

POSITION PAPER

**BOOK AND CLAIM: THE ROLE OF
GHG REDUCTION CERTIFICATES
IN THE CLIMATE**



One of the main challenges of decarbonising industrial production is finding ways to finance the transition while keeping the industry itself competitive. In this regard, the existing and proposed tools can be divided into supply-side and demand-side initiatives: supply-side initiatives push companies to decarbonise their production, while demand-side initiatives are aimed at creating the demand for such low-carbon products. Supply-side initiatives require compliance from producers, while demand-side initiatives help creating a customer based and the business case for low-carbon products, providing long-term market predictability to producers.

The trade of Greenhouse Gas (GHG) reduction certificates using a Book & Claim (B&C) model is one of the proposed tools to boost demand for low-carbon products. It also helps supply and demand meet virtually if it cannot be met physically, especially for local products such as cement and concrete for which long-distance transport is deemed infeasible due to the high transport costs and emissions compared to the value and low carbon nature of the product. As a result, it is useful for producers with costly decarbonisation investments to find customers willing to pay the higher price associated with lower-carbon products, commonly referred to as the *green premium*.

What is a GHG reduction certificate?

A Chain of Custody (CoC) model is used to track the environmental attributes of a product along the supply chain. There are several types of Chain of Custody models with different approaches that mostly differ in the physical connection with the decarbonised product.

The main CoC models are:

- **Identity Preservation:** the certified and non-certified materials are kept separate along the supply chain;
- **Segregation:** materials from different sources and certified according to the same standards can be mixed, but not with non-certified materials;
- **Mass Balance:** certified and non-certified materials can be mixed during production only if their quantities are controlled and balanced over a define period of time. The share of certified material is reflected in the final product by either labelling it as partially certified or only a part of it as fully certified;
- **Book & Claim:** the physical connection with the certified product is lost as GHG reduction certificates are issued and traded independently from the physical product.

A scheme of the principal CoC models can be seen in Figure 1.

