future refinements in the understanding and representation of storage durability may enable a more differentiated treatment of removal approaches over time.

[9] SBTi (2025). Cross sector pathway documentation (Note that the revised version of this document will accompany the CNZS draft for public consultation).

Why should companies take responsibility for ongoing emissions?

Taking responsibility for ongoing emissions is increasingly recognized as a marker of credible climate strategy — and a source of long-term business advantage. By acting early, companies can:

- Mitigate transition and technology risk by funding emerging mitigation and removal technologies, hedging against future cost and regulatory exposure.
- Secure access to capital as investors increasingly evaluate climate responsibility and resilience.
- Enhance supply chain resilience through climate finance that supports nature-based and adaptation solutions protecting assets and operations.
- Differentiate their brand and strengthen stakeholder trust through tangible, transparent action.
- Attract and retain talent seeking purpose-driven employers.
- Build social license to operate, demonstrating that corporate success contributes to planetary stability.

In short, ongoing emissions responsibility is both a climate imperative and a competitive strategy: a way for companies to lead with integrity while preparing for the inevitable expectations of a net-zero global economy.