The Carbon Border Adjustment Mechanism eLearning module

CBAM in the iron and steel sector

Course takeaways

This eLearning course on CBAM in the iron and steel sector offers a comprehensive exploration of the Carbon Border Adjustment Mechanism (CBAM) specifically within the context of the iron and steel industry.

By the end of this course, the learner will understand CBAM's general aspects, the criteria specific to the iron and steel sector, emissions measurement and reporting requirements, and the IT system. They will be well-equipped to navigate the challenges and opportunities presented by CBAM in the iron and steel industry and comply with the legal obligations.

This is a quick and handy summary of the most relevant module information:

1. Introduction

1.1 Did you know?

The Carbon Border Adjustment Mechanism (CBAM) is an instrument implemented by the European Union to address carbon leakage. The EU's ambition is to become climate neutral by 2050, and CBAM will aim to ensure that imported goods are subject to a carbon price equivalent to the carbon price of domestic production in the EU.

CBAM affects the iron and steel sector by putting a price on emissions associated with iron and steel produced in countries outside the EU and **imported into the EU**. It aims to encourage sustainable practices and reduce carbon footprint.

For iron and steel importers, compliance with CBAM initially involves reporting direct and indirect emissions associated with iron and steel production in imported goods from third countries on a quarterly basis, relying on supplier information. However, from 1 January 2026, importers of iron and steel will have to buy CBAM certificates for emissions in imported iron and steel, just like in the Emissions Trading System in the EU.

Nevertheless, these costs can be minimized by choosing suppliers who have implemented sustainable practices and reduced their carbon emissions.

Overall, CBAM provides an opportunity for the iron and steel sector to embrace sustainability and contribute to environmental protection by positioning businesses as socially responsible and environmentally conscious players in the market.

1.2 Learning objectives

This course is addressed to any person who operates or controls production installations in third countries, importers, indirect customs representatives (acting as reporting declarants), trade partners and competent authorities or anyone who needs to understand and work with CBAM obligations in the iron and steel sector.

At the end of this course, you will have achieved the following learning objectives:

- Understand the general aspects of CBAM and rules for reporting declarants.
- Understand the main criteria for CBAM in the iron and steel sector, including relevant emissions and the formula to calculate specific embedded emissions.
- Be able to calculate the formula for specific embedded emissions in the transitional period.

- Understand reporting requirements and how they are applied in the IT system (CBAM Transitional Registry).
- Demonstrate confidence and competence in the use of the CBAM Transitional Registry.

2 General aspects of CBAM

2.1 Overview

The European Union has adopted the Carbon Border Adjustment Mechanism (CBAM) to support the goal of achieving climate neutrality by 2050. CBAM will work alongside other measures in the 'Fit for 55' package and will reduce the risk of carbon leakage as the EU moves towards achieving its climate targets.

Carbon leakage

Carbon leakage occurs when companies move carbon-intensive production from the EU to countries where less stringent climate policies are in place than in the EU, or when EU products get replaced by more carbon-intensive imports. CBAM aims to gradually replace existing measures designed to prevent carbon leakage, particularly the allocation of free emission allowances under the EU Emissions Trading System (ETS). It seeks to establish an equivalent carbon price for both domestic and imported production of specific goods.

Sectors

CBAM will apply to the following sectors: aluminium, cement, electricity, fertilisers, hydrogen, iron and steel. During the transitional period, the reporting for these sectors includes both direct and indirect emissions, except for electricity, which only includes direct emissions.

Certificates

Each year, from 1 January 2026, authorised CBAM declarants (importers or indirect customs representatives) will have to buy and surrender CBAM certificates that correspond to the embedded emissions in the imported goods. The European Commission will calculate the price of CBAM certificates based on the average weekly price of ETS auctions. This ensures that CBAM certificates remain closely aligned with the price of ETS allowances. Additionally, this approach maintains a manageable system for administrative authorities overseeing the process. But for now – you only need to provide information on the emissions.

2.2 Timeline

Transitional phase: October 2023 - December 2025

CBAM focuses on monitoring and reporting only. It does not involve any financial adjustments or the need to purchase certificates. The goal is to ensure a seamless and uninterrupted rollout of the mechanism. Importers of CBAM goods, or their appointed customs representatives, will need to submit a quarterly CBAM report outlining the embedded emissions associated with goods imported, as well as any carbon pricing due. To prepare for the post transitional phase, it is possible to apply to

become an authorized CBAM declarant from 1 January 2025. Applications must be submitted in the Member State of establishment.

Review and scope extension: 2025

The European Commission will use the reported information for general analysis and review of the CBAM. The conclusions will be presented in reports to the European Parliament and the Council before the end of the transitional period. Those reports will look into different topics on the implications, implementation and functioning of the CBAM. This includes the possibility for extension of the scope to other goods, specifying the methodology and progress made in the international discussions.

Post transitional phase: 2026 - 2034

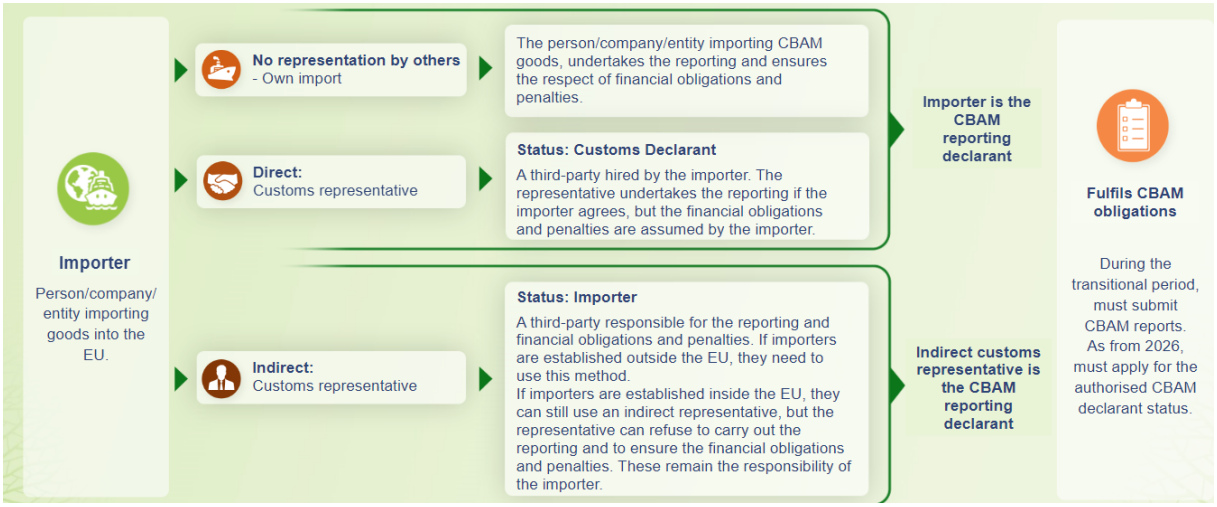
From 1 January 2026, only authorised CBAM declarants will be able to import CBAM goods into the European Union. Authorised CBAM declarants will have to buy CBAM certificates that correspond to the emissions in the goods imported. To ensure coherence with ETS, the CBAM certificates are phased in gradually and in line with the phase out of free allowances in the ETS.

