

Science-Based Targets - Northmore Gordon

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Science-Based Targets

The Science Based Targets initiative (SBTi) is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). SBTi provides a framework for organizations to set greenhouse gas reduction targets aligned with climate science. Targets are considered 'science-based' if they align with what the latest climate science deems necessary to meet the Paris Agreement goals—limiting global warming to well-below 2 degrees C above pre-industrial levels and pursuing efforts to limit warming to 1.5 degrees C. SBTi offers sectoral guidance and is developing a Net-Zero standard. For organizations developing carbon strategies, SBTi provides an external reference framework that connects emissions reduction commitments to climate-science requirements.

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What is the Science Based Targets initiative (SBTi)?

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What makes a target 'science-based' according to SBTi?

A target is considered 'science-based' if it aligns with what the latest climate science deems necessary to meet the Paris Agreement goals of limiting global warming to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C. Science-based targets therefore reflect the emissions reductions required at the organizational or sectoral level to contribute to global climate stabilization. Rather than representing an arbitrary reduction percentage, a science-based target connects an organization's decarbonization pathway to global climate requirements. This distinction

matters for organizations seeking credible, externally validated reduction commitments that stakeholders and regulators can assess against climate objectives.

How do science-based targets relate to organizational emissions reporting and transition planning?

Science-based targets provide a framework that connects organizational emissions inventories to decarbonization pathways with external credibility. An organization must first establish its Scope 1, 2 and 3 emissions baseline through a recognized accounting methodology before setting science-based reduction targets. The target then drives transition planning—defining the specific operational, procurement and investment changes needed to achieve the reduction. This creates accountability: the target becomes measurable against actual performance through ongoing emissions reporting. For organizations subject to NSW Climate Change Mitigation and Adaptation Plans or sustainability reporting requirements, science-based targets can provide the strategic foundation for demonstrating genuine decarbonization progress rather than relying on unverified assumptions.

Does SBTi provide different guidance for different sectors and organization types?

Yes, SBTi has developed specific sectoral guidance recognizing that different industries face different decarbonization opportunities and constraints. Sector-specific methods account for technology maturity, competitive dynamics, and the role of energy efficiency versus renewable energy or electrification within each industry. For example, industrial facilities, commercial buildings, water utilities, and food and beverage manufacturers may have different relevant pathways and baseline assumptions. SBTi's sectoral approach ensures that science-based targets remain technically feasible and commercially credible within each business context. Organizations should select guidance applicable to their primary activity rather than applying a generic corporate target methodology.

What is SBTi's Net-Zero standard and why is it being developed?

SBTi is developing a Net-Zero standard to provide methodology and verification for organizations pursuing net-zero emissions commitments beyond interim science-based targets. The standard addresses the distinction between physical emissions reductions and the use of carbon credits or offsets, ensuring that net-zero claims remain credible and aligned with climate science. A net-zero pathway typically involves reducing absolute emissions as far as feasible through operational and investment changes, then using verified carbon credits or renewable attributes only for residual emissions that cannot be eliminated. This distinction is important because purchasing offsets without underlying operational change does not constitute genuine decarbonization. The Net-Zero standard helps organizations structure transition plans that combine measurable performance improvements with appropriate use of environmental instruments.

How can an organization develop a science-based target aligned with SBTi requirements?

Developing a science-based target requires several foundational steps. First, establish a complete Scope 1, 2 and 3 emissions inventory using a recognized framework such as the GHG Protocol Corporate Standard. Second, select the applicable SBTi sectoral guidance and identify the baseline year and reduction pathway relevant to your industry and business model. Third, determine the absolute reduction percentage and target year consistent with the 1.5°C or 2°C warming scenario specified in your sectoral guidance. Fourth, develop a transition plan that connects the target to specific operational, procurement and investment changes—energy efficiency improvements, electrification, renewable energy procurement, and carbon management across the value chain. Finally, establish measurement and verification processes to track progress annually against the stated target. We provide emissions inventory, transition planning and carbon advisory services to support this process.

What is the difference between a science-based target and a voluntary net-zero strategy?

A science-based target is an interim emissions-reduction commitment grounded in climate-science requirements and verified against recognized methodology such as SBTi's sectoral guidance. A

net-zero strategy is a longer-term commitment to eliminate residual emissions through a combination of physical reductions and verified carbon credits or offsets. Science-based targets typically have a defined time horizon (such as 2030 or 2035) and specify absolute reduction percentages. Net-zero strategies typically target 2050 or later and explicitly address the role of carbon instruments alongside operational improvements. An organization might set a science-based target for 2030, then develop a complementary net-zero strategy for 2050 that extends the reduction pathway. The science-based target provides near-term accountability; the net-zero strategy provides long-term directional commitment. Both benefit from underlying transition planning that defines specific actions and measurement approaches.

How do science-based targets interact with regulatory emissions-reduction requirements such as NSW CCMAPs?

Science-based targets and regulatory requirements such as NSW Climate Change Mitigation and Adaptation Plans serve different but complementary purposes. An CCMAP is a compliance obligation for licensed premises exceeding 25,000 tonnes CO₂-e of Scope 1 and 2 emissions in any of the previous three financial years. It requires documented emissions assessment, planning and implementation support. A voluntary science-based target aligns that mandatory planning with externally credible climate-science benchmarks. Rather than treating a CCMAP as a standalone regulatory exercise, an organization can map its CCMAP emissions and transition plan against SBTi sectoral guidance to verify that planned reductions are at least aligned with 1.5°C or 2°C science-based pathways. This approach provides regulators with evidence of genuine commitment while helping the organization distinguish between minimum compliance and authentic decarbonization progress.

What role do carbon credits and renewable energy attributes play in achieving science-based targets?

Science-based targets typically distinguish between absolute emissions reductions achieved through operational and procurement changes, and the use of carbon credits or renewable energy attributes. An organization pursuing a science-based target should prioritize physical reductions—energy efficiency, electrification, renewable heat adoption, and sustainable procurement—as the primary mechanism for meeting the target. Renewable electricity attributes such as LGCs or REGOs can support Scope 2 accounting under the GHG Protocol Scope 2 Guidance but should not be counted as reductions of Scope 1 or Scope 3 emissions. Carbon credits such as ACCUs can address residual emissions that cannot be eliminated through operational change, but should be applied transparently and with clear documentation of the underlying abatement. The credibility of a science-based target depends on demonstrating that the majority of the reduction comes from measurable operational improvement, not from offsetting.