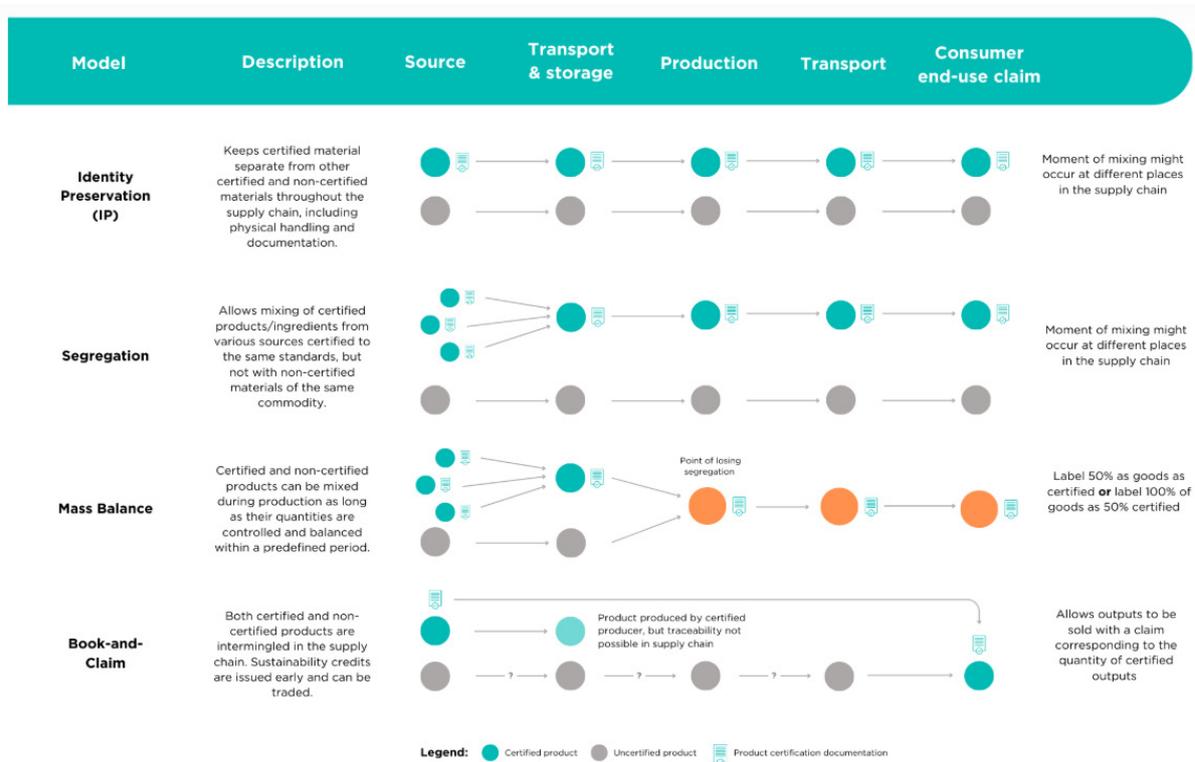


Figure 1. Summary of the existing Chain of Custody models¹.

While all of these models are relevant for industrial decarbonisation, this paper focuses exclusively on the trading of GHG reduction certificates using a Book & Claim model. GHG reduction certificates are a specific type of Environmental Attribute Certificates (EACs), a broader category of certificates that covers more than just GHG reductions. Nevertheless, GHG reduction certificates are often called EACs.

Book & Claim does not require any physical link between the traded certificate and the decarbonised product. In other words, B&C is a market instrument that allows to separate the environmental benefit coming from the decarbonisation of a production process from the location of the physical end-product. The environmental benefit is a GHG reduction certificate called “Environmental Attribute Certificate”, and usually corresponds to a certain amount of avoided or reduced CO₂ emissions (compared to a baseline). GHG reduction certificates can be traded to improve the environmental performance of a similar product without need for decarbonisation, becoming a product in and of itself. In particular, the buyer of GHG certificates can be either a direct customer who wants to reduce their so-called company-wide “scope 3 emissions” (which covers non-energy upstream and downstream emissions not directly emitted by the company) or a producer who can use them to nominally decarbonise (part of) their own production so that they may market their products as low carbon.

Figure 2 is a representation of how a Book & Claim system works. The physically decarbonised production takes place in a specific location, where the local (decarbonised) product is sold as a regular (non-decarbonised) product without environmental benefits attached to it. Meanwhile, the environmental attributes of the decarbonised production are compiled into

¹ GoodShipping 2024, [What is Book and Claim? How can it help increase digital traceability in the shipping sector](#)

one or several GHG reduction certificates that then get sold, together with conventionally manufactured products, in a different location (e.g. a different country). Depending on the circumstances and the agreement, the buyer may claim to be using a net-zero product, due to the accumulated attributes, even if the original emission reduction is far from 100%.