2.3 Rules for representatives

How do importers know who the person responsible for the reporting obligations is?

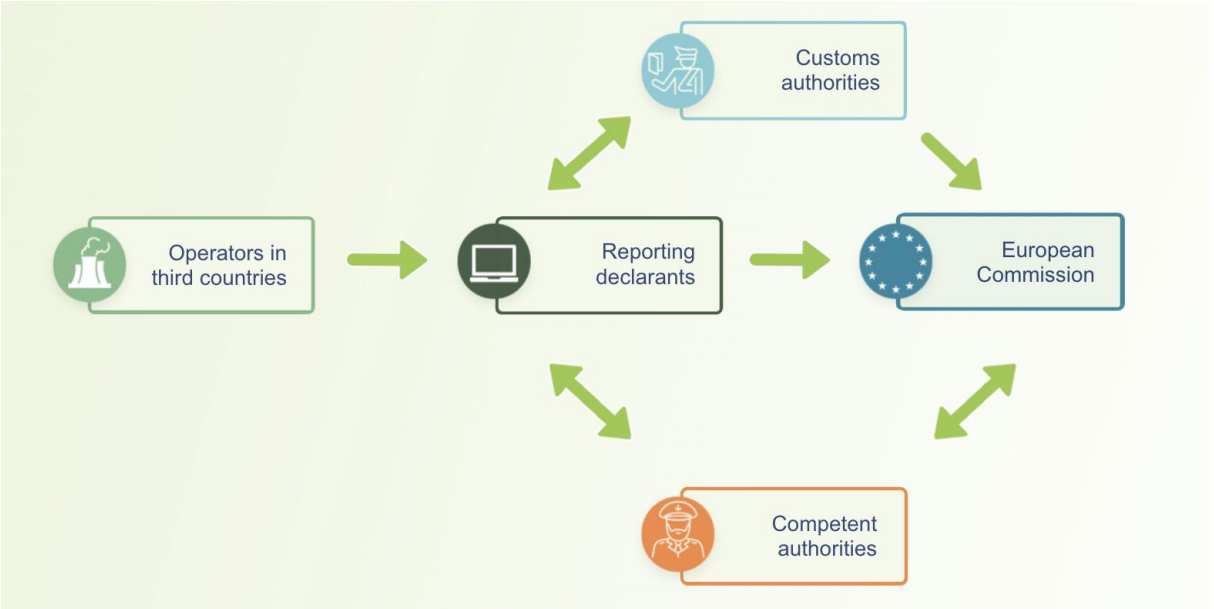
When importers import on their own, that is, with no representation by others, or use a direct representative, then the importer must be the reporting declarant. Note that direct customs representation is not possible if the importer is located outside the EU.

When the importer uses an indirect customs representative, then this representative is the one responsible for the reporting obligations. In this case the indirect customs representative is the reporting declarant.



2.4 Interactions between the reporting declarants and officials

During the transitional phase of CBAM, there is no specific authorisation process in place. Instead, a simplified procedure is applied to facilitate the initial stages of CBAM implementation. This transitional phase is designed to provide time for stakeholders to adjust and prepare for full compliance with CBAM requirements.



Operators in third countries

Operators gather and provide the necessary data related to the direct and indirect emissions associated with the imported goods. This data includes information on the production processes, specific embedded emissions, and other relevant factors.

Reporting declarants

Reporting declarants are responsible for compiling and submitting CBAM reports. They may receive the data from the operators. They analyse and process the data to ensure its accuracy and compliance with CBAM requirements. They then submit the CBAM reports to the European Commission.

Customs authorities

Custom authorities will automatically provide information to the reporting declarants to ensure that these have a clear understanding of their obligations. Additionally, customs authorities collaborate with the European Commission by sharing accurate and detailed information on imports, including customs declarations and associated CBAM-related data.

European Commission

Once the European Commission receives and reviews the CBAM reports submitted by the reporting declarants, a communication process takes place with competent authorities. This process during the transitional period will help improve the implementation of CBAM in the definitive period. Also, data exchanges with customs authorities allows the European Commission to monitor the implementation of CBAM, verify compliance, and assess the effectiveness of CBAM.

Competent authorities

During the transitional period, competent authorities carry out verifications and give feedback to the declarants about the CBAM reports. This serves to clarify any issues, address discrepancies, and ensure

compliance with CBAM requirements. As from 2025 they will deliver the authorisation to become authorised CBAM declarants.

3 CBAM methodology in the iron and steel sector

3.1 Calculating embedded emissions in the iron and steel sector

3.1.1 What types of iron and steel will be included in CBAM

The different CBAM goods in the iron and steel sector can be aggregated in goods categories and have specific greenhouse gases (GHG) associated.

Aggregated goods categories refer to goods that are grouped based on their similar characteristics. These categories are created to simplify the administration and implementation of CBAM. Instead of assessing and monitoring goods individually by their CN codes, goods within the same aggregated goods category are treated and evaluated collectively.

This approach helps to streamline the process while ensuring effective implementation of reporting of embedded emissions for imported goods. However, for several production routes that are used in the same installation for producing goods falling under the same CN code, and where those production routes are assigned separate production processes, the embedded emissions of those goods shall be calculated separately for each production route. However, the emissions of goods falling under the same aggregated goods category shall be calculated separately, if different production routes are applied. Production route means a specific technology used in a production process. Moreover, operators may voluntarily split the aggregated goods category further, for example if this is required by their national system.

The **greenhouse gases** that need to be monitored have been defined according to the activities and emissions of the greenhouse gases listed in Annex I of Directive 2003/87/EC.

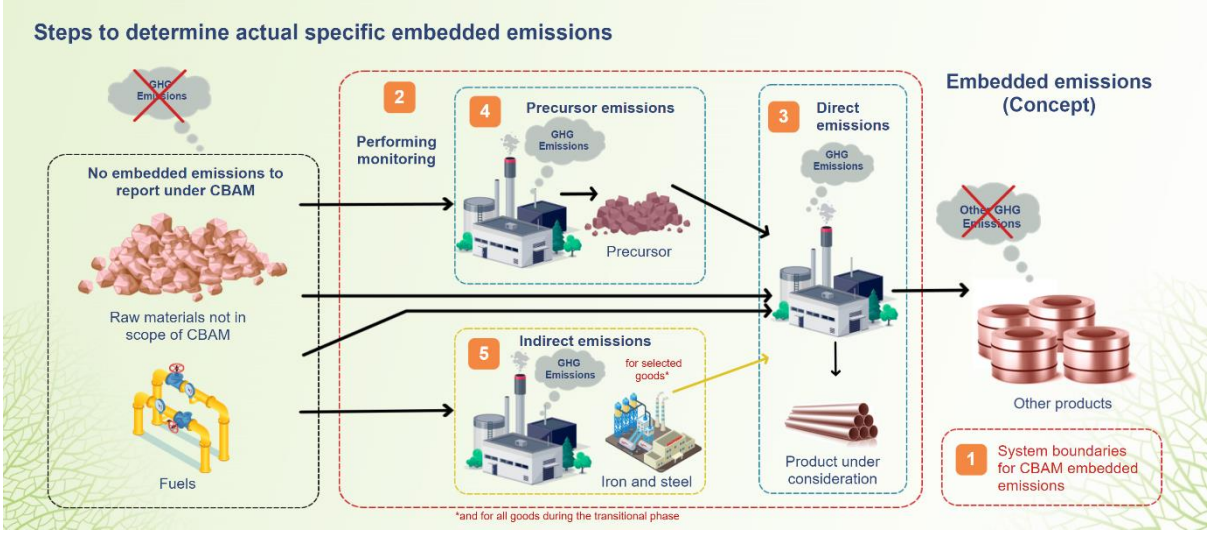
In the iron and steel sector, carbon dioxide (CO_2) needs to be monitored as it is the primary greenhouse gas emitted during the production process.

