

Why C-Capsule?

C-Capsule is a tradeable attribute certificate for carbon removal, acting as a verifiable record for CO₂ (per metric tonne) that has been durably removed from the atmospheric cycle. C-Capsule generates additional revenue for carbon removal developers and enables consumers to neutralise their residual emissions footprint as part of their sustainability accounting.

C-Capsule has been developed by Terrametric Solutions LLC: a joint venture between Carbon Finance Labs¹ (CFL) and Green Certificate Company² (GCC).

Our values

C-Capsule represents a seminal shift in the way carbon is transacted, displacing avoided emissions (offsets) with verified CO₂ removals. To help consumers navigate through an overcrowded, low-quality and poorly governed market, our values demonstrate our aim to reform carbon markets in line with consumer's net zero goals:

- **Science-based:** science-based targets require science-based evidence. All C-Capsules are uniquely attributable verified historical facts relating to the durable sequestration of carbon that would have otherwise been emitted to, or remain in the atmosphere.
- **Impact-driven:** universal methodologies can be problematic when evidencing complex or unique processes. We set a quality threshold for carbon removal developers to become eligible, increasing the opportunity to participate in the market and allowing use of robust methodologies for every solution.
- **Durability:** carbon removal developers must evidence both the capture and sequestration of CO_{2eq}. C-Capsule assures consumers of the durability of carbon removed from the atmospheric cycle over a 100-year time horizon.

How does it all work?

C-Capsule brings the measurable facts approach that is well established in the renewable energy sector to the carbon market. Every net tonne of CO₂ captured and securely sequestered in a stable form is a tonne removed from the atmospheric cycle. It is recognised by the issue of a C-Capsule to the capturing facility owner (Registrant). C-Capsules can be sold to consumers (Participants) who can then claim the CO₂ removed to mitigate their emissions within their sustainability accounting. A C-Capsule is considered used when it is redeemed and carries a unique serial number to guarantee no double counting or double claim.

The issuance, transfer and redemption of certificates will take place on the Evident Registry³. Their well proven Registry acts as a database for records of the full lifecycle of ownership and use of C-Capsules. The clear and uninterrupted chain of possession of a C-Capsule from the carbon removal event to the mitigation claim made by an end-user is fundamental. Evident's robust data model provides the secure storage and management of carbon removal attributes to ensure a secure and trusted operation of a Registry Service.

How to participate?

Carbon removal developers wishing to be issued C-Capsules are required to develop a methodology adherent to the C-Capsule 'Methodology Protocol'. This document (available on request) outlines the quality threshold for developers to register their facilities on the Registry. All methodologies are subject to independent Accreditation by the International REC Standard

¹ <https://carbonfinancelab.com/>

² <https://gcc.re/>

³ <https://evident.app/>

Foundation (see *Governance*). Methodologies will be assessed on their adherence to our core carbon removal principles:

- **Real:** C-Capsules quantify tangible CO₂ removal and do not seek to quantify avoided emissions.
- **Measurable:** C-Capsules represent carbon removal activity which can be precisely measured. Projects adhere to Methodologies with identifiable measurement points where the volume of carbon removal can be accurately determined through robust and reliable metering equipment.
- **Durable:** C-Capsules demonstrate the durable sequestration of CO₂ that has been purposefully removed from the atmospheric cycle for long-term sequestration. Every methodology reflects a certain probability of durability set against a 100-year time horizon.
- **Verifiable:** C-Capsules are independently verified at the point of issuance to guarantee measurable carbon removal and no double counting. The Facilities themselves are also audited prior to issuance to verify characteristics in adherence with the associated methodology.
- **No-net harm:** C-Capsules are not issued at the expense of harmful social and environmental trade-offs. Every methodology adheres to robust, publicly documented environmental and social safeguards, ensuring no-net harm to the surrounding community and/or ecosystem by a C-Capsule registered Facility.

Entities wishing to trade and redeem C-Capsules can create accounts on the Registry, allowing market space for intermediaries to deliver portfolio management to their carbon market clients. As an account holder on the Registry, a market intermediary can manage client accounts in a secure and confidential manner. Only aggregated data is publicly reported. Individual client publication can be permitted by the account holder.

Governance

The C-Capsule Code (description of roles and set of rules) is undergoing Accreditation by the International REC Standard Foundation⁴, a not-for-profit organisation based in the Netherlands. The Foundation owns the International Attribute Tracking Standard which defines how organisations can coordinate and facilitate attribute tracking systems. Accreditation to the Standard ensures that the affiliated tracking of products (in C-Capsule's case, carbon removal) are of the highest quality and meet the most rigorous of expectations of stakeholders, market entities and end-users. The Foundation acts as an independent body to oversee the integrity of the market and help align the C-Capsule Code with industry best-practice.

Heritage

C-Capsule's team developed the first renewable energy certificate trading mechanism in Europe during the 1990s, eventually evolving into the Guarantee of Origin (GO). The team later designed and implemented the highly successful I-REC (International Renewable Energy Certificate), which currently serves over 40 countries. I-REC has become the established system for evidence to support originations claims by consumer in reporting their Scope 2 and Scope 3 emissions. It is internationally recognised by NGOs and consumer organisations to provide secure and reliable electricity origination information across the chain of custody.

⁴ <https://www.irecstandard.org/>