Carbon Border Adjustment Mechanism



Presented by

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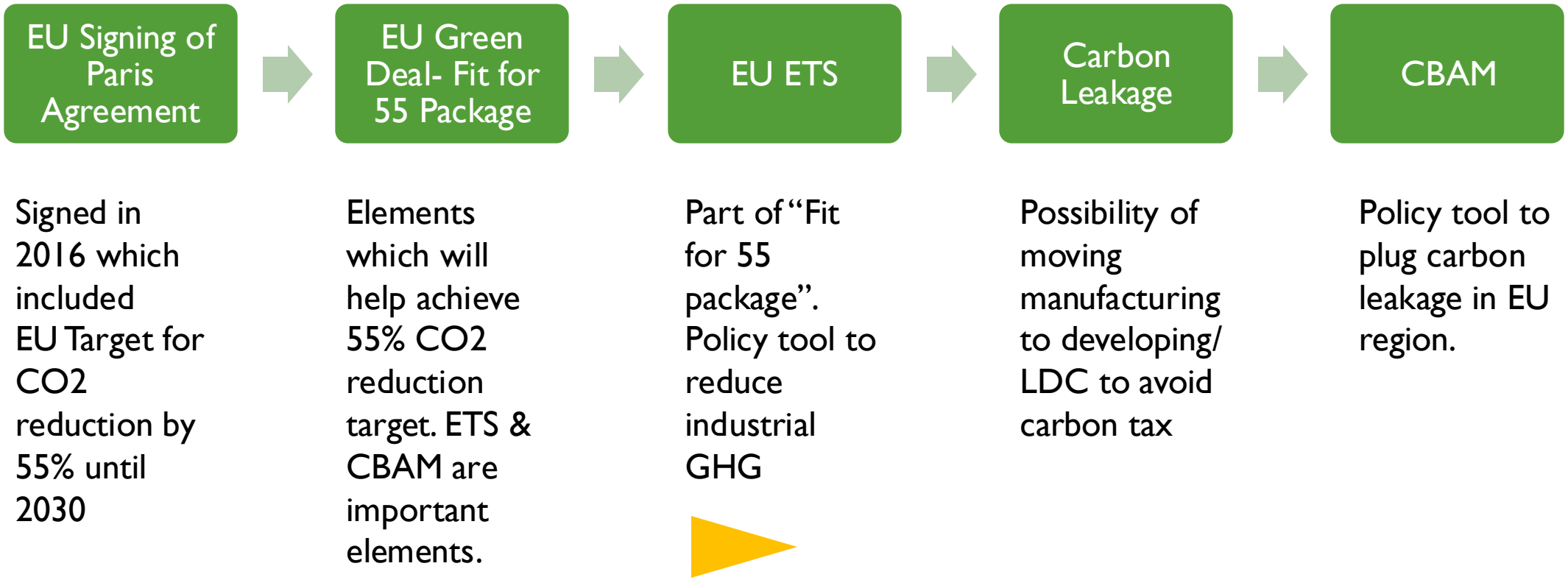
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…….towards sustainability

- Introduction to CBAM & Background
- EU ETS
- CBAM Timelines
- Key Sectors
- Recent Changes

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Background of CBAM



CBAM is an EU climate policy tool to prevent carbon leakage

- *by placing a carbon price on certain imports to match EU's domestic carbon costs.*
- *It ensures imported goods face the same carbon cost as EU-made goods under the EU Emissions Trading System (EU ETS).*

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CBAM Policy was introduced through Regulation (EU) 2023/ 956 in the year 2023

