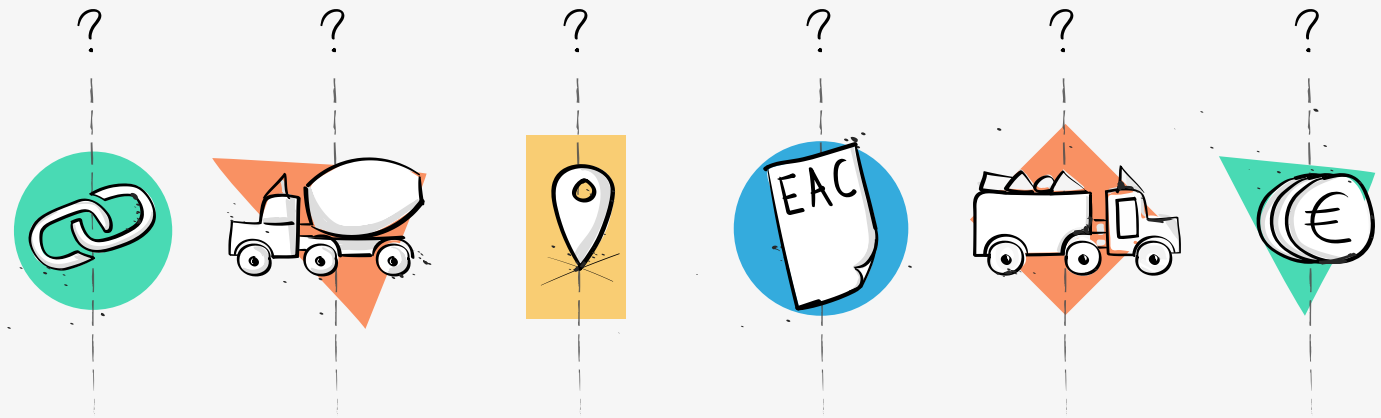
Cemented in reality: ensuring credible and accurate Chain of Custody models in Environmental Attribute Certificates



Companies have a key role in tackling climate change by reducing their greenhouse gas (GHG) emissions. Typically, most of those emissions are indirect (known 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 tell how a product was made. For example, whether fewer emissions were produced by using renewable energy or recycled materials.

However, the reality is that when these certificates are based on Chain of Custody (CoC) models that are not credibly linked to the actual good being sold, they can enable greenwashing with inaccurate emissions accounting. This disadvantages companies truly reducing their emissions with competition from companies falsely claiming emissions reductions while inflating their green credentials and misleading purchasers.

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 environmental claim. Read on and learn which Chain of Custody (CoC) models uphold these principles – and which ones fall short.

What is Chain of Custody (CoC)?

Chain of Custody models are used to track how environmental attributes (like recycled materials) move through supply chains. For example, imagine you are buying cement and want to know its content. Some CoC models can tell you exactly what is in the cement and its carbon footprint. However, weak CoC models can enable a company to sell regular cement while claiming it as 'net zero', based on reductions made somewhere else.

This is why Chain of Custody matters so much for EACs. Without a reliable tracking system, companies can use EACs to claim progress on their climate goals without taking any real action.

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A concrete example: net zero cement that isn't

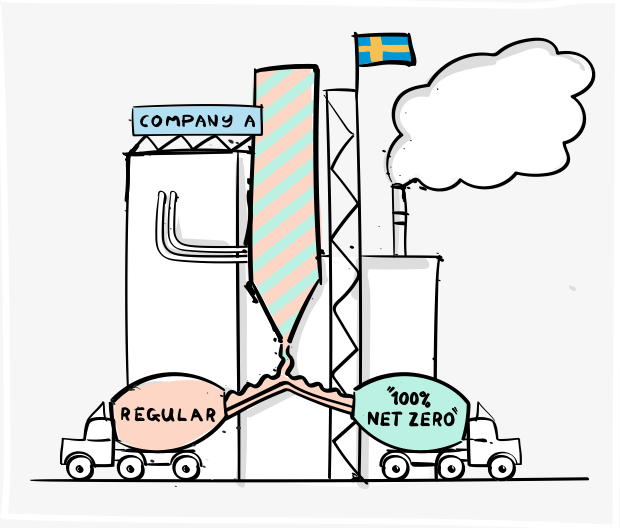
Scenario:

Cement Company A has a cement facility in Sweden where it produces regular, clinker-intensive cement and recently installed Carbon Capture and Storage (CCS) at the facility. Through CCS, it now captures an average of 50% of the emissions from cement production annually.

