



CBAM:

Preparing Thailand's Businesses for Net Zero

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KEY SUMMARY

- **The EU Emissions Trading System (EU ETS) is an important tool that the European Union (EU27) uses to reduce greenhouse gas emissions (GHG emissions).** The EU ETS increases production costs for EU producers, therefore there is the risk that EU producers may decide to import products or move their production bases to countries where there are no costs, or lower additional costs, for emitting emissions which leads to the **issue of carbon leakage**. By design, EU ETS reduces its GHG emissions cap every year, and is progressively lowering the allocations of free allowances on GHG emissions that it had given to EU producers in hard-to-abate industries to help them maintain their competitiveness. As a result, EU producers are facing higher costs for their GHG emissions.
- **The EU introduced the Carbon Border Adjustment Mechanism (CBAM) Regulation to ensure an equitable carbon price between domestic EU products and imported goods.** Importers to the EU must purchase CBAM certificates based on the volume of embedded GHG emissions in the imported goods. The price of CBAM certificates will be linked to the price of the EU ETS.
- Recently, on 18 April 2023, the European Parliament approved the CBAM Regulation as a way to strengthen its climate measures and ambition.
- **Businesses exporting products to the EU will have a transitional phase to prepare for the CBAM before it enters into force in 2026.** The transitional phase will be from 1 October 2023 – 31 December 2025, and will include the requirement only to report on embedded emissions in imported goods. The CBAM will enter into force in 2026, and from this point, importers must report on their GHG emissions data and pay for their emissions through the purchase of CBAM certificates. The CBAM will initially cover the following product categories: 1) Iron and steel, 2) Aluminium, 3) Cement, 4) Fertilizer, 5) Electricity, and 6) Hydrogen. However, it is expected that the EU will expand the CBAM's scope to cover other product categories. It is also worth noting

that **these requirements still need to be clearly defined and may be subject to change, and therefore must continue to be monitored.**

- **If importers are not able to report on the embedded GHG emissions of their imported goods, they may have to pay higher emission costs than what they should have paid,** as the reference for the embedded GHG emissions of that good may be calculated based on the GHG emissions produced by the worst-performing group instead.
- **The CBAM places pressures on producers/exporters to measure their GHG emissions and to make improvements to lower the carbon footprint of their production.** If producers/exporters to the EU are not able to measure or reduce their GHG emissions, they may face the risk that their products are under less competitiveness, or negotiations with importers asking for lower prices.
- **Initially the CBAM will not affect Thailand in a significant way, given that the five CBAM product categories that are exported to the EU comprise a very small portion of Thailand's total export value. Nevertheless, Thai businesses should be prepared,** as the EU may expand the scope of goods covered under CBAM. Similarly, global trends in net zero will assume a greater role in Thailand, and Thai businesses should be prepared for such developments. They could start by collecting data on the GHG emissions of producing their products; implementing plans to maximize their process efficiencies and reduce emissions in order to remain competitive; and prepare for potentially strengthened climate regulations in the future.

Why did the European Union introduce the CBAM?

The Carbon Border Adjustment Mechanism (CBAM) emerged from the EU's efforts to ensure equal treatment between domestic producers in the EU, who face higher costs for their GHG emissions, and importers of goods to EU27 countries. The EU region places a priority on reducing its greenhouse gas emissions (GHG emissions), and a key measure to achieving this is through the **EU Emissions Trading System (EU ETS)**, which is a compliance carbon market.

The EU ETS is predicated on two principles: 1) **Polluter Pays Principle**, where the polluter is responsible for compensating for their environmental impacts, and 2) **the Cap-and-Trade system**, where the authority determines the GHG emissions ceiling ('cap'), and reduces this cap each year. The authority then distributes GHG emissions allowances under the cap to EU producers through the 'EU ETS Allowance.' A portion of these allowances are allocated through auctions, and others are 'free allowances' that are given to EU producers in hard-to-abate industries to help them maintain their competitiveness. This system reflects the costs of emissions via market mechanism, and producers are able to trade their free allowances on the market. For example, a producer that emits higher volumes of than their allowance permits must purchase extra allowances from lower emitting producers. Based on these principles, the authority will reduce the cap each year, so that ultimately a lower number of free allowances remain. As a result, this will **increase the costs of GHG emissions for producers, which will be reflected in the price of the EU ETS free allowance. It therefore put a pressure on these producers to reduce the GHG emissions of their production.**