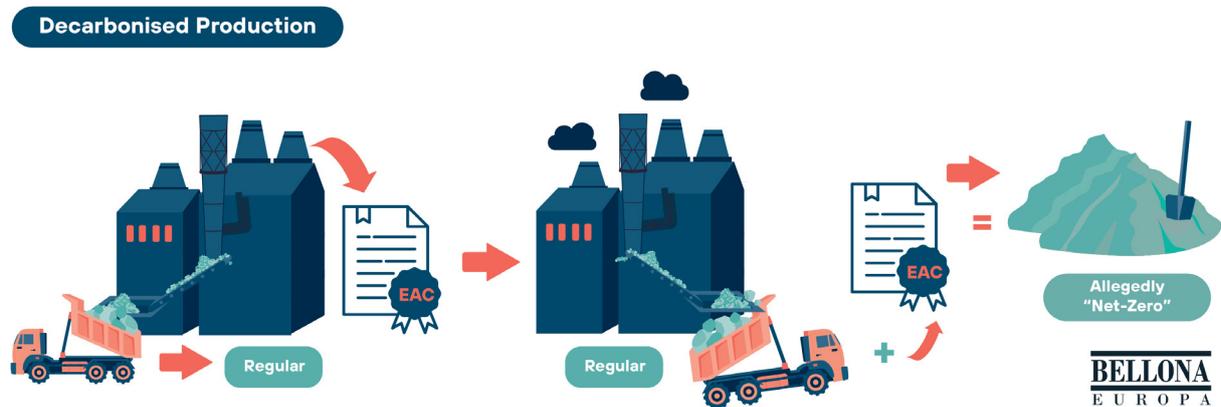


Figure 2: Book & Claim process visual, by Bellona Europa. Source: ECOS

In principle, GHG reduction certificates in a Book & Claim system can be used and traded within any industrial sector. However, with the exception of Guarantees of Origin certificates, existing life-cycle assessment standards do not allow the use of externally generated certificates to reduce one's own emissions. Nevertheless, several industrial stakeholders, trade associations, and non-profit organisations around the globe are working on the development of methodologies and standards for the implementation of such system in an environmentally robust way, while also advocating for the introduction of GHG reduction certificates into existing carbon accounting standards.

GHG reduction certificates present several benefits that would help the transition towards a net-zero industry:

- Fulfil demand for low-carbon products
- De-risk and attract investments
- Make demand and supply meet even where shipping and transport is infeasible
- Provide accurate and reliable primary data on the environmental performance of products
- Find customers willing to pay for the green premium associated with low-carbon products
- Provide a mechanism to reduce Scope 3 emissions in the absence of local low-carbon products

Still, the use of a Book & Claim model for GHG reduction certificates risks undermining and slowing down the decarbonisation efforts undertaken so far, opening the door to double counting, resource shuffling, and greenwashing. To address these risks, some measures and conditions are necessary across the different methodologies to ensure the effectiveness and environmental benefit of such system:

- A third-party verification is necessary to ensure that all emissions are accounted for in an independent way
- GHG reduction certificates can only be sold once the physical, emission-intensive product has been sold
- An appropriate registry of certificates must be created to avoid double counting and to ensure that each certificate is only sold once
- Once a certificate is sold, it is removed from the inventory and cannot be sold again

The conditions listed above are the more common approaches across the different proposed methodologies while many others can be found for each different methodology, stemming from different assumptions and considerations.

In Bellona's view, to ensure that the various risks in the trade of GHG reduction certificates do not cause delays in the decarbonisation of materials and products, the B&C system for GHG reduction certificates should also present the following conditions and safeguards:

- Maintain a connection to the physical product
- Geographical scope
- Realistic technical feasibility
- Early mover advantage
- Compliance consistency
- Presence of strict, clear, and mandatory requirements in place
- Marketing transparency
- Clear phase out conditions

Of course, the conditions and safeguards presented here want to be as general as possible and should be implemented with sector-specific recommendations that take into account the specificities of each product and market.

Before diving deeper into each of these requirements, it is important to understand the reasoning behind them and which issues and trade-offs they seek to address.

Bellona's take on GHG reduction certificates and Book & Claim

From a general perspective, Bellona advises against the trade of GHG reduction certificates as the trade-offs and risks far outweigh the potential benefits. In this regard, Bellona believes that a focus on other demand-side initiatives, such as investment de-risking, non-price criteria in procurement, or low-carbon product mandates and quotas, would present greater benefits with fewer risks of undermining EU climate goals. Our proposed tools for the creation of lead markets for low-carbon products can be found in [our consultation response](#) on the Industrial Accelerator Act.

Resource shuffling

One of the pillars of the climate transition is that it should be happening at a global scale, broadly at the same time, before reaching irreversible changes to our climate and our planet. The trade of EACs opens the door to resource shuffling, whereby minor reductions (such as

efficiency gains) across the allocation of part of the production process are allocated to those products intended for export towards countries and regions with stricter carbon requirements, such as the EU, without actually decarbonising local production. In addition to being against the principle of several Regulations, such as the Carbon Border Adjustment Mechanism (CBAM), selling EACs to third countries without any obligation to decarbonise does not support projects which are cutting emissions, questioning one of the main benefits claimed.

Loss of additional benefits

Oftentimes, decarbonisation is accompanied by other environmental and societal benefits other than the reduction in greenhouse gas emissions. The trade of GHG reduction certificates moves the emissions reduction to the buyer of certificates but it does not improve the local situation in terms of pollutants, dust, and overall societal benefits, including jobs creation.

