GLOBAL CCS INSTITUTE

SUBMISSION

SBTi Draft Corporate Net-Zero Standard Version 2.0

May 2025

Background on the Institute's Submission

The Global CCS Institute recently submitted a formal response to the Science Based Targets initiative (SBTi) consultation on its draft *Corporate Net-Zero Standard Version 2.0*. While the Institute supports efforts to create rigorous, science-based climate standards, the submission raises serious concerns with the draft's definition of "zero-carbon electricity," which explicitly excludes fossil-based generation with carbon capture and storage (CCS). This exclusion undermines the role of CCS in net-zero pathways recognised by the IPCC and IEA, and contradicts SBTi's own stated commitment to technology neutrality. In our submission, the Institute calls for a more consistent, evidence-based approach that assesses all technologies according to their actual lifecycle emissions performance rather than pre-emptively excluding entire categories. The full submission is included below.

Submission to SBTi

The Global CCS Institute (Institute) is an international think tank whose mission is to accelerate the deployment of carbon capture and storage (CCS) to achieve Net Zero. Our diverse and unrivalled membership includes governments, global corporations, private companies, research bodies, and non-governmental organisations, all committed to CCS as an integral part of a low-carbon energy future.

We respectfully submit the following comments on SBTi's draft Corporate Net-Zero Standard Version 2.0, specifically regarding the definition of "zero-carbon electricity". Our high-level comments are summarised below, and we provide more detailed discussions after:

- CCS is critical to reaching net zero. Key Intergovernmental Panel on Climate Change (IPCC) and International Energy Agency (IEA) analyses recognise the importance of CCS as part of net-zero scenarios. SBTI uses these same references, yet explicitly excludes CCS technologies from consideration in this standard.
- The draft standard is inconsistent with SBTi's own procedures. SBTi's Standard Operating Procedure for Development of Standards emphasises that standards shall be technology agnostic; however, with the exclusion of CCS, disregards its own procedures.
- The draft standard should be technology agnostic. SBTi's draft standard shows technology bias by excluding embodied emissions from some electricity sources to fit them into the zero-carbon category, even though all electricity-generating sources have some greenhouse gas (GHG) emissions, which is well-documented.

See, for example, this U.S. National Renewable Energy Laboratory meta-analysis: https://docs.nrel.gov/docs/fy13osti/57187.pdf.

- Importance of consistent lifecycle analysis. SBTi should be technology agnostic and mathematically accurate. Technologies should receive the appropriate credit based on clearly defined lifecycle analysis instead of excluding an entire class of technologies that are still evolving and will play a critical role, globally, for decades to come.
- Consider GHG Protocol Guidance currently in development. SBTi should avoid adding rules on top of the GHG Protocol's Land Sector and Removals Guidance unless there is a need for clarification. Even if those rules are yet to be finalized, a significant amount of effort has gone into crafting them. New definitions or rules would create unnecessary confusion.

Our recommendations:

- In light of the above comments, we strongly encourage SBTi to remove the following text: "Fossil-fired electricity with carbon capture and sequestration (CCS) and certain renewable resources, such as sustainably sourced biomass, are not classified as zero-carbon due to potential emissions associated with their lifecycle and operational practices (adapted from Climate Group)."
- Instead, we recommend that zero- and/or low-carbon electricity be defined by an emissions intensity threshold rather than by excluding categories of power generation where technologies are still evolving, including those that can remove CO_2 directly from the atmosphere.

Both the IPCC and the IEA recognise fossil-fuel power generation with CCS as a technically viable option in global net-zero scenarios. The IPCC's Sixth Assessment Report indicates that achieving 1.5°C pathways involves transitioning from unabated fossil power to low- or zero-carbon energy sources, including renewables or fossil fuels with CCS.[1] Similarly, the IEA's net-zero emissions roadmap describes CCS/CCUS as an essential technology for reaching net-zero goals.[2] These analyses demonstrate that, when coupled with high CO_2 capture rates and the effective management of upstream emissions, fossil-based electricity with CCS can contribute to a near-zero-carbon power supply alongside renewables and nuclear. We also call to your attention the European Union (EU)'s Sustainable Taxonomy[3]

[1] IPCC (2022), "AR6 Summary for Policymakers Headline Statements"
[2] IEA (2020), "CCUS in the transition to net-zero emissions"
[3] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, OJ L 198/13

and complementary delegated act[4], which recognise electricity generation from fossil gaseous fuels with CCS as sustainable under strict conditions. Specifically, to be taxonomy-compliant, such projects must achieve lifecycle GHG emissions of less than 100g CO_2e per kWh or a direct GHG emissions intensity of less than 270g CO_2e/kWh, applicable only when the facility's construction permit is granted before 31 December 2030. Beyond the IPCC, IEA and EU, the United Kingdom (UK) has also acknowledged the role of CCS in decarbonising power generation. Notably, the UK proposed the Dispatchable Power Agreement (DPA)[5], a business model designed to provide revenue certainty through long-term contracts for difference. By incentivising high capture rates, the DPA aims to enable natural gas-fired power plants with CCS to serve a mid-merit role, alongside renewable electricity and nuclear power, in balancing electricity demand.

