



Response to Draft recommendation: Activities involving removals under the Article 6.4 mechanism (A6.4-SB007-AA-A15)

Prepared in advance of the seventh meeting of the Supervisory Body (September 10-14, 2023)

C-Capsule, a leading certification standard for durable Carbon Dioxide Removal (CDR), is pleased to contribute to this public consultation on the draft recommendation on activities involving removals under the Article 6.4 mechanism. We hope our insights will contribute to the Supervisory Body's ongoing efforts to design guidelines of Article 6.4 that will drive meaningful climate action by establishing robust and credible carbon markets.

We are encouraged by the rigor of the SB's work to date and its commitment to engaging with a wide range of stakeholders in developing robust guidelines for carbon markets. This response builds on previous submissions to the SB (June 2023, March 2023, and October 2022) and we remain at the SB's disposal for additional consultations.

Carbon Finance Labs and Evident have developed C-Capsule as an attribute tracking system to certify durable CDR. C-Capsule has a heritage dating back to the first renewable energy certificate trading in Europe during the 1990s and the creation of the Guarantee of Origin scheme. Co-Founder Evident includes the technical designers behind the highly successful I-REC, the international renewable energy certificate system, which currently serves over 50 countries outside Europe and North America. C-Capsule's work is independently accredited by the International Attribute Tracking Standard, ensuring that the fundamental principles of trust and quality are enshrined in every aspect of our product.

Commentary on Proposed Text

3. Definitions

It is paramount to construct clear and robust definitions for terms like 'removals' to ensure a common understanding and strict adherence to the long-term goals of carbon dioxide removal. We agree in principle with the direction taken by the more detailed definition of 'removals' in Proposal 2. Importantly, Proposal 2 allows for the consideration of carbon durably stored in products, in addition to storage in natural formations.

However, we would urge the SB to draw clear boundaries on what products constitute a legitimate removal. For instance, while captured carbon can be utilised in various ways, its use in low-durability products such as fuel or food-grade CO₂ should not qualify as a removal, as carbon in these products is reintroduced into the atmosphere on a <100-year timescale.

Additionally, we support Proposal 2 B defining 'durably storing' in this section as well as grounding that definition in all available evidence. However, requiring that the injected carbon



dioxide will be ‘completely and permanently stored’ sets an unrealistic target for removals and the entities tasked with monitoring them.

C-Capsule recommends shifting the language from ‘permanence’ to ‘durability’ as a more realistic metric for risk. In our view, removal activities should only be considered under the Article 6.4 mechanism if they guarantee a minimum of 100 years of durability. C-Capsule defines durability as 100+ years because:

1. It aligns with IPCC Global Warming Potential (GWP) determinations;
2. It represents political consensus on the furthest realistic time horizon of reliable enforcement;
3. 20-50 years is too short relative to the problem and effort; and
4. 1,000 years is too long to manage co-risk factors, reduces fungibility between removals generated by different methodologies, and limits financing for the development of useful climate change mitigation tools.

We understand that various removal methodologies have different timeframes, but a 100-year threshold ensures a long-lasting impact on reducing atmospheric CO₂ concentrations and mitigating climate change effects. Activities that do not meet this threshold should be addressed within alternative market structures or policy mechanisms, or, if they deliver significant co-benefits, valued by non-carbon incentive schemes.

Incorporating a 100-year minimum durability requirement within the UNFCCC's guidelines for carbon removal activities under the Article 6.4 mechanism would promote greater confidence in the market mechanism, encourage the development of long-term removal solutions, and ensure that these efforts contribute effectively to the global goal of limiting temperature increases. At the same time, inclusion of removal methodologies on a long, but non-geologic timeframe, increases market liquidity and promotes the financing and development of necessary climate change mitigation tools.¹

4.1 Monitoring

The draft text’s additional monitoring criteria effectively strengthen the framework for removal projects. Regarding proposed language on post-crediting period monitoring, C-Capsule agrees with Option 3 (“until the reversal risk is eliminated or deemed negligible”). The timeframe for addressing reversals depends largely on the removal method utilised. Given the diverse nature of carbon removal technologies and their variable durability and risk profiles, the timeframe to

¹ On the risks of overly restrictive storage criteria, see Parisa, Zack and Marland, Eric and Sohngen, Brent L. and Marland, Gregg and Jenkins, Jennifer, *The Time Value of Carbon Storage* (September 1, 2021). Available at: <https://www.sciencedirect.com/science/article/pii/S1389934122001538#bb0010>



address any potential reversal should be commensurate with the identifiable risks associated with each method.