REGULATION (EU) 2023/956

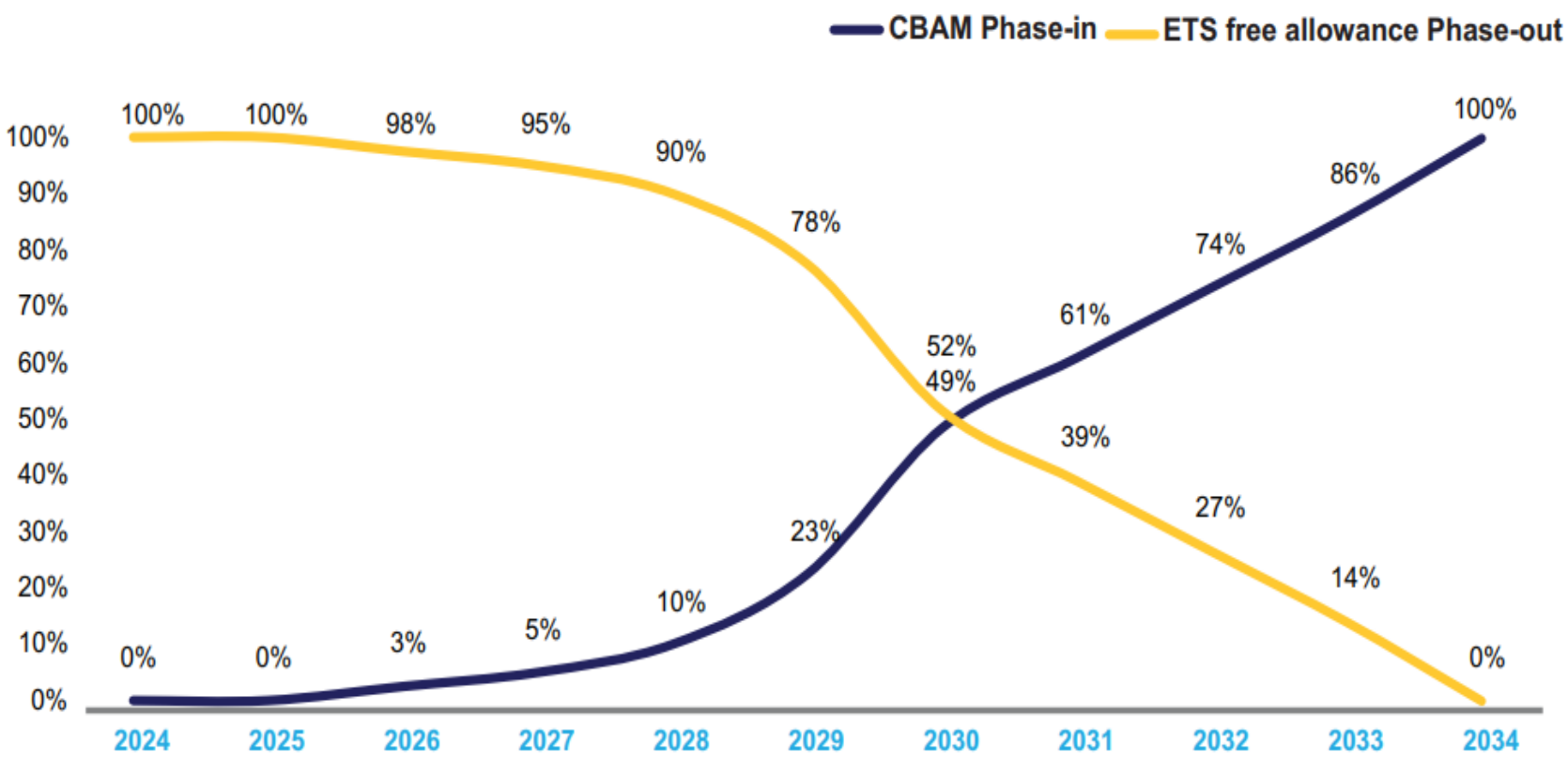
CHAPTER 1 **subject matter, scope and definitions**	CHAPTER 2 **obligations and rights of authorised cbam declarants**	CHAPTER 3 **competent authorities**	CHAPTER 4 **cbam certificates**
CHAPTER 5 **rules applicable to the importation of goods**	CHAPTER 6 **enforcement**	CHAPTER 7 **exercise of the delegation and committee procedure**	CHAPTER 8 **reporting and review**
CHAPTER 9 **coordination with free allocation of allowances under the eu ets**	CHAPTER 10 **transitional provisions**	CHAPTER 11 **final provisions**	

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How Are They Linked

The **EU Emission Trading System (ETS)** is the EU's internal carbon pricing system — where industries buy and surrender **allowances** for their emissions.