The **Combined Nomenclature** (CN) is presented in the form of an organized catalogue that codifies goods which are the subject of trade and takes account on the specific characteristics of the good in question, particularly: the type of product, what is it made of, its function and how it is presented or packaged.

CN Code	Aggregated goods category	Greenhouse gas
Iron and Steel		
2601 12 00 - Agglomerated iron ores and concentrates, other than roasted iron pyrites	**Sintered Ore**	Carbon dioxide
7201 - Pig iron and spiegeleisen in pigs, blocks or other primary forms Some products under 7205 (Granules and powders, of pig iron, spiegeleisen, iron or steel) may be covered here	**Pig Iron**	Carbon dioxide
7202 1 - Ferro-manganese	**FeMn**	Carbon dioxide
7202 4 - Ferro-chromium	**FeCr**	Carbon dioxide
7202 6 - Ferro-nickel	**FeNi**	Carbon dioxide
7203 - Ferrous products obtained by direct reduction of iron ore and other spongy ferrous products	**DRI**	Carbon dioxide
7206 - Iron and non-alloy steel in ingots or other primary forms (excluding iron of heading 7203) 7218 - Stainless steel in ingots or other primary forms; semi-finished products of stainless steel 7224 - Other alloy steel in ingots or other primary forms: semi-finished products of other alloy steel	**Crude steel**	
7205 - granules and powders, of pig iron, spiegeleisen, iron or steel (if not covered under category pig iron) 7207 - semi-finished products of iron or non-alloy steel	**Iron and steel products**	Carbon dioxide
7208 - Flat-rolled products of iron or non-alloy, of a width of 600 mm or more, hot-rolled, not clad, plated or coated 7209 - Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, cold-rolled (cold-reduced), not clad, plated or coated 7210 - Flat-rolled products of iron or non-alloy steel, of a width of 600 mm or more, clad, plated or coated 7211 - Flat-rolled products of iron or non-alloy, of a width of less than 600 mm, not clad, plated or coated 7212 - Flat-rolled products of iron or non-alloy steel, of a width of less than 600 mm clad, plated or coated 7213 - Bars and rods, hot-rolled, in irregularly wound coils, of iron or non-alloy steel	**Iron and steel products**	Carbon dioxide
7214 - Other bars and rods of iron or non-alloy steel, not further worked than forged, hot-rolled, hot-drawn or hot-extruded, but including those twisted after rolling 7215 - Other bars and rods or non-alloy steel 7216 - Angles, shapes and sections of iron or non-alloy steel 7217 - Wire of iron or non-alloy steel 7219 - Flat-rolled products of stainless steel, of a width of 600 mm or more 7220 - Flat-rolled products of stainless steel, of a width of less than 600 mm 7221 - Bars and rods, hot-rolles, in irregularly wound coils, of stainless steel 7307 - Tube or pipe fittings (for example, couplings, elbows, sleeves), if iron or steel	**Iron and steel products**	Carbon dioxide
7308 - Structures (excluding prefabricated buildings of heading 9406) and parts of structures (for example, bridge and bridge-sections, lock-gates, towers lattice masts, roofs, roofing frameworks, doors and windows and their frames and thresholds for doors, shutters, balustrades, pillars and columns), of iron or steel; plates, rods, angles, shapes, sections, tubes and the like, prepared for use in structures, of iron or steel 7309 - Reservoirs, tanks, vats and similar containers for any material (other than compressed or liquefied gas), of iron or steel, of a capacity exceeding 300l whether or not lined or heat-insulated, but not fitten with mechanical or thermal equipment 7311 - Containers for compressed or liquefied gas, of iron or steel 7318 - Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter pins, washers (including spring washers) and similar articles, of iron or steel 7326 - Other articles of iron or steel	**Iron and steel products**	Carbon dioxide

3.1.2 Steps to determine actual specific embedded emissions for iron and steel

Here is an overview of the emissions to monitor and report under CBAM. Emissions to report include the indirect emissions linked to the electricity used in the production process, as well as the direct and indirect emissions to produce precursors, and finally also the direct emissions to produce iron and steel products. However, there are some types of iron and steel products, namely other types of ferro alloys under CN 7202 and CN 7204 that are not in the scope of CBAM.



1 Establishing System Boundaries

As a first step, declarants need to define the installations boundaries, the production processes and routes, which means that there is a need to identify the goods under CBAM scope.

The system boundaries encompass all processes directly or indirectly linked to the production process. The system boundaries depend on the aggregated goods category and as example may include processes such as producing, melting or refining iron or steel or ferrous alloys, and manufacture of semi-finished and basic steel products. Emissions related to transport activities are outside the system boundaries.

The production route refers to the specific technological option used to produce particular goods under an aggregated goods category.

2 Performing monitoring

Performing monitoring in the case of iron and steel means:

- monitoring direct emissions at installation level, originating from fuel combustion, including all production steps applied at the installation, starting from crude steel, including, but not limited to: re-heating, re-melting, casting, hot rolling, cold rolling, forging, pickling, annealing, plating, coating, galvanizing, wire drawing, cutting, welding, finishing;
- monitoring flows of net measurable heat;
- monitoring electricity consumption;
- monitoring the consumption of precursors.

3 Attributing emissions to production processes, then to goods

This involves allocating emissions to the production processes responsible for generating them and subsequently attributing those emissions to the specific goods produced within those processes. Emissions from heat consumption/production are considered by multiplying the net measurable heat with the relevant emission factor.

4 Embedded emissions of precursors

There are two types of CBAM goods, simple and complex ones. Simple goods are produced from input materials that are considered to have zero embedded emissions under the CBAM. Therefore, the embedded emissions of simple CBAM goods are based entirely on the emissions occurring during their production.

In the iron and steel sector, sintered ore is considered a simple goods. As iron and steel products are considered complex goods, it is necessary to include the embedded emissions of relevant precursors used in the production processes.

