INDUSTRIAL DECARBONIZATION ACCELERATOR

October 2023

All you need to know on the EU's carbon border adjustment mechanism

What is the EU carbon border adjustment mechanism?

The European Unions' Carbon Border Adjustment Mechanism (CBAM) is a tool to put a price on the carbon emitted during the production of carbon-intensive products that are entering the EU, and to encourage cleaner industrial production in non-EU countries.

When will it come in?

From 1 October 2023, the CBAM will require all companies that import goods into the EU to report on the carbon emissions of their imported goods[1]. This will be a transitional phase which will serve as a pilot to enable importers, producers and authorities to learn how the CBAM will work and address any issues. It will also be used to collect useful information on embedded emissions to refine the methodology for reporting on them. The full CBAM will come into force in 2026.

The European Commission is managing the mechanism on behalf of EU countries. Full details of how the mechanism will work will only be released once the transitional phase is complete.

How will it work?

Initially, the CBAM will apply to EU imports of the following carbon-intensive products: cement, iron and steel, aluminium, fertilizers, electricity and hydrogen.

The carbon-intensity of steel, cement and concrete

Steel, cement and concrete account for just over 50 per cent of all industrial emissions.

The average amount of GHG emissions from manufacturing steel is almost double the amount of steel created: 1.85 tonnes of CO_2 per 1 tonne of steel.

The average amount of GHG emissions from cement production is around 0.6 tonnes per tonne of cement created.

The carbon intensity of concrete depends on the amount of cement used in the mix.

To achieve global climate goals, carbon emissions from steel, cement and concrete need to decrease by more than 90 per cent by 2050.

1. The full requirement is for companies to report on the total quantity of goods imported, total embedded direct and indirect emissions, and the carbon price due in the country of origin.

During the transition period, if your company is in one of these industries and exports goods for sale in the EU it will need to report on greenhouse gas emissions (GHG) embedded in the products imported into the EU. But your company will not have to make any financial payments or adjustments on these emissions until 2026. At this point, gradually (until 2034) carbon emission costs will be introduced through CBAM certificates (see below).

All companies exporting to the EU will have to register on the CBAM register. As part of the registration process, companies will also need to indicate the embedded emissions of their product. You can find out more about the CBAM register on the EC's Directorate for Taxes website.

The CBAM timeline

While importers will be asked to collect data related to embodied carbon as of 1 October 2023, but you will not have to submit their first report until the end of January 2024. Reports will then need to be submitted every quarter.

During the first year of implementation, you can report emissions in three different ways:

1. Full reporting according to a new EU methodology
2. Reporting based on equivalent third country national systems
3. Reporting based on reference values

As of 1 January 2025, only the EU method will be accepted, with small exceptions for complex goods where reference values will be accepted.

You can find the EU methodology described in the CBAM Implementing Regulation for the transitional phase, plus more clarity in this guidance document.

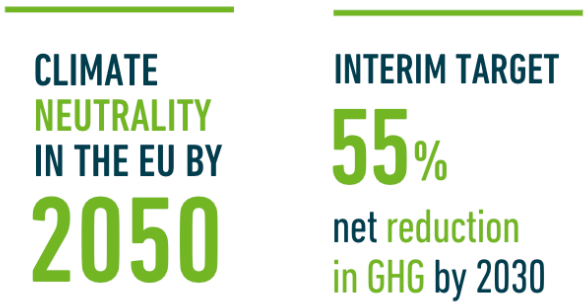
From 2026, EU importers of goods covered by the CBAM will need to buy CBAM certificates. The price of the certificates will be calculated depending on the weekly average auction price of allowances under the EU Emissions Trading Strategy (EU ETS). These will be expressed in €/tonne of CO_2 emitted.

From 2026, every May your company will need to declare the quantity of goods and the embedded emissions in those goods imported into the EU in the preceding year. At the same time, your company will need to provide the number of CBAM certificates that match the amount of GHG embedded in your products.

During this phase, CBAM's product scope will be reviewed to assess how feasible it is to include other industrial products. A timetable for any new products being included will be set out by 2030.

Why is the CBAM being introduced?

In 2021, the EU set out how it intends to achieve what it calls climate neutrality in the EU by 2050. This includes an interim target of at least a 55 per cent net reduction in GHG by 2030.



To reduce industrial emissions, the EU already charges companies based in the EU for every tonne of carbon emissions they produce. This has resulted in some EU companies moving production to countries that are less strict about emissions

This is because products that are made outside of the EU do not currently count in EU companies' carbon quotas, even if they are sold in the EU. This is a practice known as 'carbon leakage'.

Another type of carbon leakage happens when more carbon-intensive products made by manufacturers outside of the EU are used in the EU because they can avoid the current charges and so are more competitively priced. The CBAM will address both these issues by getting all importers to the EU to report on and eventually pay for the GHG emissions they produce.