Transparency challenges

The trade of GHG reduction certificates moves the emission reduction from one location to another, posing a possible challenge for transparency on the decarbonisation efforts undertaken by the producer. In turn, this may lead to opportunities for fraud along the value chain and in the way a climate-related claim is made. To avoid such issue, a robust Monitoring, Reporting, and Verification (MRV) system must be created to ensure that the environmental claim of the GHG reduction certificates is accurate.

Risk of double counting

While the accounting of emissions for companies might be quite straightforward, when it comes to national inventories, Nationally Determined Contributions (NDCs), and national decarbonisation goals the situation becomes more complicated, especially when public funding is involved in the decarbonisation project itself. While the use of GHG reduction certificates is only relevant for corporate targets and claims, it is also true that national inventories may rely on corporate inventories as data sources; when using corporate inventories, it is essential to ensure that the use of GHG reduction certificates keeps being reported separately from the physical GHG inventory to avoid any double counting of emission reductions across countries.

Undermining environmental policy and public perception

Public acceptance and public perception are crucial for the creation of decarbonisation projects that oftentimes receive great media coverage, especially at local level. Promoting and advertising a product as low-emission or net-zero when the decarbonisation is the result of the purchase of GHG reduction certificates risks creating distrust in the final customer, especially if such information is not appropriately disclosed in advance and the customer is not familiar with CoC models. As a consequence, the process might be perceived as deceptive, undermining public trust in the producer and, more generally, the decarbonisation project and environmental policies as the product does not meet expectations. While marketing transparency might seem to only affect companies relying on the trade of GHG reduction certificates, unclear or misleading marketing risks undermining all green claims. In that case, the effect would be a loss in trust towards future decarbonisation projects and policies, effectively reducing the public support for future initiatives.

Public procurement and product labelling

One of the most important demand drivers for low-carbon materials and products in the EU is expected to be public procurement, opening the question about how the use of

GHG reduction certificates will interact with the awarding of tenders. While allowing the use of such certificates for public procurement procedures provides increased flexibility in finding low-carbon materials and products in line with the procuring authority's emission requirements, it also risks undermining the creation of local lead markets for said products and materials. One great example is the city of Zurich: mandating the use of less-energy intensive cement in all public projects systemically changed the local industry² without needing any other tool than environmental criteria in public procurement. While it is impossible to predict exactly the effect of trading GHG reduction certificates would have on industry changes at local level, it is important to ensure that public procurement requirements produce tangible effects on the local industry. For this reason, in public procurement priority should be given to the physical product when available locally and to certificates as a second choice, still preferable than not using low-carbon products at all.

Similarly, the announcement of an EU labelling system for cement and steel (likely to be the backbone of environmental requirements in public procurement) raises questions on whether GHG reduction certificates can be used to determine the carbon footprint of said products. Once more, it is essential to be cautious of such integration as it might reduce the effectiveness of such a tool.

Reporting and financing

Under the current reporting system of the Corporate Sustainability Reporting Directive (CSRD), GHG reduction certificates cannot be used to reduce gross scope 3 emissions but are to be reported separately to show the company's commitment towards decarbonisation. One of the objectives of investing in decarbonisation and reduce corporate emissions is to attract more investors who support industrial decarbonisation, especially when it comes to scope 3 emissions. When it comes to GHG reduction certificates, it is not completely clear whether their use would affect the investment project. It is true that reducing scope 3 emissions by procuring decarbonised materials and products is more exposed to risks and delays coming from the upstream value chain, especially with announced projects or emerging technologies. In this regards, investing into GHG reduction certificates might portray a less risky scenario that might result in attracting more investments than the counterparts assuming the risk associated with physically decarbonising the value chain. While it is clear that GHG reduction certificates represent a useful transitional tool until market maturity is reached, the implications regarding access to green investments should be carefully assessed.