5 Indirect emissions

Monitoring and reporting of indirect emissions in the iron and steel sector requires multiplying the electricity consumption with the relevant emission factor. During the transitional period, these emission factors are generally:

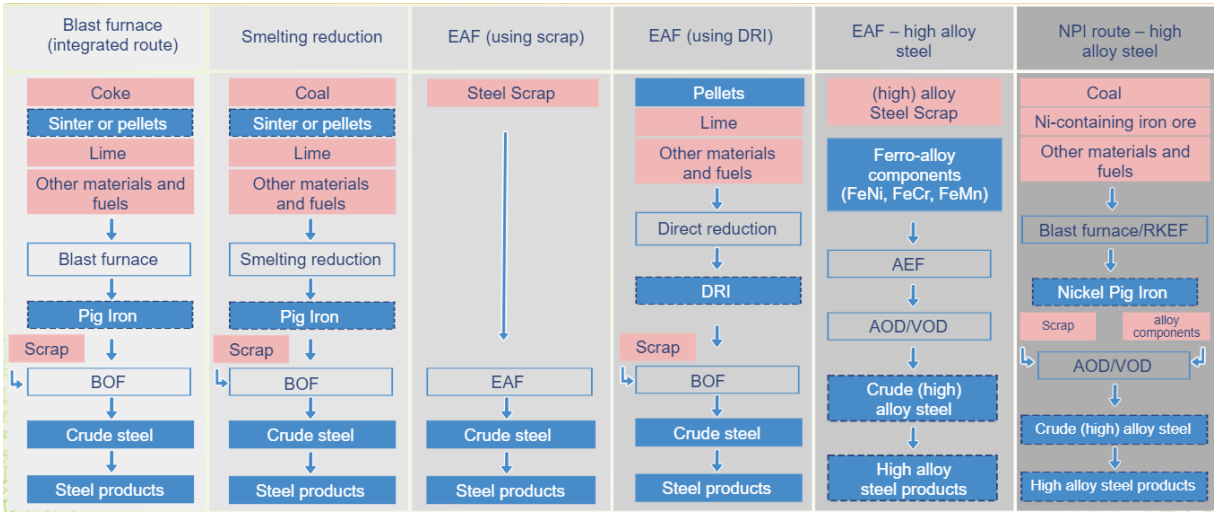
a) The average emission factor of the country of origin of the electricity grid, based on data from the International Energy Agency (IEA) provided by the Commissions or
b) Any other emissions factor of the country of origin of the electricity grid based on publicly available data representing either the average emission factor or the CO_2 emission factor as referred to in Section 4.3 of Annex IV to Regulation (EU) 2023/956.

Actual emission factors for electricity may be used if it can be demonstrated that:

a) A direct technical link exists between the installation in which the imported good is produced and the electricity generation source or
b) The installation has concluded a power purchase agreement with a producer of electricity located in a third country for an amount of electricity that is equivalent to the amount for which the use of a specific factor is claimed.

3.1.3 System boundaries embedded emissions of iron and steel sector

Note that the system boundaries for precursors and iron or steel finished products are distinct. They may, under certain conditions, be added together to include all processes directly or indirectly linked to the production of these goods, including the related input and output activities. Therefore, there are different routes by which iron or steel products may be produced.

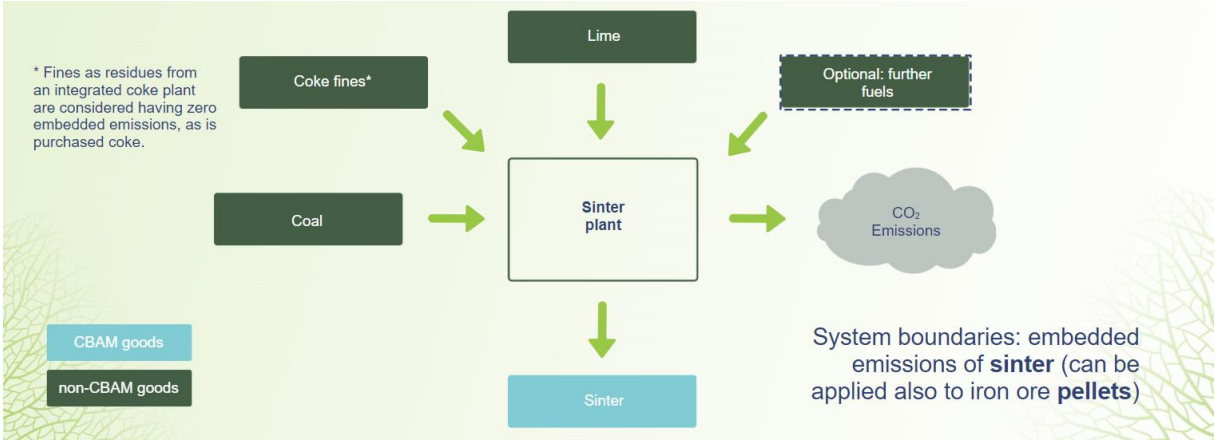


Sintered ore production process

When talking about emissions of sintered ore pellets, we are looking at an aggregated goods category which includes all kinds of iron ore pellet production (either for sale or for direct use in the same installation) and sinter production.

In this case, pelletisation and sintering are complementary process routes for preparing and agglomerating iron oxide raw materials for use in iron and steel making. In pelletisation, iron oxide raw materials are ground and combined with additives to form pellets, which are then thermally treated. In sintered ore production, iron oxide raw materials are mixed with coke breeze and other additives before the mixture is sintered together in a kiln, forming a porous material similar to clinker, called 'sinter'. Sinter is typically produced and used at the steelworks. Pellets may be produced at the steelworks or at a distance at mine sites.

There are no relevant precursors for this production process.

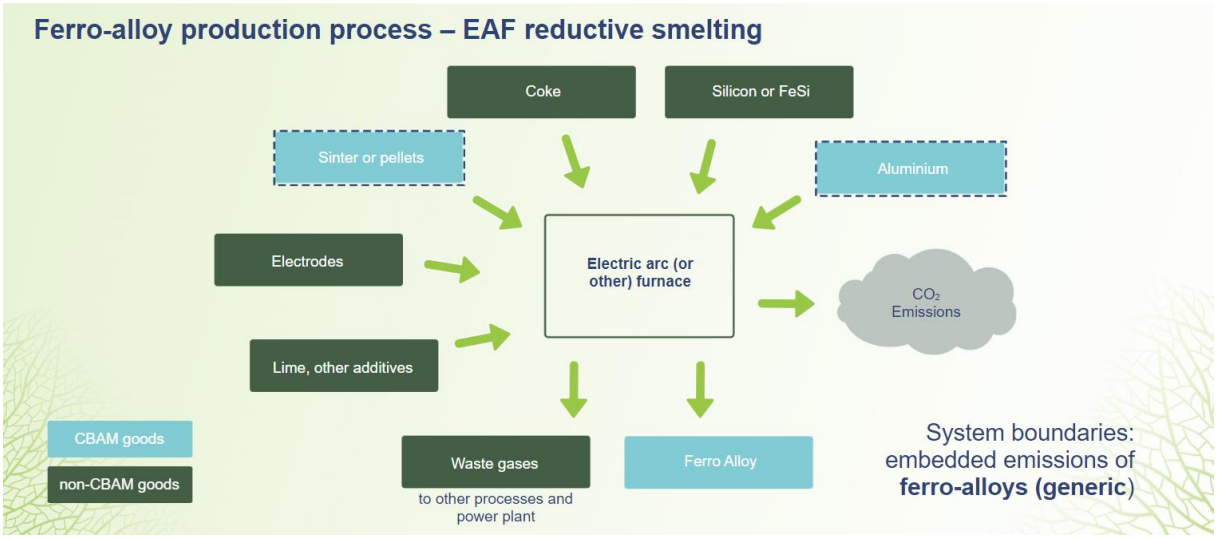


Ferro-alloy production process – EAF reductive smelting

The different ferro-alloys are produced by reductive smelting with the addition of a reducing agent such as coke to the EAF, along with other additives. Several different types of EAF are used, depending on the ferro-alloy being produced. Following EAF smelting, liquid metal alloy is tapped and cast in moulds and the solidified metal is then crushed or granulated depending on customer requirements.

