

Biomass Combustion in IPCC, GHG Protocol, SBTi, and CDP

Key Takeaways

- ① IPCC Guideline does NOT treat bioenergy as carbon neutral.
- ② GHG Protocol, SBTi, and CDP require reporting of biogenic CO2 emissions.

① IPCC Guideline does NOT treat bioenergy as carbon neutral.

According to the IPCC guideline (2006),¹

Biomass is a special case:

- Emissions of CO2 from biomass fuels are estimated and reported in the AFOLU sector as part of the AFOLU methodology. In the reporting tables, emissions from combustion of biofuels are reported as information items but not included in the sectoral or national totals to avoid double counting. (…)
- For biomass, only that part of the biomass that is combusted for energy purposes should be estimated for inclusion as an information item in the Energy sector.

According to Task Force on National Greenhouse Gas Inventories' "Frequently Asked Questions,"² it says, in response to a question "According to the IPCC Guidelines CO2 Emissions from the combustion of biomass are reported as zero in the Energy sector. Do the IPCC Guidelines consider biomass used for energy to be carbon neutral?", it says,

¹ 2006 IPCC Guidelines for National Greenhouse Gas Inventories, 2.3.3.4 TREATMENT OF BIOMASS

https://www.ipccnggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf

² <https://www.ipcc-nggip.iges.or.jp/faq/faq.html>

The approach of not including these emissions in the Energy Sector total should not be interpreted as a conclusion about the sustainability, or carbon neutrality of bioenergy.

(...) Thus, the IPCC Guidelines do not automatically consider or assume biomass used for energy as "carbon neutral", even in cases where the biomass is thought to be produced sustainably.

② GHG Protocol, SBTi, and CDP require reporting of biogenic CO2 emissions.

Excerpts from GHG Protocol Scope 2 Guidance³

"6.12 Treatment of Biofuel Emissions" (p. 57) says that **biomass "still produces GHG emissions and should not be treated with a 'zero' emission factor"** and that "the CO2 portion of the biofuel combustion shall be reported outside the scopes. In practice, this means that any market-based method data that includes biofuels **should report the CO2 portion of the biofuel combustion separately from the scopes.**"

7.2 "Recommended Disclosures" (p. 61), "Biogenic Emissions" says that "**Companies should separately report the biogenic CO2 emissions from electricity use (e.g. from biomass combustion in the electricity value chain) separately from the scopes.**"

The final draft of the GHG Protocol "Land Sector and Removals Guidance"⁴

The final draft of the GHG Protocol "Land Sector and Removals Guidance," which is expected to be finalized and published in 2024, states in 5.4.2 Scope 2 Emissions that "**Companies should separately account for fossil and biogenic emissions by determining the grid-average emission factors for fossil CO2 emissions vs biogenic CO2 emissions of purchased electricity, steam, heating, and cooling sourced from an electric grid or other distribution system. Companies should report each portion separately (fossil and biogenic), following the accounting and reporting requirements.**"

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https://ghgprotocol.org/sites/default/files/ghgp/standards/Scope%20%20Guidance_Final_0.pdf

⁴ <https://ghgprotocol.org/sites/default/files/2022-12/Land-Sector-and-Removals-Guidance-Pilot-Testing-and-Review-Draft-Part-1.pdf>

Excerpts from the SBTi Corporate Net-Zero Standard⁵

Section 4.2.2, "Calculate emissions that are reported separately from the GHG inventory," states that "To meet SBTi criteria, companies that use bioenergy must report direct CO2 emissions from biomass combustion, processing, and distribution, as well as the land-use emissions and removals associated with bioenergy feedstock. These emissions are reported separately from the company's GHG inventory, in line with Greenhouse Gas Protocol guidance."

7.2 C11 "Bioenergy accounting" states that "CO2 emissions from the combustion, processing and distribution phase of bioenergy and the land use emissions and removals associated with bioenergy feedstocks, shall be reported alongside a company's GHG inventory," meaning that companies must report CO2 emissions from biomass combustion.

CDP 2023 questions that are relevant to GHG emissions from biomass combustion

C6.1: What were your organization's gross global Scope 1 emissions in metric tons CO2e?

*Non-CO2 emissions from biomass/fuel combustion should be reported in this question.

C6.7: Are carbon dioxide emissions from biogenic carbon relevant to your organization?

*Companies should respond "Yes" to this question if biomass/fuel combustion is relevant to their organization.

C6.7a: Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

*CO2 emissions from biomass/fuel combustion should be reported in this question.

⁵ <https://sciencebasedtargets.org/resources/files/Net-Zero-Standard.pdf>