Unproportional mass balance

Instead of accounting that all the cement produced at the facility that year has 50% lower emissions, Company A claims that half of its production is 100% carbon-free – branding it as 'net zero cement'.

Since production is the most emissions-intensive stage in the life cycle of cement, this skewed allocation results in a misleadingly low carbon footprint. Company A then creates EACs based on these results, but without representing the actual GHG emissions of the product, these certificates become inaccurate. Company A then reports and markets its product as having zero carbon intensity.

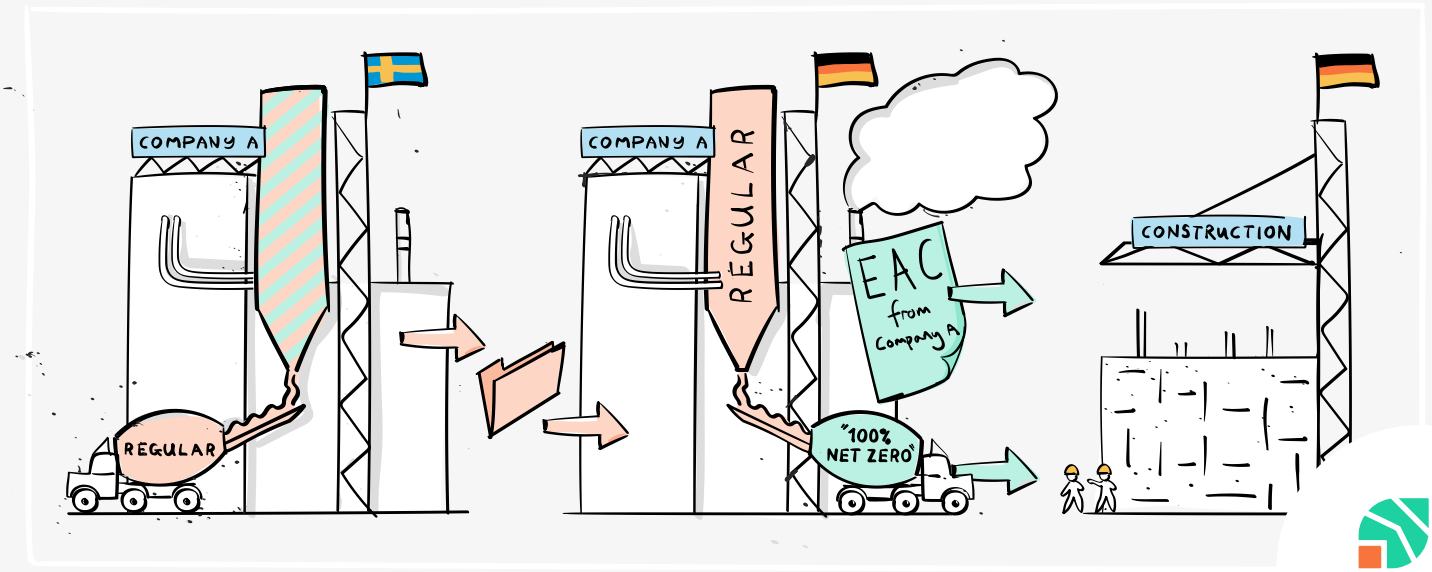


Credit mass balance

Company A creates an internal credit system between its facility in Sweden (where it claims to produce the 'net zero' cement) and their other international facilities where regular cement is produced.

A construction company in Germany wants to purchase Company A's 'net zero' cement in an effort to reduce its own emissions. Company A transfers 'net zero' cement credits from its facility in Sweden to its facility in Germany.

This enables Company A's facility in Germany to sell their regular cement with an EAC claiming it is 'net zero'. Meanwhile, Company A's facility in Sweden will sell its cement as regular.