C-Capsule agrees with the SB's preference for policies tailored to methodological specifications, both for timeframe-relevant queries and all other requests for guidance. For post-crediting period monitoring, timeframes for reporting should be informed by the expected durability of the removal pathway and the quantified risks of reversal or Event of Carbon Default (EOCD). C-Capsule looks forward to providing additional input to the SB as it develops new 6.4 mechanism methodologies.

4.2 Reporting

Reiterating C-Capsule's experience designing governance documentation relating to the monitoring of removals, C-Capsule suggests that initial monitoring and submission of monitoring reports should occur on an annual basis.

After initial verification of the project design document and a methodology-specific audit period, during which annual monitoring reports are required, C-Capsule requires additional monitoring reports be submitted at least every five years. Within this timeframe, monitoring should not cease, and preference should be given to removals that have the capability to provide continuous real-time monitoring. C-Capsule and accredited Local Issuers reserve the right for ad hoc site visits and recommends the SB reserves the same right for registered removal facilities. C-Capsule agrees with proposed language that allows reporting requirements to be tailored the risk profile of the technology based on robust evidence or scientific literature.

Regarding initial reporting on reversal events, we believe technologies with the capacity for real-time monitoring should be treated preferentially to enable closer monitoring after potential reversal events. Where this is not possible, a maximum of six months between reports for the following two years should be allowed. Beyond two years after the event, monitoring can return to normal timeframes. This should be reviewed on a case-by-case basis, however, as there is a variety of potential reversal events, and some may require more frequent monitoring.

4.5 Addressing reversals

As discussed above, C-Capsule argues that a 100-year minimum 'permanence' period provides the most realistic and effective time frame to ensure durability of projects. This period should begin after the year when removals occurred rather than after the activity has ceased to operate, as durability claims should be made in reference to the removals being issued, not the project's lifetime.

4.5.1 Reversal risk assessment

C-Capsule's risk management approach rests on the four-part typology of reversal risks: 'natural, unintentional'; 'natural, intentional'; 'unnatural, unintentional'; and 'unnatural, intentional.' We



believe this framework effectively captures the universe of risks and provides a useful rubric by which to mitigate these risks.

The draft text's additional description of risk assessment principles and mitigation measures greatly strengthen the document, particularly the suggestion that assessments should be conducted by independent qualified experts. Voluntary carbon markets are currently strengthened by the diversity of market actors that analyse risk. These include ratings agencies and insurance bodies who work independently to evaluate risks associated with issuing removal credits. When developing risk assessment tools, care should be taken to separate the responsibilities of stakeholders such that assessment is done independently. Regarding risk assessment tools to be developed by the SB, our view – based in part on our experience in the renewable electricity certificate sector – is that recourse to default values alone in incentive programs can impede innovation and that use of the most specific assessment of individual activities should be encouraged wherever possible.

4.5.2 Post reversal actions

The core corrective measures outlined in the draft text are critical to any reversal response. C-Capsule would encourage the SB to consider the following additional interventions as well to ensure the greatest credibility of the removals sector:

'...6. **Assessment of Project Continuity and Financial Stability:** The project's financial viability needs to be assessed to ensure its continuity despite the reversal. This could involve exploring additional funding sources, reassessing project management strategies, or developing contingency plans for potential future reversals. It should be noted that there are times when continuing the financial support of a project that has had a reversal is ill-advised, and project continuity should only be considered when the above steps are followed. The following situations wherein continuing financial support for a project would be ill-advised include:

6a. Repeated Reversals: If the project experiences multiple instances of carbon reversal, it may indicate fundamental issues with the technology or its implementation. Constant reversals can undermine the effectiveness of the carbon sequestration efforts and lead to wasted resources.