Pathway for phasing out free allowances and phasing in CBAM regulations



Source: *European Commission; ICRA Research*

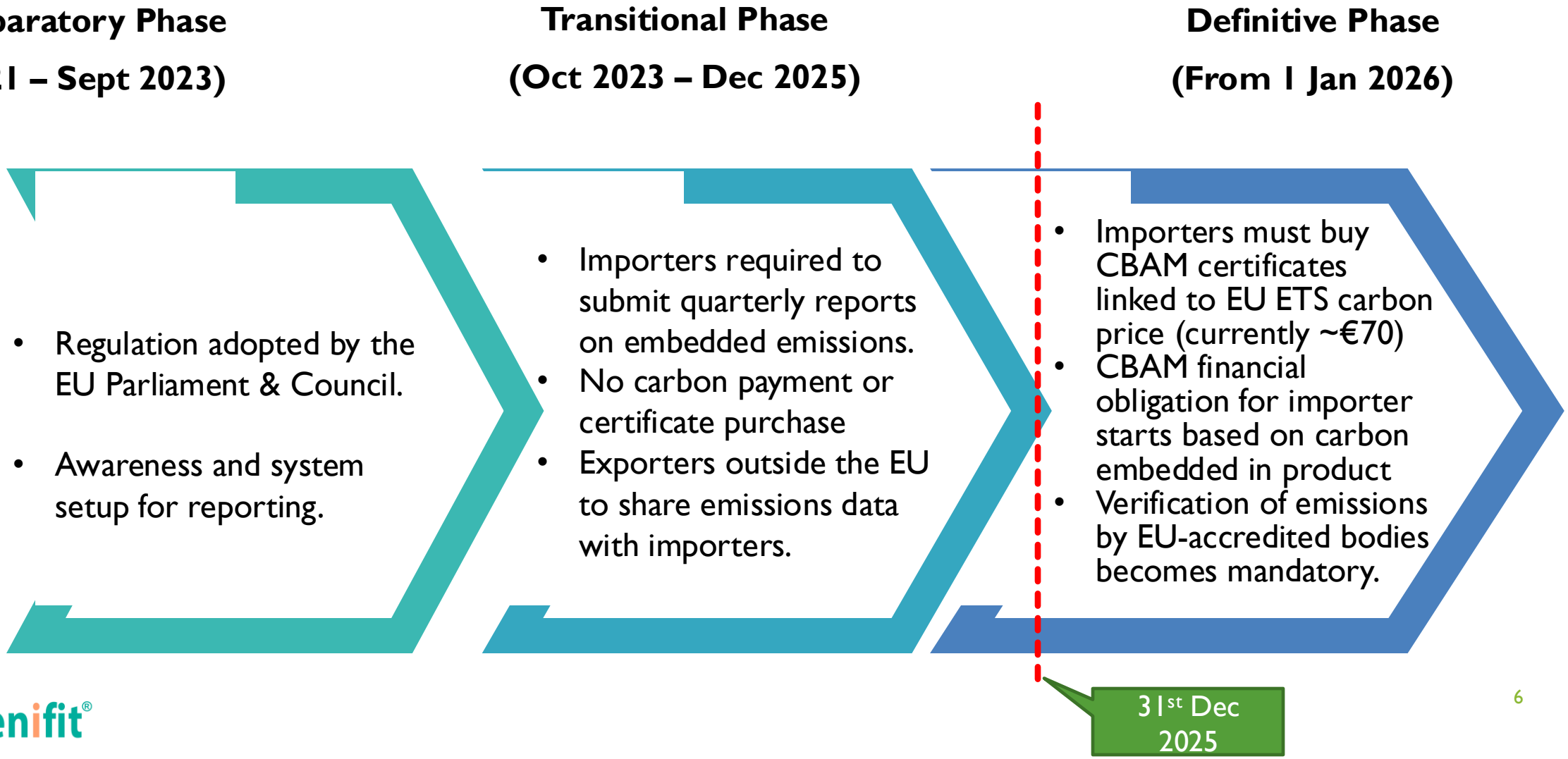
Free Allowances and Their Relevance

- Currently, some EU industries receive free allowances under ETS to prevent carbon leakage & keep their competitiveness.
- These will be phased out gradually as CBAM phases in, ensuring a level playing field for imports and domestic production.

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CBAM Implementation Timeline

It entered into force on October 2023 -Regulation (EU) 2023/956

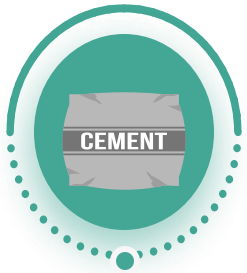


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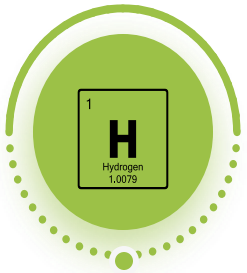
Sectors / Products Covered



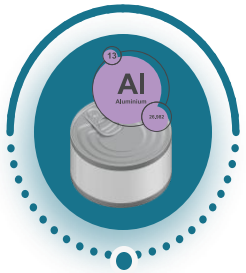
Iron and Steel



Cement



Hydrogen Production



Aluminum



Electricity



Fertilizers

These sectors are considered carbon-intensive due to the significant GHG emissions associated with their production processes, the risk of carbon leakage and the practical feasibility. These sectors are chosen because not many value chain partners are associated with these sectors.