When used, the relevant precursor for these processes is sintered ore.

Keep in mind that raw material inputs for ferro-alloys include pellets and sinter that are produced under the separate production process for 'Sintered ore'.

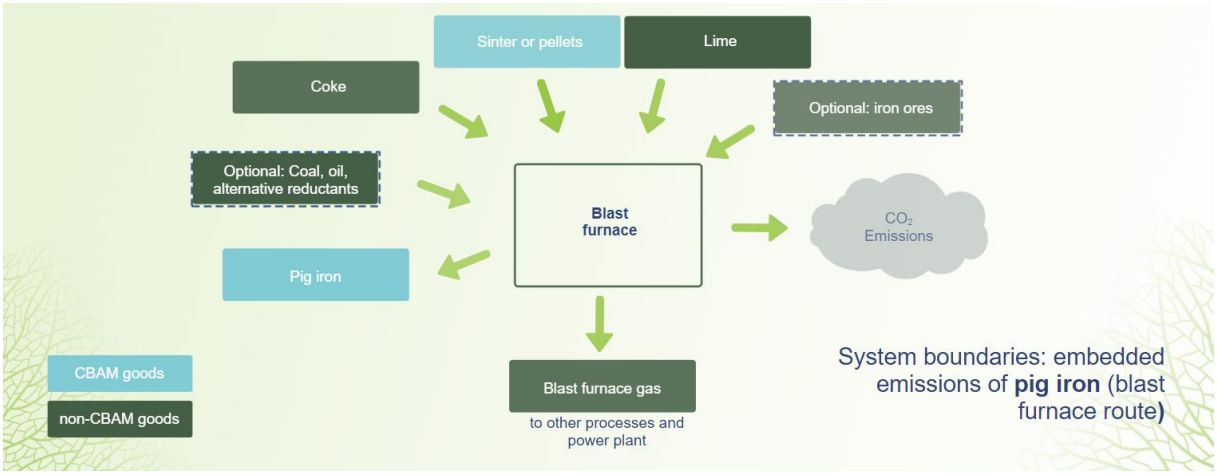


Pig iron – Blast furnace production route

When talking about the blast furnace production route, this refers to the production route that produces liquid pig iron, also known as "hot metal", that may be alloyed or non-alloyed. The main production unit for this production process is the blast furnace. Inputs into the blast furnace include iron ore pellets or sintered ore, fuels and other raw materials, then inside the blast furnace iron oxide is reduced to iron metal.

The hot metal produced is then tapped and is either cast or directly converted to crude steel in a sequential step by the basic oxygen converter. Note that this step is covered under a different production process, the crude steel – basic oxygen steelmaking production route.

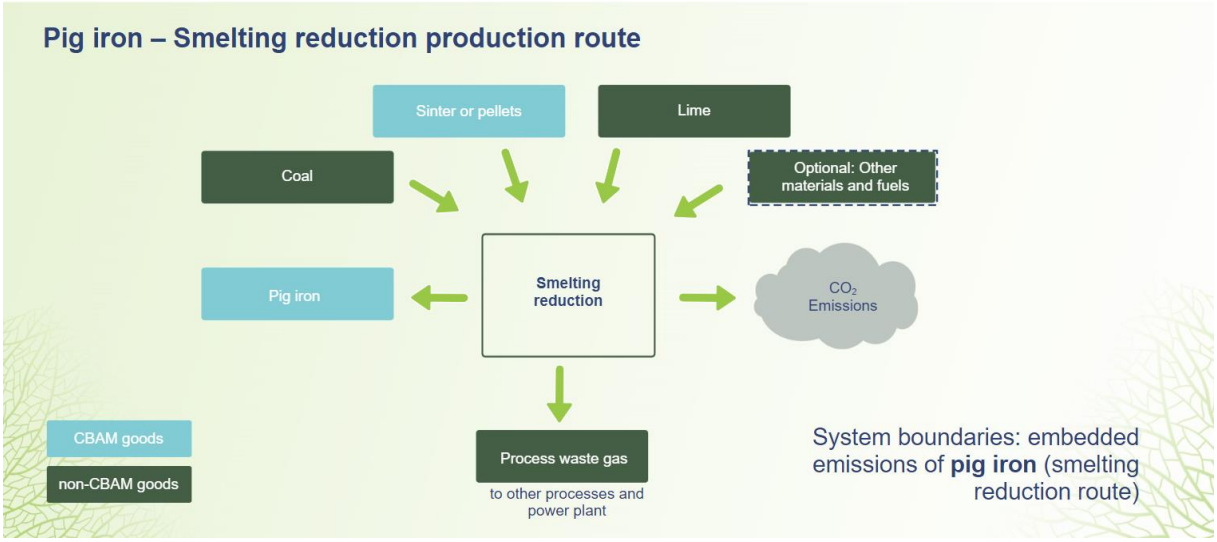
If used, the relevant precursors are sintered ore, pig iron or DRI from other installations or production processes, ferro-alloys, and hydrogen.



Pig iron – Smelting reduction production route

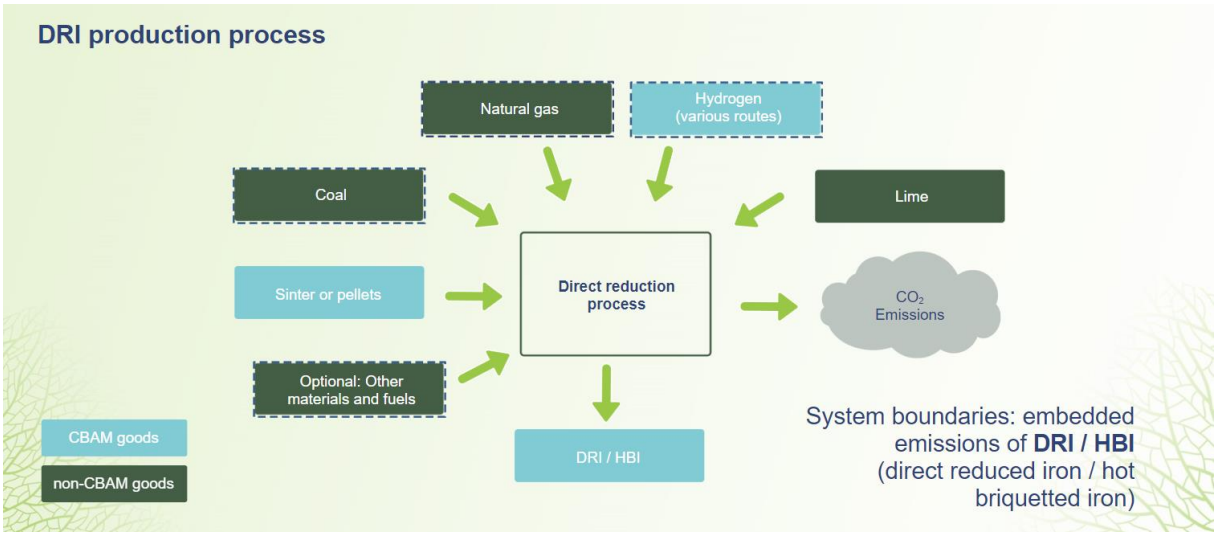
This is the process of smelting reduction that produces pig iron from precursor sintered ore, iron ore pellets, (or ironmaking residues), using coal (not coke) as a reductant. The process comprises two steps, the reduction of iron ore followed by melting to produce pig iron or hot metal.