We note that the current consultation draft defines zero-carbon electricity as electricity with total GHG emissions per unit of generation less than or equal to zero (accounting for direct and fuel-cycle emissions), explicitly excluding fossil fuel-based electricity with carbon capture and storage and sustainably sourced biomass on the basis of potential lifecycle and operational emissions.[6] The definition also excludes embodied emissions related to the construction of electricity infrastructure. The draft standard states that this definition has been adopted from the Climate Group. However, despite an extensive search, we have been unable to identify the source document. We would appreciate access to this document for review.

While we appreciate SBTi's commitment to rigorous climate integrity, we believe that such a narrow definition fails to recognise the critical role of the suite of CCS technologies in our common ambition to reach net zero. A robust, science-based standard needs to be inclusive of all viable decarbonisation solutions, taking into account full lifecycle emissisions analysis as opposed to excluding an entire class of generation that will play a critical role for decades to come, especially when firm power demand driven by AI and data centers is increasing the recognition of the need for fossil-fuel power generation with CCS.[7] Moreover, there are over 2,200 coal power plants[8] and over 2,000 natural gas

[4] European Commission (2022), Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139 as regards economic activities in certain energy sectors and Delegated Regulation (EU) 2021/2178 as regards specific public disclosures for those economic activities

[5] https://assets.publishing.service.gov.uk/media/6373993e8fa8f559604a0b8b/ccus-dispatchable-power-agreement-business-model-summary.pdf

[6] SBTi (2025), "SBTi Corporate Net-Zero Standard Version 2.0 – Initial Consultation Draft with Narrative"

[7] https://www.carbon-direct.com/insights/from-capture-ready-to-capture-committed-decarbonizing-natural-gas-with-ccs

[8] https://www.statista.com/statistics/859266/number-of-coal-power-plants-by-country/

power plants[9] operating worldwide. The majority of coal power plants are in China (1,161), followed by India (285) and the United States (204). Some of these plants are expected to be operational for years to come. For example, the IEA reported that the average age of coal plants is under 15 years in both China and India.[10] IEA also reported that natural gas demand in the electricity sector grew by 2.8% year-on-year, driven by strong increases in North America and in fast-growing markets in Asia and Eurasia.[11] Decarbonising these coal and natural gas fleets will be critical in helping us reach net zero. We would also like to share a recent study by the Oxford Institute for Energy Studies, which highlights the role of gas plants with CCS and shows that their lifecycle emissions can be comparable to wind and solar.[12]

We believe the SBTi standard should reflect this understanding by evaluating outcomes (actual emissions intensity) rather than excluding entire classes of technologies. This approach is consistent with SBTi's technology-agnostic stance as required by the Standard Operating Procedure for Development of SBTi Standards.[13] Achieving a net-zero economy will require a portfolio of solutions, and we believe a science-based, inclusive approach will send the right market signals to all low-carbon technologies.

We acknowledge the concerns that may have led to excluding fossil generation with CCS under the current draft, namely, the potential for non-trivial lifecycle and operational emissions. These concerns are valid and highlight the need for robust evaluation. Rather than a blanket exclusion, however, we advocate for a more nuanced, evidence-based framework to assess power with CCS. This could involve establishing stringent eligibility criteria or benchmarks for lifecycle emissions performance. For instance, plants with CCS could be required to demonstrate a high CO_2 capture rate, minimise methane fugitives in their fuel supply chains, and comply with best-practice monitoring and reporting standards. For example, oxyfuel power generation with CCS can effectively capture all CO_2 produced during fuel combustion. By setting a clear threshold (e.g., a specific kg of CO_2e per MWh limit that reflects near-zero emissions), SBTi can ensure only truly low-carbon CCS projects qualify, addressing performance variability on a case-by-case basis. Such an approach would maintain the Standard's integrity while incentivising continuous improvement and

[9] https://www.statista.com/statistics/1281761/number-of-gas-power-plants-by-country/
[10] https://www.iea.org/data-and-statistics/charts/average-age-of-existing-coal-power-plants-in-selected-regions-in-2020
[11] Natural gas – Global Energy Review 2025 – Analysis - IEA
[12] https://www.oxfordenergy.org/wpcms/wp-content/uploads/2025/05/Insight-168-Lifecycle-emissions-of-gas-with-CCS.pdf
[13] SBTi (2023), "Standard Operating Procedure for Development of SBTi Standards", s.55e

innovation in carbon capture technologies and preserving the value of diverse power generation options.

Moreover, the draft SBTi standard requires companies to report in accordance with the GHG Protocol Draft Land Sector and Removals Guidance. This standard specifies that companies should not report emissions in scope 1, scope 2, or scope 3 categories for any CO_2 that is captured and stored, provided it meets the geological storage requirements and accounts for all emissions from the capture process. SBTi should avoid adding rules on top of the GHG Protocol Guidance unless there is a need for further clarification. Even if the Guidance is yet to be finalised, introducing additional zero-carbon electricity targets as an alternative to scope 2 market-based emissions reduction targets complicates the reporting process and may create inconsistencies and confusion with the GHG Land Sector and Removals Guidance.

The Global CCS Institute shares SBTi's mission to accelerate decarbonisation in line with climate science. We are keen to contribute our technical expertise and real-world experience with CCS to help refine the Standard's criteria for zero-carbon electricity. We respectfully request the opportunity to participate in upcoming stakeholder consultations or technical working group discussions on this topic. An open dialogue will enable us to provide data and insights (for example, on lifecycle assessments of CCS-equipped power, global project experience, and advancements in emissions controls) that can inform a balanced, robust methodology.