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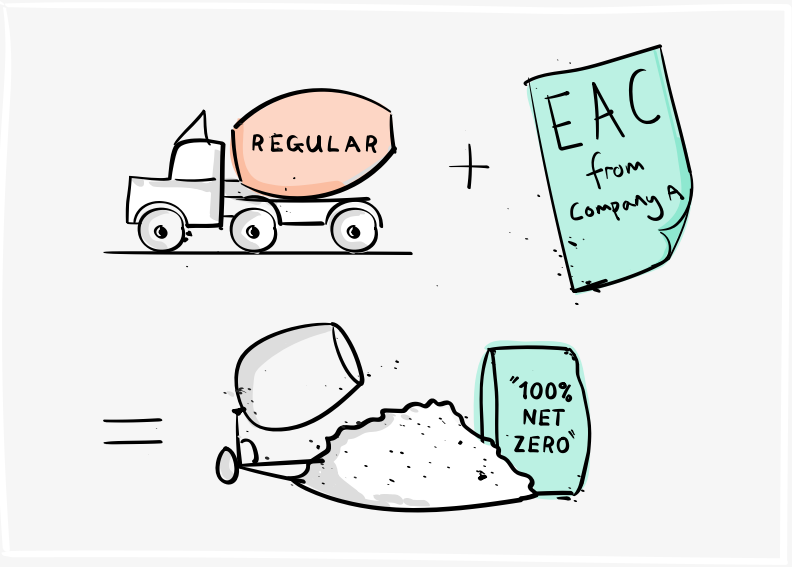
Book and claim

A construction company in Finland buys regular cement but separately purchases the equivalent amount of EACs from Company A. Using this model, there is no link between the EACs and the actual cement purchased, resulting in a significant gap between the real environmental impacts of the product and how the product is labelled.

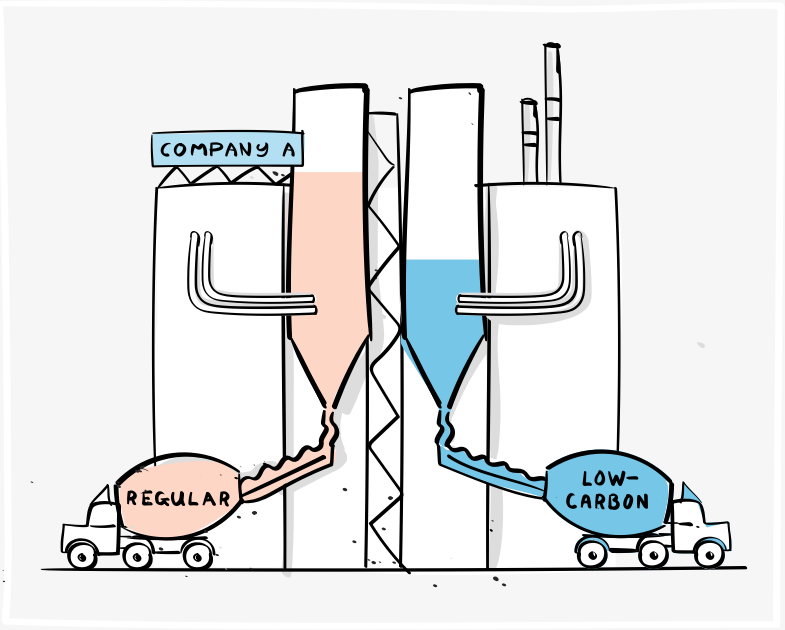
Even still, the Finnish construction company reports a reduction in its Scope 3 emissions.



Segregated model: a transparent model

In the segregated model, environmental characteristics are physically separated during production. For example, if Company A switches clinker with a low-carbon **substitute** in 40% of its production, it results in a distinct batch of blended lower-carbon cement.

The remaining 60% is used to produce clinker-intensive cements. By keeping the two streams separate and accounting for their actual content, Company A generates credible EACs backed by real reductions.



The nuances of EACs when including them in GHG accounting

A key component for EACs to work is that they need to be accurate and truly link to the product, such as in the segregated model – but that is only part of the equation. Ensuring EACs communicate environmental information accurately also requires credible and product-specific environmental criteria. For example, measuring impacts across the life cycle and beyond GHG emissions. When done well, these certificates can show that a company has reduced emissions through investments in better practices.

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