

IOGP Europe views on the methodologies for the certification of carbon dioxide removals

Executive summary

To achieve the European Union's target of climate neutrality by 2050, carbon dioxide removals (CDR), which encompass natural and technological solutions to extract CO₂ from the atmosphere and store it long-term, must complement emissions reduction efforts. Scaling these solutions while maintaining environmental integrity and aligning with existing climate policies is essential. Robust certification methodologies will play a pivotal role in ensuring high-quality carbon removals.

While progress has been made with frameworks such as the Carbon Removals and Carbon Farming (CRCF) Regulation, challenges persist. IOGP Europe, as a member of the European Commission's expert group on carbon removals, would like to contribute to the debate by providing views on the proposed methodology.

Certification methodologies for industrial carbon dioxide removals

According to Article 8 of the Carbon Removals and Carbon Farming (CRCF) Regulation (EU/2024/3012), the Commission should establish detailed certification methodologies for permanent carbon removal activities.

As part of this work, in October 2024, the European Commission presented to the Carbon Removal Expert Group a draft methodology¹ for the European Union's Carbon Removal Certification Framework through DACCS/BioCCS, to which IOGP Europe would like to provide initial feedback. While welcoming this proposal, we consider some refinements should take place to ensure these methodologies are comprehensive, effective, and fit for purpose. At the same time, it is important to acknowledge that few projects are operational as today, making it crucial for the framework to remain flexible and for provisions to evolve as progress is made. In this context, we would like to point out the following aspects:

- The current definitions and text within the ICF methodology restrict BioCCS to "oxidative processes," inadvertently excluding several important forms of carbon capture and storage (CCS) that utilize biogenic CO₂, such as from biomethane oxidation or biomethane production by anaerobic digestion. This exclusion risks undermining the potential of diverse Bio-CCS technologies that contribute to achieving the EU's climate goals by removing carbon dioxide from the atmosphere. We call for a need to revise the ICF methodology to ensure a more inclusive definition of BioCCS.
- Several BECCS (Bioenergy with Carbon Capture and Storage) projects, such as those announced by Ørsted and Stockholm Exergi, are underway in Europe, with additional projects currently under development. These projects, set to commence after 2026, intend to issue carbon credits through independent carbon standards like Verra Verified Carbon Standard (VCS). It would be important if the Commission could ensure the pathway for those projects to become eligible under the CRCF certification framework. Moreover, we also encourage the European Commission's Carbon Removal Expert Group to leverage the work of the CCS+ Initiative², a multi-stakeholder alliance developing robust carbon accounting methodologies for CCS. Its unique modular approach promotes high environmental integrity and facilitates implementation through collaborative CCS hubs and shared infrastructure, enabling the efficient and scalable deployment of multiple CCS technologies.

¹ Support to the development of methodologies for the certification of industrial carbon removals with permanent storage - Draft technical specifications for the certification of permanent carbon removals through DACCS/BioCCS, ICF 1 October 2024.