The EU is progressively reducing its free allowance allocation to producers and will stop allocating them entirely in 2034 as it strengthens its climate change measures. Due to the decrease in free allowances and cap, the price of the EU ETS allowances up for auction will increase, which will then lead to higher production costs. In turn, this could push producers to import more carbon-intensive raw materials from other countries, or move their production bases outside of the European Union to countries with weaker environmental regulations and lower costs. To prevent the risk of *carbon leakage* where producers importing carbon-intensive goods or moving their production to countries with no costs/lower additional costs for GHG emissions, the European Union introduced the **Carbon Border Adjustment Mechanism (CBAM)**, to ensure a level playing field between EU producers, who must carry the costs of their emissions, and importers of goods into the EU from elsewhere.

CBAM: A parallel measure to the EU ETS System

The CBAM measures will be aligned to the EU ETS system in order to replace free allowances. The EU will start applying the CBAM on imported goods that are no longer benefiting from free allowances. In parallel, the EU will progressively decrease its allocation of free allowances and stop doing so entirely in 2034, when the CBAM measures will enter into force to prevent the issue of carbon leakages.

Once the CBAM comes into force, importers into the customs territory of EU must pay for their GHG emissions through the CBAM certificate, which is priced based on the embedded emissions of their imported good. Each CBAM certificate has a two-year duration, and its price is determined by the average weekly auction price of the EU ETS in the week before the good is imported, so that the price of that imported good is as close as possible to the carbon price of the same good manufactured within the EU.

If an exporting country has an ETS system linked to the EU (e.g., EEA¹ countries outside of the European Union), or has a carbon pricing mechanism that is of an equivalent standard to the EU ETS (such as Switzerland), it will be exempted from the CBAM or permitted to reduce its CBAM certificate purchase requirements. **However, if an exporting country has a carbon market that is not aligned or of equivalent standard to the EU ETS system, such as Thailand, it will not be exempted from purchasing carbon credit offsets, or have the right to reduce the number of CBAM certificate purchases.**

Read more about Thailand's carbon credit market in: [SCB EIC Future Perspective: Key Challenges in Thailand's Carbon Credit Market](#).

Enforcement of the CBAM and implications on exporters

Businesses will have a transitional period to prepare before the CBAM enters into force in 2026. During this time, businesses can adapt their manufacturing processes to align with the CBAM standards, and collect data on the GHG emissions of their processes to submit to the European Union. In this way, policymakers will be able to adjust measures as appropriate, based on the additional information received.

During the CBAM's **transitional phase from 1 October 2023 – 31 December 2025**, importers must report on the following to the European Commission: (1) their direct emissions (Scope 1), (2) the quantity of goods covered under the CBAM that are being imported into the EU, and (3) the carbon price of the producing/exporting country. At this stage, importers do not yet have to purchase CBAM certificates, and the data that they report does not need to be independently verified by a credible third party.

The CBAM will enter into force from 1 January 2026. Authorized importers of goods covered under the CBAM must purchase CBAM certificates and submit the following information to the EU database: (1) their direct emissions (Scope 1), (2) the quantity of CBAM covered goods imported into the EU, and (3) the number of CBAM certificates that must be purchased (after making the necessary deductions based on whether the exporting country has a carbon pricing mechanism), and (4) supporting documentation demonstrating that their GHG emissions have been verified by the accredited verifier.

Even though the CBAM outlines the categories of goods that are covered under these measures, there is still a lack of clarity, particularly concerning methods for calculating GHG emissions. The categories of goods covered under the initial scope of the CBAM are those that are carbon-intensive and have high risk of carbon leakage, including: 1) Iron and steel, 2) Aluminium, 3) Cement, 4) Fertilizers, 5) Electricity, and more recently this has expanded to include, 6) Hydrogen. It is

