

# Trade low-carbon steel, not credits:

## How trade can support systemic decarbonisation

23% of global emissions come from embodied carbon of traded commodities, meaning how a product was made before being traded. Trade agreements and measures, such as carbon border levies, are increasingly seen as tools to facilitate trade of low-carbon products – which are essential for countries and companies to decarbonise. However, market instruments used to calculate embodied impacts of products, such as Environmental Attribute Certificates (EACs), could undermine trade of low-carbon products.

Read on to learn about why and how trade measures supporting climate action must ensure credible and accurate EACs to achieve real decarbonisation progress.

### In focus: ensuring trade of truly low-carbon steel

Steel is among the most traded commodities and is also responsible for 7% of greenhouse gas emissions globally. Decarbonising its production must be a global priority. This can be done by increasing and improving the use of scrap steel as feedstock and electrifying production through renewable electricity—either directly or using renewable hydrogen as a reducing agent. Unfortunately, conventional and cleaner methods are sometimes mixed together in production, making it impossible to distinguish between low-carbon and conventional steel. This is a Chain of Custody model known as mass balance.

There are two mass balance methods: credit and rolling average. Both will lead to different results when calculating the climate impacts of products. While the former is currently not recognised, and in some cases explicitly not permitted, it continues to be strongly promoted by certain actors.



#### Cemented in reality: ensuring credible and accurate Chain of Custody models in Environmental Attribute Certificates



Companies have a key role in tracking climate change by reducing their greenhouse gas (GHG) emissions. Typically, most of those emissions are indirect (shown as Scope 3), meaning they happen upstream in the supply chain or downstream after the product is sold.

To show they are reducing their impact, companies sometimes use commodity Environmental Attribute Certificates (EACs). These certificates are supposed to link a product's carbon footprint to the supply chain or downstream after the product is sold.

However, the reality is that when these certificates are based on Chain of Custody (CoC) models that are not verified, linked to the actual goods being sold, they can create greenwashing with inaccurate emissions accounting. This is because companies may mix their own emissions with emissions from companies selling emissions reductions while inflating their own emissions and reducing their own.

For an EAC to be used correctly in Scope 3, it must use a Chain of Custody model that has a direct link between the product and the emissions data. That means either using Chain of Custody (CoC) models with these principles – and which ones fall short.

#### What is Chain of Custody (CoC)?

Chain of Custody models are used to track low environmental attributes (the recycled materials) more through supply chains. For example, companies are buying material and want to know its carbon footprint. However, since CoC models can only be used to track the material's carbon footprint, they can't track the carbon footprint of the material's production.

This is why Chain of Custody models are not suitable for EACs. Without a reliable tracking system, companies can use EACs to claim progress on their climate goals without taking any real action.



### Ensuring reliable Chain of Custody Models in Environmental Attribute Certificates

Want to know more about Chain of Custody models in Environmental Attribute Certificates? Read [this factsheet](#) explaining different methods with a focus on cement.

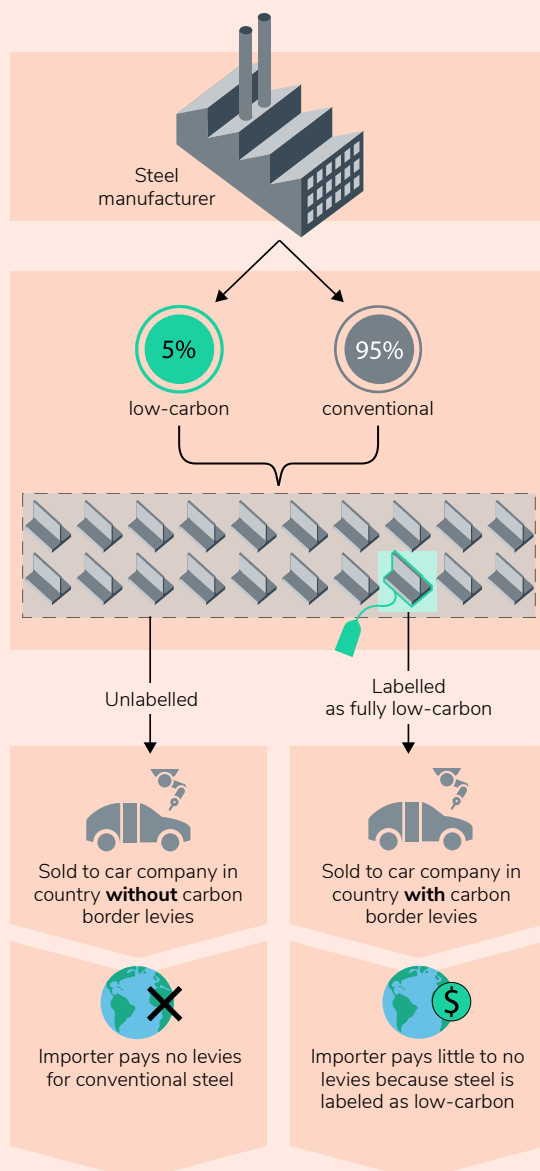
## Putting mass balance methods into context

