First Movers Coalition Position on Chain of Custody Carbon Accounting Models

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WORLD ECONOMIC FORUM

The First Movers Coalition (FMC) advances the most critical, emerging climate technologies by leveraging members' collective purchasing power. By translating member commitments into the world's largest credible demand signal, FMC accelerates the adoption of emerging climate technologies to decarbonize the world's heavy-emitting sectors. In service of this mission, FMC seeks to drive bankable offtake, increase credible demand signals, surface viable supply, and build and leverage an enabling environment.

Emerging climate technologies are highly capital intensive, requiring strong business cases reliant on monetization of low greenhouse gas (GHG) products. However, monetizing low GHG products can be challenging when key customers are far from production, either physically or in terms of value chain position. Mixed chain of custody models[1] —which are developing across multiple sectors—represent a transformative opportunity to connect supply of low GHG products with demand, thereby unlocking the business case for investment and accelerating the deployment of innovative solutions.

This topic is particularly salient to FMC members as they work to meet their sector-level FMC commitments. Specific guidance on whether and which mixed chain of custody models may be used to meet commitments will be shared through sector-level commitment documents and updated through the biennial Commitment Review process to address sector-specific needs, including varying problems to solve and differing maturity of safeguards. FMC's general position is as follows:

FMC sees mixed chain of custody carbon accounting models as promising mechanisms to further its mission of advancing the most critical, emerging climate technologies by facilitating offtake agreements with customers (including FMC members) who are: 1.) physically distant from low-GHG production sites or services (i.e., not co-located), and 2.) positioned further along the value chain (i.e., indirect buyers).

Without credible offtake agreements, needed investments in emerging climate technologies may not occur[2], slowing their deployment and hindering progress towards the decarbonization of heavy-emitting sectors.

To be acceptable under FMC commitments, all chain of custody models must be designed and implemented such that integrity and credibility are ensured. The way a chain of custody model is used to meet the FMC commitment must promote the scale-up of emerging climate technologies (vs. marginal improvements)[3]. Safeguards such as standards, supply chain certification, registries and reporting guidelines will be required, and models should be as interoperable with other systems as possible.

In accordance with its mission, FMC will monitor and engage with ongoing efforts to mature the chain of custody ecosystem, understand risks, support credible safeguards, and—through the biennial Commitment Review process—adjust sector-level commitments to reflect significant advances. Given the importance and rapid

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[1] See ISO definitions on next page for more detail; typically refers to models such as controlled blending, mass balance, and book & claim as they allow for 1.) some blending and volume reconciliation of input materials and/or 2.) flexibility to decouple physical product from environmental attributes

[2] See WEF Scaling Clean Technology Offtakes report for more information on how offtake agreements can determine the finance ability of projects.

[3] FMC provides an overview of detailed guidelines by relevant international standard-setting bodies here that members can consider when applying chain of custody models, as long as they do not contradict or undermine the overall FMC objectives.

evolution of the topic, FMC suggests individual member companies contribute their insights and perspectives as well (e.g., commenting on draft principles from third parties, engaging in pilot programs and working groups).

Definition

> Chain of custody models are, "the processes by which inputs and outputs and associated information [including environmental claims] are transferred, monitored and controlled as they move through each step in the relevant supply chain.
>
> ISO, 22095: 2020

These chain of custody models include[4]:

Non-mixed

- Identify preserved: "The materials or products originate from a single source and their specified characteristics are maintained throughout the supply chain"
- Segregated: "Specified characteristics of a material or product are maintained from the initial input to the final output"

Mixed

- Controlled blending: "Materials or products with a set of specified characteristics are mixed according to certain criteria with materials or products without that set of characteristics resulting in a known proportion of the specified characteristics in the final output".
- Mass balance: "Materials or products with a set of specified characteristics are mixed according to defined criteria with materials or products without that set of characteristics"
- Book & claim: "The administrative record flow is not necessarily connected to the physical flow of material or product throughout the supply chain".

FMC Guidance on mixed chain of custody models

Decisions made within the transport sector regarding alternative chain of custody approaches can also be applied to the transport-related emissions of materials in other FMC sectors such as steel and aluminium. This promotes consistency across sectors and reflects the interconnected nature of supply chains. An overview of which CoC model is allowed in which sector can be found here.

Across all sectors above, the use of offsets[5] can **not** be used to meet FMC commitments. Please note that mixed chain of custody models are **not** applicable to the Carbon Dioxide Removals (CDR) sector.

Note: this document is subject to revisions/updates.

[4] ISO, 22095: 2020.

[5] Carbon offsetting is, "a mechanism used to compensate for corporate [or individual] carbon footprints through the purchase of carbon credits issued by accreditation standards to projects that remove GHG emissions from the atmosphere or avoid generating the emissions in the first place" (ICROA).