Exemptions

- ✓ CBAM does not apply to imports from countries covered by the EU Emission Trading System (ETS) or countries with fully linked domestic ETS, such as EEA (European Economic Area) & EFTA (European Free Trade Association) countries.
- ✓ Imports up to 50 tonnes per importer per year now exempted from CBAM.

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✅ **EEA countries** = EU member states **+** three EFTA members (Iceland, Liechtenstein, and Norway).
✅ **EFTA countries** = Iceland, Liechtenstein, Norway, and Switzerland (Switzerland is *not* part of the EEA).

Annex I of CBAM Regulation (EU) 2023/956



Iron and Steel

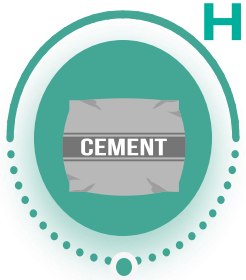
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HS/CN Codes

- 2601 12 00 – Agglomerated iron ores and concentrates,
- 7301 – Sheet piling of iron or steel,
- 7302 – Railway or tramway track construction material of iron or steel,
- 7303 00 – Tubes, pipes and hollow profiles, of cast iron
- 7304 – Tubes, pipes and hollow profiles, seamless, of iron
- 7305 – Other tubes and pipes
- 7307 – Tube or pipe fittings (for example, couplings, elbows, sleeves), of iron or steel
- 7308 – Structures (excluding prefabricated buildings of heading
- 7309 00 – Reservoirs, tanks, vats and similar containers
- 7310 – Tanks, casks, drums, cans, boxes and similar containers
- 7311 00 – Containers for compressed or liquefied gas, of iron or steel
- 7318 – Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter pins, washers
- 7326 – Other articles of iron or steel

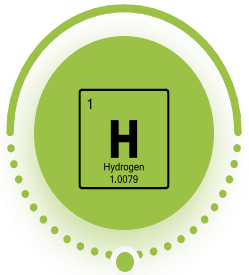
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HS/CN Codes



Cement

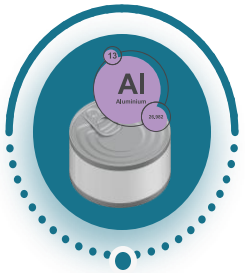
- 2507 00 80 – Other kaolinic clays
- 2523 10 00 – Cement clinkers
- 2523 21 00 – White Portland cement, whether or not artificially coloured
- 2523 29 00 – Other Portland cement
- 2523 30 00 – Aluminous cement
- 2523 90 00 – Other hydraulic cements



Hydrogen Production

- 2804 10 00 – Hydrogen

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Aluminum

HS/CN Codes

- 7601 – Unwrought aluminium
- 7603 – Aluminium powders and flakes
- 7604 – Aluminium bars, rods and profiles
- 7605 – Aluminium wire
- 7606 – Aluminium plates, sheets and strip
- 7607 – Aluminium foil
- 7608 – Aluminium tubes and pipes
- 7609 00 00 – Aluminium tube or pipe fittings
- 7610 – Aluminium structures
- 7611 00 00 – Aluminium reservoirs, tanks, vats and similar containers
- 7612 – Aluminium casks, drums, cans, boxes and similar containers
- 7613 00 00 – Aluminium containers for compressed or liquefied
- 7614 – Stranded wire, cables, plaited bands and the like, of aluminium
- 7616 – Other articles of aluminium

HS/CN Codes



Electricity

- 2716 00 00 – Electrical energy



Fertilizers

- 2808 00 00 – Nitric acid; sulphonitric acids
- 2814 – Ammonia, anhydrous or in aqueous solution
- 2834 21 00 – Nitrates of potassium
- 3102 – Mineral or chemical fertilisers
- 3105 – Mineral or chemical fertilisers containing two or three of the fertilizing elements

It is critical for Indian exporters to verify whether their goods fall within the CN codes listed in Annex I of Regulation (EU) 2023/956, as this will determine their reporting and compliance obligations. Over time, the EU may broaden CBAM's scope to include downstream or semi-finished products such as fasteners, metal components, and machinery parts.