Of course, many of the presented trade-offs and risks can be overcome and avoided by the introduction of solid guardrails in the methodology for the creation of GHG reduction certificates and their trade. Still, **Bellona remains sceptical about its introduction**, especially as it risks deprioritising local decarbonisation projects instead of stimulating real, local demand for low-carbon products. In the presence of pressure in favour of adopting the trade of GHG reduction certificates in the European Union, the conditions necessary to minimise risks while still allowing for the trade of GHG reduction certificates are explained in the following section.

Minimum conditions for reducing the risks and trade-offs of Book & Claim for industrial decarbonisation in Europe

Connection to physical products

GHG reduction certificates should only be considered when there is a clear and equal physical product that is linked to the certificate, resulting from a specific deep decarbonisation project. There should not be credit given by claimed emissions reductions across different production sites pooled into arbitrary batches or products. In case companies decide to rely on GHG reduction certificates to reduce their scope 3 emissions, such reduction should continue to be reported separately in their GHG inventory due to investments in certificates rather than procuring the physically decarbonised product.

Keeping the connection to the physical product avoids the pooling of emission reductions across different processes and production sites, ensuring that only deep decarbonisation efforts are rewarded.

Geographical limitation

The trade of GHG reduction certificates should be limited at national or regional level. In the case of the European Union, Bellona proposes to limit the trade of GHG reduction certificates to the European Economic Area as all decarbonisation projects participate in a common climate policy framework and there is an overall shared obligation to decarbonise production. This would maintain the competitiveness of the European industry without creating dependencies on the influx of third-country certificates. This is especially important when it comes to the previous considerations about public procurement criteria and labels for carbon-intensive products as it ensures that trading GHG reduction certificates stimulates demand and lead markets for low-carbon materials and products at the local level.

Technical feasibility of claims

For many materials and products, it is still impossible to reach carbon neutrality, and this should be reflected in climate-related claims. To this end, the use of GHG reduction certificates should be limited to the decarbonisation level allowed by the currently available technologies and their maturity level for the specific material or product. Doing otherwise would be in contrast with the connection to the physical product principle, but it would also distort the public perception on the existing possibilities for decarbonisation, setting impossible expectations for companies.

Limited to First-of-a-Kind projects

The sale of GHG reduction certificates should be allowed only to First-of-a-Kind (FOAK) projects as they face higher costs and risks and deserve to receive more flexibility: such limitation would favour frontrunners and distinguish them from laggards. Moreover, the share of production eligible for the creation of GHG reduction certificates should be limited to match the quantity of products that are traded locally, depending on the production process and the nature of the product itself.

As a matter of fact, FOAK projects do the heavy lifting of creating demand and develop the market for low-carbon materials and products while facing more difficult challenges and burdens compared to later projects.

Obligation to decarbonise production

The possibility of selling GHG reduction certificates should be granted only to companies that have an obligation to decarbonise their production to ensure that the sale of GHG reduction certificates is a financing and de-risking tool and does not become the company's goal. In alternative, there should be measures in place to ensure that low-carbon materials and products substitute existing production instead of adding to it.

Strict, clear, and mandatory requirements in place

A robust B&C system requires not only a strong third-party verification of the environmental claim, a GHG reduction certificates register, and a clear set of rules aimed at avoiding greenwashing, but also some strict guidelines on the determination of the benchmarks used for the calculation of the emission reduction and an accounting methodology that ensures all emissions are accounted for and are comparable across production sites.

Marketing transparency

The marketing of products decarbonised using GHG reduction certificates must be transparent and ensure that clients and customers are not blindsided by climate-related claims but are fully aware of the CoC system in place behind the product. Specifically, marketing plays a very significant role in the success not only of the decarbonised products, but also in the success of climate-related policies and the trust of customers and consumers in the green transition. Ensuring that GHG reduction certificates does not erode such trust is key for the success of future projects.

B&C phase out

The phase out of the Book & Claim system for GHG reduction certificates should be defined clearly from the beginning to provide predictability to producers and unequivocally highlight its temporary nature. The conditions for the phase out do not necessarily need to be temporal or linked to specific dates but can rely on market penetration criteria, geographical criteria, or company production, to mention some of the possible options.



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