What impact will the CBAM have on EU exporters in low- and middle-income countries?

The good news is that this is a phased introduction, so the CBAM will have no immediate financial implications. But unless enough support is provided to address CBAM's impact, there are concerns that the tariff will widen the gap between richer and poorer economies. Initial studies, such as this one from **Boston University**, suggest the CBAM could result in low- and middle-income countries losing significant market share to high-income countries unless appropriate support packages are in place.

> "The inability to decarbonize is a bigger problem than understanding how to comply with the CBAM. If companies are not able to do something to reduce their embodied emissions then they may progressively lose market share."
>
> **– Marco Matteini,**
> Industrial Development Officer, Energy and Climate Change Division, UNIDO

Monitoring and verification

The process for monitoring and verifying reported emissions (direct and indirect) will be critical to the effectiveness of the CBAM. But it will have a big cost implication for companies in low- and middle-income countries.

Once fully agreed, the EC will release regulations outlining the process, procedures and requirements for monitoring and verification. There is a need to build capacity in low- and middle countries so companies can meet these requirements without having to rely on costly external verifiers. Building this capacity will have an upside as it will improve the availability and quality of industrial emission data globally, something that is essential for the energy transition.

What support will the EU provide?

Pressure is building for EU countries to agree to use a large part of tariff revenues to fund a technical and financial assistance package so that low- and middle-income countries will have the resources and capacity to comply with CBAM's requirements. Negotiations on this are still happening, so this is an area to watch.

Could the CBAM bring any advantages?

For the planet – yes. Climate change is a global issue that requires global solutions, and the CBAM has the potential to significantly reduce GHG emissions. If it is implemented in a way that is sensitive to the need for climate justice, so that the world's biggest polluters bear the greatest financial costs of climate action, it could provide a blueprint for greener, fairer trade mechanisms across the world.

Companies in low- and middle-income countries also have much to gain by engaging with the CBAM. By improving monitoring and reporting systems for energy use and emissions, a company will be able to see where its energy use could be more efficient and which renewable solutions carry the most attractive return-on-investment. Knowing this will enable a company to reduce production costs, retain or enhance market competitiveness, and play its part in securing the future of the planet and the people on it.

How can my company get ready for the CBAM?

Companies need to be ready to report data on the embedded emissions of their products. To do this you need to know how your company monitors its emissions and energy use, the type of data this monitoring system produces, and the quality of this data. If there are any gaps or issues, now is the time to identify and address them. That way, you'll be ready to provide the information when it is needed.

What existing support is available to help my company get ready?

> Within UNIDO's ongoing industrial energy efficiency and decarbonization programmes there is a growing attention being given to enabling companies to establish monitoring, reporting and verification frameworks for energy and greenhouse gas emissions. This work should provide a very useful foundation for companies and governments to get ready for the CBAM."
>
> **– Marco Matteini,**
> Industrial Development Officer, Energy and Climate Change Division, UNIDO

EC guidance notes and tools

The EC is developing dedicated IT tools to help importers perform and report emission calculations alongside in-depth guidance, training materials and tutorials to support businesses when the transitional mechanism begins. You can find these on the **EC's Directorate for Taxes website**.

Energy management initiatives

If you're not already, get involved in an energy management systems process to understand how to collect and report quality data relating to your company's energy use. An Energy Management System (EnMS) helps companies identify opportunities to adopt and improve energy-saving technologies, including those that do not necessarily require high capital investment. You can find out more about EnMS **here**.

You can also download UNIDO's energy efficiency starter kits. These cover **energy management systems** and **energy metrics and performance indicators**, as well as efficiency solutions for **motor-driven systems**, **industrial heating** and **industrial cooling**.

Decarbonization roadmaps

UNIDO is supporting some governments to produce industrial decarbonization roadmaps. Morocco, Brazil, Kenya and Vietnam are all engaged in this process and other countries are likely to follow. Each roadmap contains recommendations and action plans to support specific industrial sectors to decarbonize, and is likely to contain details on how companies in that sector can comply with the CBAM and other decarbonization regulations. Find out if your country is developing a decarbonization roadmap or plans to, as it will be a useful resource.

The Deep Industrial Decarbonisation Initiative

If you're working in steel, cement or concrete, get involved with **the Deep Industrial Decarbonisation Initiative** (IDDI), the largest and most diverse coalition of governments and private sector companies working to decarbonize heavy industries, starting with these sectors. One of the key areas IDDI is looking at is aligning global standards that define what low carbon steel, cement and concrete is, and how to account for embodied carbon. Any government or industry player from these sectors can participate in IDDI's working groups, which also provide knowledge sharing opportunities, you do not need to be based in an IDDI member country to join.

For more information about UNIDO's Industrial Decarbonization Accelerator visit:

industrialaccelerator.org