If used in the process, the relevant percursors are sintered ore; pig iron or DRI from other installations or production processes; ferro-alloys FeMn, FeCr, FeNi; and hydrogen.



DRI production process

Direct reduction involves the production of solid primary iron from high grade iron ores (pellets, sinter or concentrates), using natural gas, coal or hydrogen as a reducing agent. The solid product is called direct reduced iron, of different types, for example, 'iron sponge' and hot briquetted iron. Some DRI is used as a feedstock directly in EAFs or other downstream processes. It is expected that production routes using hydrogen will play a major role in decarbonising the steel industry in coming years.
Although there are several different processes used in practice, the high-level system boundaries are very similar and can therefore be represented on a single diagram.

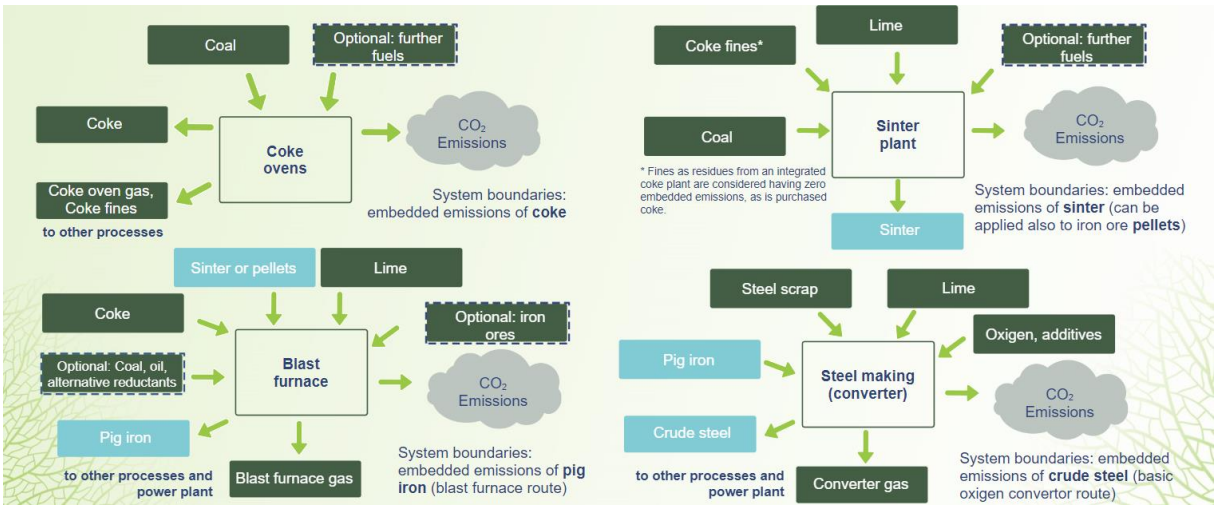


Crude steel – Basic oxygen steelmaking alongside other related activities

If the basic oxygen steelmaking production route starts with hot metal (liquid pig iron), the hot metal is directly converted to crude steel by the basic oxygen converter or furnace (BOF) as part of a continuous process. Following the converter, a steel decarburisation process by argon oxygen decarburisation (AOD) or vacuum oxygen decarburisation (VOD) may be performed, followed by various secondary metallurgical processes such as vacuum degassing to remove dissolved gases. Crude steel is then cast into its primary forms by continuous casting or ingot casting, which may be followed by hot-rolling or forging to obtain the semi-finished crude steel products (under CN codes 7207, 7218 and 7224).

Relevant precursors, if used in the process, are pig iron, DRI; ferro-alloys FeMn, FeCr, FeNi; and crude steel from other installations or production processes, if used.

In integrated steel plants, liquid pig iron that is directly charged to the oxygen converter is the product which separates the production process for pig iron from the production process of crude steel. The integrated blast furnace, basic oxygen furnace steelmaking process is by far the most complex steel making process and is characterised by networks of interdependent material and energy flows between the various production units. Note that coke is treated as a raw material with no embedded emissions.



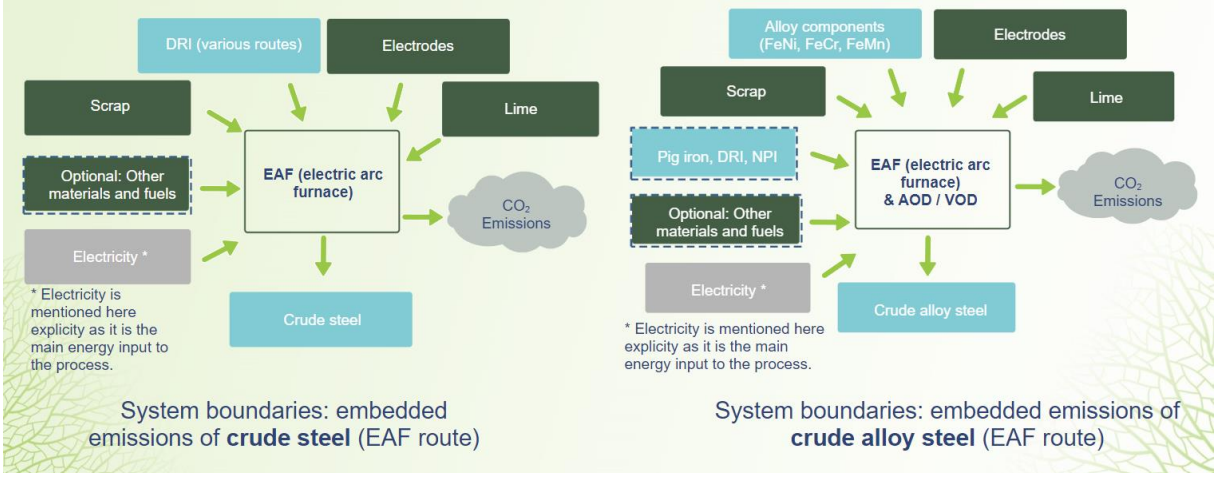
Crude steel – EAF alloy and non-alloy steel production route

The direct smelting of materials which contain iron is usually performed in an electric arc furnace. Feedstocks for EAF routes are metallic iron in particular ferrous scrap and/or Direct Reduced Iron. Where significant amounts of DRI are used, one of the various EAF-DRI routes applies.

Following EAF smelting, a steel decarburisation process by argon oxygen decarburisation or vacuum oxygen decarburisation may be performed, followed by various secondary metallurgical processes such as desulphurisation and degassing to remove dissolved gases. Electricity is the main energy input to the EAF.