6b. Non-compliance with Regulations: If the project continuously fails to comply with local, national, or international regulations related to carbon sequestration, continuing financial support could put funders at legal risk and tarnish their reputation.

6c. Unsustainable Practices: If the project is linked to unsustainable practices, such as using non-renewable resources or causing significant environmental harm, continuing financial support may contradict the broader goal of environmental stewardship.



6d. **Lack of Adequate Management:** If the project consistently demonstrates poor management, lack of oversight, or inadequate response to setbacks, it can indicate a higher likelihood of failure and thus a poor return on investment.

6e. **Technological Obsolescence:** As CDR technology evolves, certain methods may become outdated or inefficient compared to newer alternatives. Continually investing in such projects may not be financially viable or environmentally beneficial in the long term.

6f. **Insufficient Impact:** If the project is not producing the expected carbon sequestration results, it may be more beneficial to invest in other projects with a better performance track record or potential for higher carbon sequestration.

Before making decisions about continuing financial support, it's crucial to conduct a comprehensive review of the project, its challenges, and its potential for success. A balance should be struck between supporting innovative carbon sequestration approaches and ensuring that funds are used in the most effective and responsible way possible.'

Providing clear reporting guidelines and methodology requirements will reduce the likelihood of reversals and mismanagement.

4.5.2.1 Timeframe for reversal notification reports

C-Capsule's guidelines mandate the immediate notification of an Event of Carbon Default (EOCD) followed by an EOCD report issued by a third-party verification authority within six months. Independent verification is critical to system credibility, and we strongly support the draft text's inclusion of this requirement. C-Capsule supports the SB recommendation to initiate reporting immediately.

4.5.3 Remediation of reversals

C-Capsule agrees with and emphasizes the importance of sovereign guarantees as a backstop to cover reversal liabilities. The language used in the draft recommendation, particularly paragraphs 80-84 and 86-90, strengthens the framework. C-Capsule favours the usage of buffer pools over temporary crediting. If temporary crediting is to be used, C-Capsule supports the language in paragraph 88 that combines this approach with buffer pools to cover non-enforceable replacement obligations. The work of independent insurance bodies and ratings agencies in the voluntary removal market has been critical in providing transparency in buffer pool schemes and insurance mechanisms, C-Capsule applauds the SB's work to adopt these measures.

Allowing project developers the choice between a range of remediation methods enhances flexibility, and we support the inclusion of more specific guidelines on the size and composition of buffer pools.



C-Capsule advocates for the inclusion of the language proposed in paragraph 90 on identifying removals cancelled for reversal compensation in a central registry, which should serve as the sole source of immutable facts about the removals market. This level of transparency is important to ensure the credibility of the removals market and maintain high standards among market participants and crediting projects.

On the treatment of uncanceled/unused buffer ERs, C-Capsule recommends the SB hew to the standard practice of insurance markets and retain Option 3, in which removals are neither cancelled nor returned under normal circumstances, contributing to overall mitigation in global emissions.

4.6 Avoidance of leakage

This section is an important addition to the draft text. To most accurately capture the emissions footprint of a project, C-Capsule recommends the use of actual emissions measurements – as opposed to default regional emissions factors – substantiated by contractually defined emission ownership agreements (e.g. renewable energy certificates), wherever possible. Not only does this provide the clearest picture of the project’s net emissions, but it encourages projects to purchase more renewable energy and adopt the lowest-carbon technologies. Relying on regional emissions averages could present a perverse incentive whereby a project that sought to reduce emissions at every step of its operations was equated with one that sought the least expensive option, regardless of emissions intensity.²

C-Capsule would also encourage defining terms like ‘project area’ and ‘control group’ in 127(d) as early as possible to ensure the greatest efficacy of this approach.

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² For additional analysis of this phenomenon, see the International REC Standard paper ‘Carbon Border Adjustment Mechanism: including contractually defined emissions ownership’, available at www.irecstandard.org/?wpdmdl=10606&ind=1671028229583.