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Self Assessment Tool for check if their product falls under the ambit of CBAM or not (https://taxation-customs.ec.europa.eu/document/download)

Emissions Covered

Direct Emission

Emission generated by the production processes of the imported goods

Indirect Emission

Emissions from the electricity consumption during the production process of the imported goods

Product Category Differentiation

Simple Goods Emission

Simple goods are produced from input materials that have net zero embedded emission during their production

Complex Goods Emission

For complex goods, it is necessary to include the embedded emissions of relevant **precursors** used in the production process

Different product categories have varying degrees of emission intensity

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Emissions Covered

Actual Emission

- The verified, product-specific greenhouse gas (GHG) emissions data provided by the exporter/manufacturer, measured according to EU-approved methodologies. Using actual emissions allows companies to demonstrate lower carbon intensity if they have invested in cleaner technologies.
- Actual emissions are based on specific measurements or data from the production processes.

Default Emission

- Standardized emission values assigned by the EU for a given product/country when actual data is not provided. These are typically conservative (higher) estimates to discourage under-reporting, meaning exporters without proper data may face higher CBAM costs.
- When actual emissions can not be adequately determined or for indirect emissions, default values are used

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What will change from 1st January 2026?

- CBAM will enter into Definitive Phase & financial obligation of EU importer will start under CBAM. Carbon will become important consideration by the importer based in EU
- Emissions trading under CBAM will begin from 1 February 2027, with retroactive obligations for 2026 imports
- Importers must obtain CBAM authorization as "**registered CBAM declarants**" to release CBAM goods for free circulation from 1 January 2026
- From 2027, importers must submit an annual CBAM declaration (as against quarterly reporting in transition phase) and surrender certificates for embedded CO2 emissions by 30 September
- First declaration covers imports during 2026; emissions can be determined using either actual data or EU default values. Emission to be verified by EU accredited verifier.
- If the carbon price was paid in the country of origin, that amount can be deducted from CBAM certificate obligation of importer
- Some more sectors can be added and CBAM scope can be extended
- Failure to surrender the required number of certificates will result in a penalty of €100 per excess tonne of CO2

Importance for Indian Exporters

- ✓ Even though exporters outside the EU won't pay for CBAM certificates directly, they are indirectly affected in two major ways:

1- Customer Demands: EU importers will ask Indian suppliers to provide product-specific carbon emissions data to comply with CBAM. Indian exporters will have to also register on a web portal of EU authority (CBAM O3CI Portal)

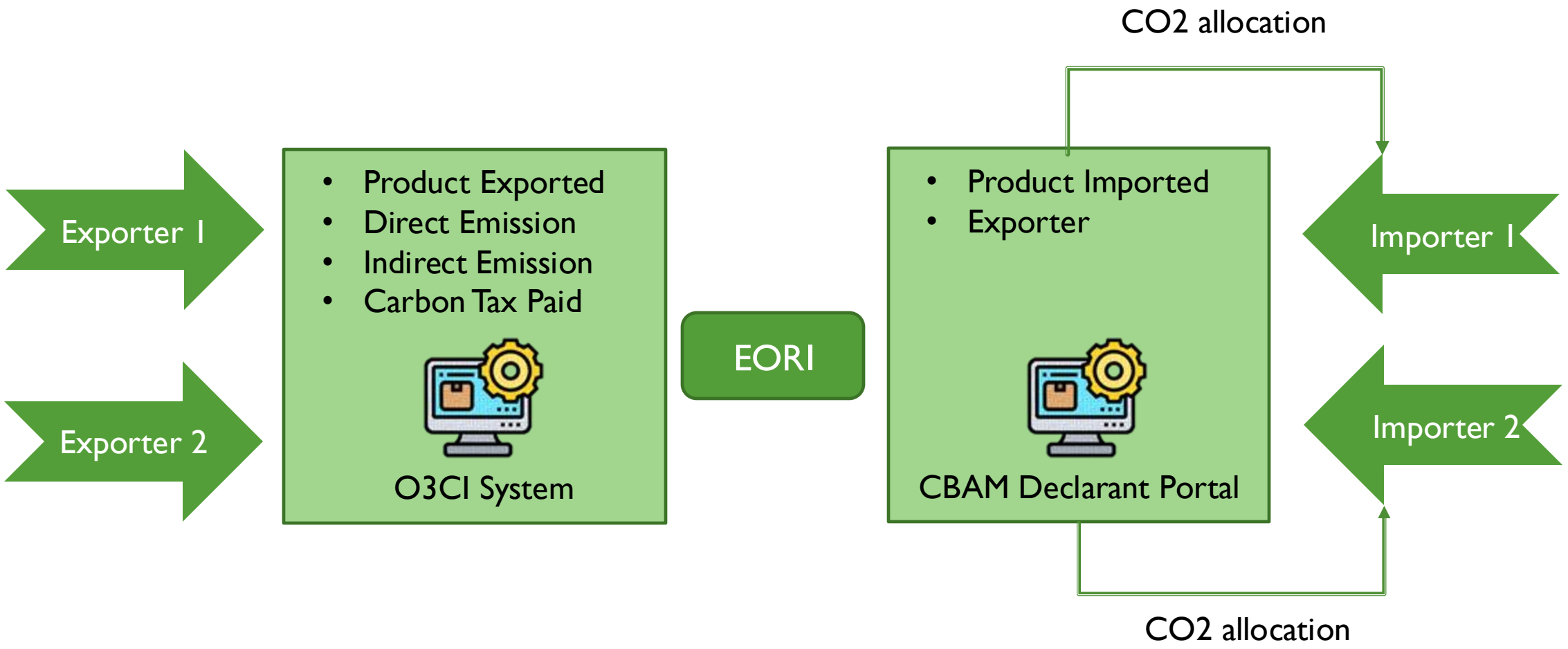
2- Competitive Pressure: High-emission products will become more expensive in the EU market, making low-carbon alternatives more attractive.