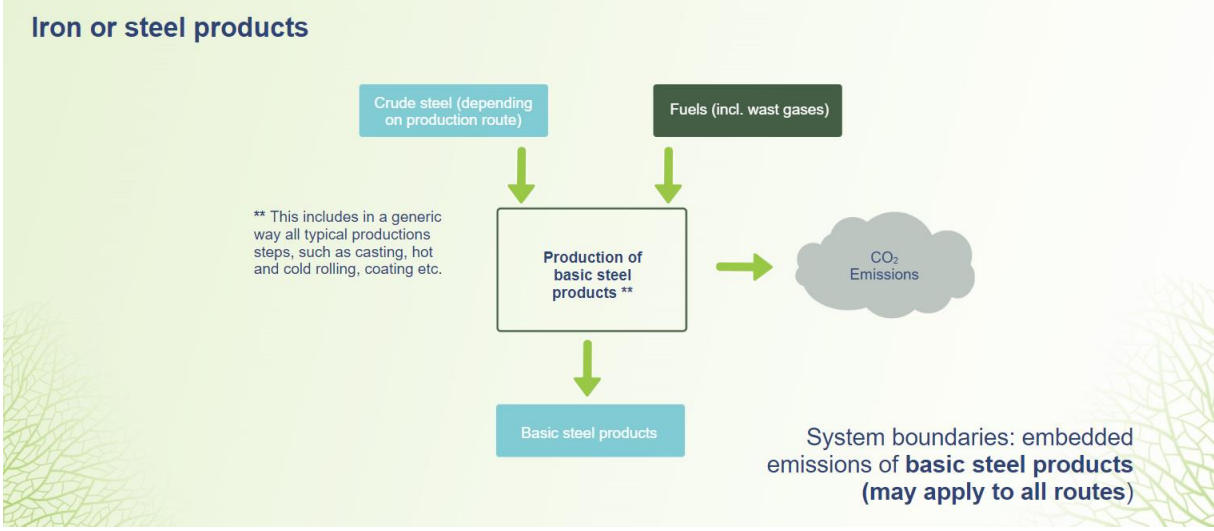
Note that only primary hot-rolling and rough shaping by forging to obtain the semi-finished products under CN codes 7207, 7218 and 7224 are included in this aggregated goods category. All other rolling and forging processes are included in the aggregated goods category ‘iron or steel products.

Though there are several different EAF production routes, for crude steel and crude alloy steel, they are broadly similar.



Iron and steel products

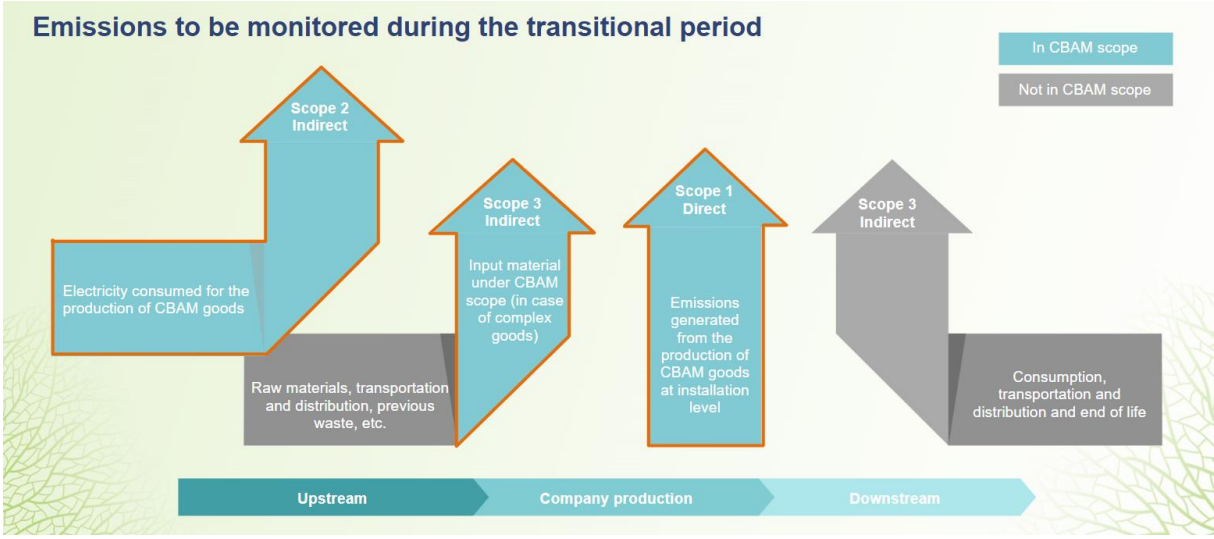
Iron or steel products are produced from the further processing of crude steel, semi-finished products, as well as other final steel products by all kinds of forming and finishing steps including: re-heating, re-melting, casting, hot rolling, cold rolling, forging, pickling, annealing, plating, coating, galvanizing, wire drawing, cutting, welding, finishing.



3.2 Collecting data

3.2.1 Emissions to be monitored during the transitional period

The EU importer or its representative is obliged to report the embedded greenhouse gas emissions of the imported goods. They get the data from the third-country installation, which does the monitoring and calculations in a primary report.



Scope 1 - Direct emissions:

Direct emissions refer to the greenhouse gas emissions released directly during the production at the installation level. The focus is on carbon dioxide (CO2), the most significant greenhouse gas in iron and steel manufacturing.
Carbon dioxide emissions result from the combustion of fuels including coke, waste gases (directly from the process or indirectly from other sources of waste gases in the steelworks), fossil fuel inputs (coal, coke, fuels oils, natural gas, coal) used both for combustion and as a reducing agent, from process emissions including from the graphite electrodes and electrode pastes, from process materials such as lime, limestone and other additives, from other fuels (biomass, or biogas), from carbon contained with the ferrous scrap and alloys entering the process, and from combustion of fuels and process emissions from flue gas cleaning, depending on the different combination of production steps carried out in producing the final iron or steel goods.

Scope 2 - Indirect emissions due to electricity consumption:

CBAM requires the emissions resulting from the electricity consumed during the manufacturing process to be monitored and accounted for. This includes CO2 emissions associated with the production of electricity, such as from power plants. Under greenhouse gas accounting standards such as the GHG protocol, indirect emissions due to electricity consumption would fall under the category of scope 2 emissions.

Scope 3 - Indirect emissions due to the use of precursors:

Precursor materials refer to those raw materials used in the production of complex CBAM goods that are CBAM goods themselves. As precursors might be produced by another installation, their embedded emissions are considered for determining the embedded emissions of complex CBAM goods produced in the installation. The embedded emissions of precursors include both direct and indirect emissions. In the iron and steel sector, a typical example for a precursor is pig iron. The determination of the overall embedded emissions of iron and steel thus requires the quantity (in tonnes) of precursor materials used (i.e. pig iron or, if used in the process, sintered ore) and their respective embedded emissions.

If the operator does not have data on the embedded emissions of precursors, default values may be used until 31 July 2024, including default made available and published by the Commission for the transitional period.

Under greenhouse gas accounting standards such as the GHG protocol, indirect emissions due to the use of precursors would fall under the category of scope 3 emissions.