**Scenario:** A car manufacturer in a country implementing carbon border levies orders green steel from a third-country company. The steel company has a new production line producing steel with hydrogen-based direct reduction. While 5% of the hydrogen used is made from renewables, the remaining is made from coal through gasification. Let us look at these two mass balance methods resulting in different calculations and consequences for end-users:

### Mass balance: the credit method

#### How does it work?

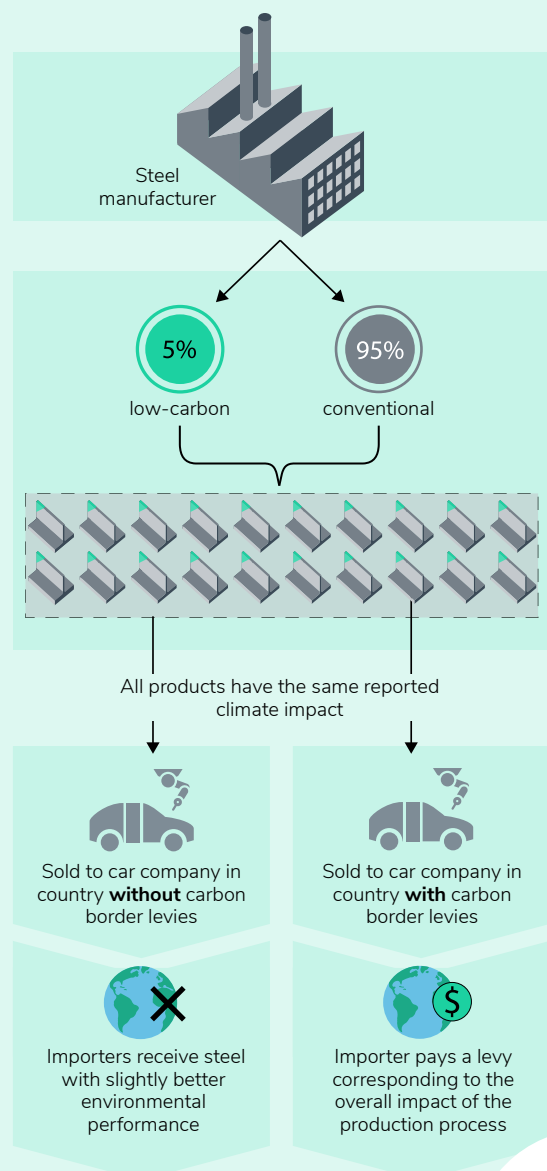
- The company uses an internal credit system to allocate all the environmental benefits to 5% of the produced steel, labelling it as fully low-carbon.
- The “low-carbon” steel is sold to the car company located in a country that has carbon border levies, having to pay a minor to no fee.
- The remaining steel is labelled as conventional and goes to countries where no carbon border levies exist.



### Mass balance: the rolling average method

#### How does it work?

- The company evenly distributes the low-carbon steel. That means that all steel that comes out is reported to have 5% low-carbon steel.
- To ensure credibility, this methodology must be used transparently, be publicly disclosed, and third-party verified.



## Mass balance: the credit method

How does this method disguise inaction?



The car manufacturer is misled to believe the purchased steel is fully green. In turn, the manufacturer will make marketing claims that also lead consumers to believe that the final product, in this case a car, is made from green steel and has a lower environmental impact.



Exporters are enabled to artificially lower reported emissions for select customers, allowing importers to circumvent potential fees based on a product's true embodied impacts. This creates unfair competition between producers, disadvantaging low-carbon front runners in the steel industry.



Producers might only invest enough to make a small, certified batch for export to the country with carbon border levies without changing their main production lines.



Companies underreport embedded emissions or double-count reductions, which undermines climate policy and consumer trust.

## Mass balance: the rolling average method

How does this method incentivise truly low-carbon steel trade?



It is aligned to trade and policy objectives to reflect the true carbon footprint. If mass balance with rolling average is applied, then the reported emissions reflect real impacts in that installation — Producers cannot hide behind accounting tricks or market splits.



Aligns with consumer protection legislation, such as the Empowering Consumers for the Green Transition Directive, by protecting against selective greenwashing.



Simplifies traceability and avoids double-counting because all steel carries the same embodied emissions.



Importers can rely on product carbon footprints to make procurement choices. It encourages producers to increase the share of low-carbon input because the rolling average emissions intensity of all exports goes down as a result – leading to stronger decarbonisation efforts. Most importantly, this method creates real, measurable emission reductions because reported reductions must come from actual process improvements, such as use of green feedstock.

## Solution

To ensure credible carbon accounting in traded commodities, only *single-facility* accounting combined with rolling average mass balance should be permitted when low-carbon and conventional products are co-produced. This maintains a physical connection between product and claim, and prevents the inappropriate use of environmental attribute certificates in embodied carbon calculations.

Environmental Coalition on Standards

Rue du Commerce 31, 1000 Brussels, Belgium, +32 2 899 76 80

Nairobi Garage Karen, Watermark Business Park, P.O. BOX 283-00502 Karen, Nairobi, Kenya, +254 112086975



@ecos.ngo



ecos-ngo

[ecostandard.org](https://ecostandard.org)