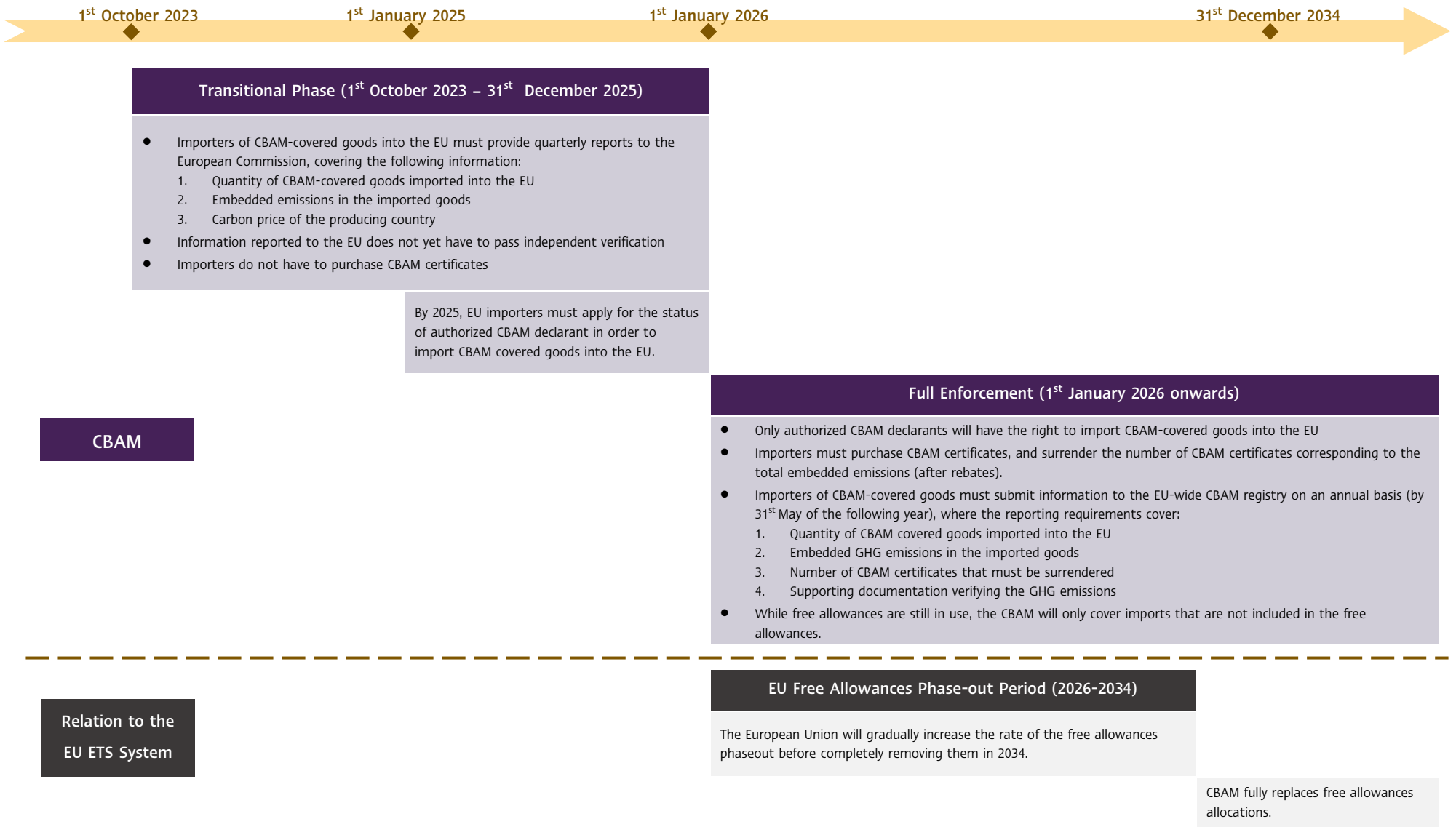
¹ The European Economic Area (EEA) is comprised of the 27 countries in the European Union, Iceland, Liechtenstein, and Norway.

expected that the EU could expand the scope of the CBAM further to cover plastics (polymers) and organic chemicals. Furthermore, before full enforcement, the EU may expand the CBAM scope to include other products that are currently covered by the EU ETS, as well as require importers to report on their indirect (Scope 2) emissions. However, the EU is still determining the appropriate method for calculating Scope 2 emissions. **This means that the CBAM measures are highly complex and enmeshed with multiple facets and stakeholders therefore they are not yet clearly defined and could be subject to change, and must continue to be monitored** (see Figure 1).