² More information available here: <https://ccsplus.org/>

- On the quantification of associated GHG for the installations capturing CO₂ from point sources of biogenic emissions, the proposed calculation methodology only considers the capture unit allocated to the biogenic CO₂ stream. We believe that for capture units operating on a mix of fossil and biogenic CO₂ the GHG emissions associated with the capture process should be allocated partly to the biogenic and partly to the fossil CO₂ stream. Therefore, we consider that the equation should be revised as follows: $GHG_{capture} = FB * (GHG_{facility} + GHG_{inputs})$.
- As regards the transport of CO₂, the methodology proposes a segmented approach to allow the allocation of transport-related emissions. To enhance monitoring, a reference to the EU ETS framework could be included, leveraging the time-lag in reporting quantified removals as a practical solution for ensuring accurate and timely reporting.
- Under the section on the quantification of fugitive, vented, and leaked emissions of captured CO₂ for storage of CO₂, there is no sound rationale to exclude the inclusions of quantified carbon removals during hours in which there was a leakage event or significant irregularity. Net carbon removal benefit can still be demonstrated, and the CCS Directive requires absence of leakage prior to transfer of responsibility to the state. As in the inclusion of storage sites under the EU ETS Directive, leakages (and surrender of emission allowances) are quantified and managed within the year that they occur. Furthermore, the current formula for quantification of storage losses implies that any leakage from the storage site is counted twice. For these reasons, we propose removing the term $CO_{2,irregularity,S}$ in the formula for CO₂ storage losses, as well as the corresponding mention in the introductory chapter's section on CO₂ storage.
- The sustainability criteria currently outlined in the section on storage of CO₂ fails to incorporate existing and well-established EU standards. We suggest aligning it to those already in place, such as those detailed in Article 29 (paragraphs 2-7) of the Renewables Energy Directive³ on biofuels, bioliquids and biomass.
- The proposed draft refers to the emission factors that should be considered for the purpose of these methodologies. We believe that centralizing lifecycle emission factors into a unified reference point could contribute to ensure consistent and transparent assessments across sectors, promoting uniformity in carbon removal calculations.
- Another important aspect to consider is the interaction of the EU methodology and the existing methodologies at a global level. The divergence of certification methodologies across the EU and globally risks market fragmentation, hindering cross-border projects and slowing the adoption of innovative solutions. In this context, ensuring alignment with international frameworks, such as the mechanism under Article 6 of the Paris Agreement, can help facilitate the global carbon market and enhance the credibility and interoperability of certification schemes.
- Finally, we believe that de-risking and adequately funding carbon removal technologies is essential to achieving the EU's climate goals and addressing residual emissions in hard-to-abate sectors. While we welcome existing EU funding mechanisms, they remain insufficient and often place excessive administrative and financial burdens on applicants, making access unnecessarily complex. Many of these mechanisms also fail to provide adequate early-stage support, creating a funding gap that could hinder the development and deployment of critical carbon removal technologies.

A key issue is the persistent lack of clarity on what Carbon Dioxide Removal (CDR) truly entails and how it differs from other mitigation approaches, such as Carbon Capture and Storage (CCS). This conceptual ambiguity affects decision-making, particularly when allocating financial support, and risks misdirecting funds intended for removals towards emission reduction projects instead. A clearer and more consistent definition of CDR, along with better guidance on its role within the EU's climate strategy, is crucial to ensuring that funding is properly allocated and that emerging carbon removal solutions receive the long-term investment certainty they require to scale effectively.

Therefore, we call for a more ambitious and accessible funding framework that prioritizes investment in carbon removal technologies while streamlining access to support. At the same time, we urge the European Commission to establish clearer distinctions between removal and reduction technologies to ensure that funding mechanisms are fit for purpose. In this context, while not the sole mechanism, integrating carbon removals into the EU ETS could serve as a demand incentive in supporting these efforts.

³ Directive 2018/2001 of the European Parliament and of the Council of 11 December 2018

Summary of key recommendations:

- 1) Revise the methodology to include broader BioCCS technologies to maximize the potential of diverse BioCCs technologies.
- 2) Clarify how early BECCS projects can become eligible under the CRCF framework.
- 3) Proportionally allocate GHG emissions from the capture in mixed fossil and biogenic CO₂ capture units.
- 4) Include a reference to the EU ETS framework to enhance monitoring for the transport of CO₂.
- 5) Take a more reasonable approach in leakage accounting by removing the constraint that carbon dioxide removals can only be recorded during hours which the storage site was operating without leakage events or significant irregularities.
- 6) Align sustainability criteria for biomass used for BECCS with the Article 29 of the Renewables Energy Directive, to ensure coherence.
- 7) Centralize lifecycle emissions factors into a unified reference point to ensure consistency and transparent assessment.
- 8) Ensure interoperability between EU and international methodologies to avoid market fragmentation and ensure investor confidence.
- 9) Enhance and streamline EU funding mechanisms to better support the development and deployment of carbon dioxide removals technologies, addressing accessibility challenges and early-stage funding gaps.

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We serve industry regulators as a global partner for improving safety, environment, and social performance. And also act as a unique global forum in which our Members identify and share knowledge and good practices to achieve improvements in every aspect of health, safety, the environment, security and social responsibility.

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