3.2.2 Methodologies for monitoring and quantifying direct emissions

There are several methods for monitoring and quantifying direct emissions.

Calculation-based methodology

- The **standard method** involves determining quantities of all the fuels and input materials consumed and multiplying those with calculation factors such as the net calorific value and emission factor. These calculation factors are typically determined either based on sampling and analysis or by the use of standard factors.
- The **mass balance method** is typically relevant where carbon remains in the goods produced (e.g. steel). In this case, the carbon quantities of all fuels, input materials as well as output materials are determined. This mass balance will result in a difference between the amount of carbon entering and leaving the installation. This difference will be considered to be converted into CO2 equivalent emissions.

Contrary to what the name suggests, the calculation-based methodology also relies on measurements. However, the emissions are not directly measured. Instead, it is parameters such as the consumption of fuels and materials as well as the carbon contents of fuels and materials that are measured. The emissions are calculated from this data.

Measurement-based methodology

This methodology focuses on continuous measurements of emissions from emission sources at the installation level. Emissions may be measured directly in the stack or using extractive procedures with a measurement instrument located close to the stack. These measurements provide direct data on the amount of greenhouse gases emitted.

Other monitoring systems

The transitional phase allows for some temporary flexibility in using other monitoring, reporting and verification system that are already applied in the installation.
Until 31 December 2024 other monitoring and reporting methods can be used if they lead to similar coverage and accuracy of emissions data.

How can you find out if your installation is covered by an eligible monitoring and reporting system, so you can use its methods during start-up of the CBAM? This is the case if either of the following applies:

- The installation is participating in a ‘carbon pricing scheme’
- The installation is participating in a compulsory GHG reporting scheme
- The installation participates in an emission monitoring scheme at the installation (non-mandatory), which can include verification by an accredited verifier

Besides, for the whole reporting period, up to 20% of the total embedded emissions of complex goods may be based on estimations."

3.3 Calculating the specific embedded emissions in the iron and steel sector

The formula for calculating specific embedded emissions in the iron and steel sector is as follows:

Specific embedded emissions = (Total CO2 Emissions from Iron and steel Production) / (Total Iron and steel Production)

- The numerator, “Total CO2 Emissions from iron and steel production”, represents the sum of carbon dioxide (CO2) emissions released during the entire iron and steel production process in tonnes. It encompasses both direct and indirect emissions.
- The denominator, “Total Iron and steel production”, refers to the overall amount of iron and steel produced within a specific timeframe. It is usually measured in cubic meters and represents the total quantity of iron and steel manufactured during that period.

By dividing the total CO2 emissions from iron and steel production by the total iron and steel production, the formula provides a measure of specific embedded emissions, which represents the amount of CO2 emitted per unit of iron and steel produced.

It's important to note that the specific calculation of specific embedded emissions may require more comprehensive methodologies that explained in more details in the guidance documentation and communication template.

4 Reporting in the CBAM Transitional Registry

4.1 Relevant reporting requirements during the transitional phase

Information requirements regarding the iron and steel imported into the EU:

- quantity of imported iron and steel
- country of origin
- direct and indirect emissions

Reporting timetable:

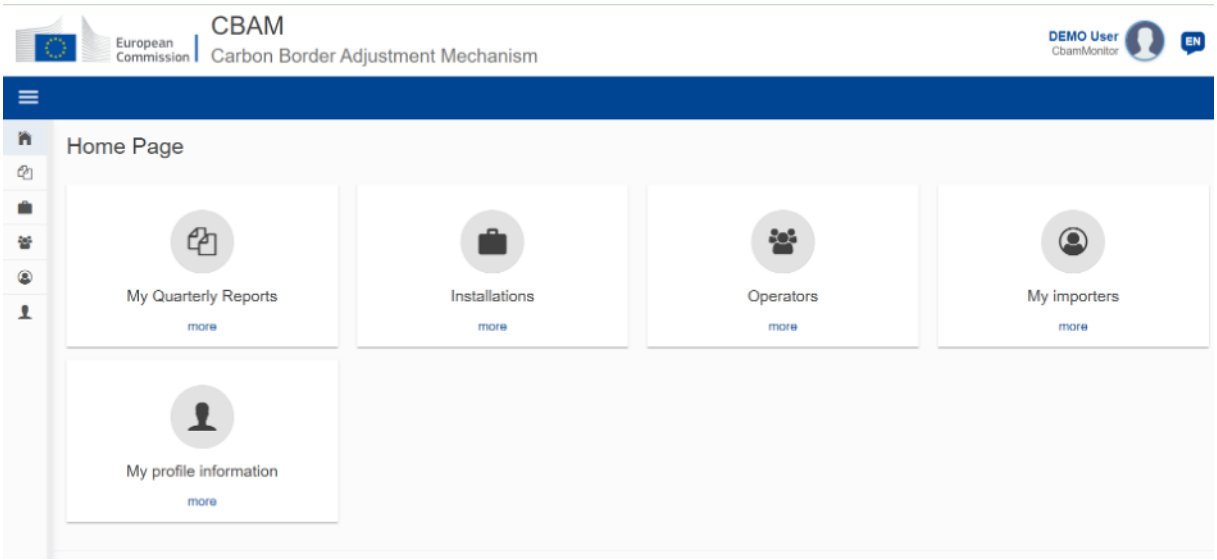
- From October 2023 to December 2025, submit reports quarterly
- First CBAM report is due by 31 January 2024
- First two reports may be modified and corrected until July 2024

Benefits of data collection:

1. helps refine the methodology for reporting and for calculating the default values,
2. integrates the carbon pricing mechanisms being applied in third countries,
3. addresses any difficulty faced by reporting declarants,
4. ensures that the system is as user-friendly as possible.

4.2 Introducing the CBAM Transitional Registry

Please note: to understand how to access the CBAM Transitional Registry, please see course Uniform User Management and Digital Signatures (UUM&DS)



My quarterly reports
All open and closed reports will be displayed on this screen. Here, you can also create new reports or rectify past reports.

Installations
The “Installation” is the physical facility or industrial plant that carries out specific production processes. It can be a manufacturing plant, a power station, or any facility involved in activities covered by CBAM. For example, in the iron and steel sector, an installation would be a iron and steel production facility. On this screen you can create a registry of the Installations you import your goods from, so you can easily look them up when submitting a new report. That way you will save time as most of the information will automatically fill in.

Operators
The “Operator” or “Installation operator" is the entity responsible for operating the installation and carrying out the production processes. They are accountable for complying with emissions monitoring and reporting and other CBAM requirements associated with the production of goods within that installation. In the iron and steel sector, the installation operator would be the company managing the iron and steel production facility. On this screen you can create a registry of the Operators associated with the Installations you import your goods from, so you can easily look them up when submitting a new report. That way you will save time as most of the information will automatically fill in.

My importers
On this screen you can see the list of your importers and access their profiles.

My profile information
On this screen you can see your profile details but cannot edit the information.

4.3 Reporting in the CBAM Transitional Registry

Please refer to the course to see the demo.

Remember, this is a quick and handy summary of the most relevant course information. Only the European Union legislation published in the Official Journal of the European Union is deemed authentic. The Commission accepts no responsibility or liability whatsoever with regard to the training.

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