Despite the lack of clarity around the emissions measurement methodology, if importers are not able to report on the actual GHG emissions of their production processes, they may face the risk of being considered among the group of highest emitters, and therefore made to purchase more CBAM certificates, as well as to bear higher costs for GHG emissions. Importers to the EU must report on the embedded emissions of their goods to the European Commission, and to calculate the number of CBAM certificates that must be purchased. If importers are not able to report on the embedded emissions of their goods, the carbon price will be calculated based on the average emission intensity of the exporting country plus a mark-up (which is still being determined). Alternatively, if the exporting country is not able to provide reliable data, the price will be calculated based on the average emission intensity of the top 10% highest-emitting EU producers of that same good.

Even though importers will bear the emission costs for their goods, these higher costs may lead to reduced demand for goods from hard-to-abate industries, and for goods where it is difficult to measure embedded emissions. EU importers may also negotiate lower prices for these goods from exporters. **In summary, the CBAM measures will put pressures on producers and exporters to the EU to measure and manage their GHG emissions, and is an indirect driver for non-EU producers to enhance their climate change measures and to move towards cleaner production.**

Figure 1: CBAM enforcement and its relation to the EU ETS System



Note: * Various measures under CBAM are still to be defined and subject to change.

Source: SCB EIC analysis based on data from the European Commission, ERPS and Van Bael & Bellis.

Implications for Thailand

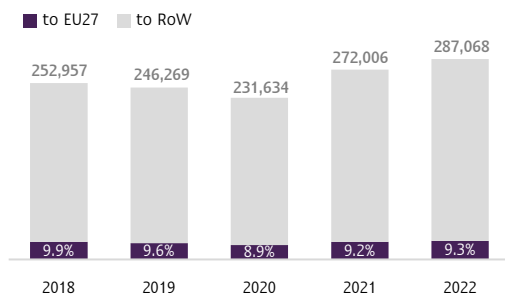
Currently, the CBAM is not significantly affecting Thailand's export sector, as Thailand does not have such a high proportion of exports to the EU as it does to other regions. The total value of exports to the EU is around 10% of Thailand's total exports. Furthermore, the five product categories initially covered under the CBAM (iron and steel, aluminium, fertilizers, electricity and cement), are not even the primary export categories for Thailand. The total value of CBAM covered goods that are exported to the EU therefore constitute a very small portion of Thailand's total export value.

Based on 2022 export data, the total value of Thailand's exports of the five CBAM covered goods to the EU amounted to 212.9 million USD, or merely 0.07% of its global exports, and 0.8% of its EU exports. Of this portion, the majority is comprised of iron and steel products (combined constitutes around 67% of the five CBAM covered goods exported to the EU, or 0.05% of Thailand's total exports), followed by aluminium (around 33% of CBAM covered goods exported to the EU, or 0.02% of Thailand's total exports). Given this, the initial impact of CBAM measures on Thailand's export sector is limited (Figure 2).

Figure 2: CBAM measures will affect only a very small portion of Thailand's exports to the EU, as Thailand does not primarily export to the EU, and the CBAM covered products are not Thailand's main export categories.

Thailand's export values to World and EU27

Unit: Million USD, % of total export values



Thailand's export values of CBAM products to World (2022)

Unit: Million USD, % of total export values



Thailand's total export values to EU27 and export values of CBAM products to EU27 (2022)

Unit: Million USD, % of total export values



Source: SCB EIC analysis based on data from the European Commission, MOC and CEIC

Although the CBAM Regulation will not yet have a significant impact on Thailand’s export sector, its enforcement is a signal for Thai businesses to start preparing for potentially strengthened environmental regulations in the future. While the various requirements and enforcement of the CBAM are still to be clearly defined, and although Thailand will not see significant initial impact, the EU may expand the scope of products covered under the CBAM beyond the five listed above. Furthermore, there is the risk that other countries may strengthen their climate change measures in a similar manner, and that other drivers to reduce GHG emissions, such as Net Zero trends, will assume greater importance in Thailand in the near future.

Because of this, Thailand should be prepared for these developments as well as other GHG reduction measures. Thai businesses can begin by enhancing their understanding of carbon accounting methodologies, and ensure that they are prepared to collect GHG emissions data for each of their products in order to plan for emission reductions in their production processes. Examples include improving the energy efficiency of their production to maintain competitiveness, installing rooftop solar panels to increase their proportion of renewable energy consumption, switching to electric cars, and improving the management of wastewater and effluents that emit greenhouse gases.

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