Failing to prepare can lead to:

- ✓ Indian exporters to the EU must begin their compliance journey now - waiting until the last moment is no longer an option.
- ✓ **Absence of CBAM preparedness can lead to:**

- Restricted access to EU markets
- Reduced competitiveness
- Financial penalties for non-compliance
- Reputational risks in global value chains

How CBAM system will work



Non-EU operators can submit installations and emissions data via the CBAM O3CI Portal which will automatically provide emission related data to importers for their import through EORI

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EORI (Economic Operators Registration and Identification)

What is an EORI

- **Economic Operators Registration and Identification (EORI)** number identifies companies for all EU customs operations.
- **Mandatory** for any company importing **CBAM-covered goods** into the EU.
- Enables tracking of shipments and reporting of **embedded emissions**.
- Without an EORI, goods may face **customs delays** or **extra costs**.

Key role of EORI in CBAM

- **Identification for Customs:** Primary ID for all importers under EU customs & CBAM.
- **CBAM Reporting:** Will link importer to **CBAM reports**.
- **Declarant Authorization (from Jan 2026):** Required to become an **Authorised CBAM Declarant**.
- **Shipment Tracking:** Ensures smooth customs clearance and prevents shipment delays.

Non-EU Exporters: Must include EORI number on **commercial invoices** when shipping to EU

Registration and getting access to system are important

STEP 1:
Create EU Login Account

- Go to https://webgate.ec.europa.eu/cas
- Register with email (company email strongly recommended), create password, confirm via email link.
- Set up 2-Factor Authentication (EU Login App, QR code, or FIDO2 key)

STEP 2:
Submit Access Request (Onboarding Wizard)

1- Go to https://cbam.ec.europa.eu/o3cinstallation
2- Log in using your EU Login credentials
3- Complete the onboarding form with:
- Company details and registration number/identifiers
- Company email and website
- User role: Admin Operator or Simple Operator
- Upload a single PDF containing (Documents in English, along with the original documents):

STEP 3:
Await Approval

- Review and submit access request.
- Monitor email address linked to the EU Login account for confirmation and next steps from the Commission
- Please note that the approval process may take several weeks

Documents Required:

- Company registration certificate (include the company registration number/relevant identifier, ensuring it matches the identifier provided in the onboarding form)
- Proof of representation (e.g., power of attorney)
- ID of the authorized representative
- Example identifiers (not to be used in your request):
  - IN123456ABCD (IN for the 2-letter country-code for India, followed by some letters and no.)
- For India: Corporate Identification Number (CIN) or Limited Liability Partnership Identification Number (LLPIN)

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Opportunities for Indian Exporters

CBAM is not just a compliance challenge — it's an **opportunity** for exporters who adapt early.

- **Low-carbon products gain price advantage:**
  Exporters adopting cleaner technologies (e.g., renewable energy, green hydrogen, efficient furnaces) will become **preferred suppliers**.
- **Green competitiveness:**
  As EU buyers face higher carbon costs for high-emission goods, they will favor suppliers with **verified low-carbon footprints**.
- **Compliance with ESG Framework:**
  Suppliers/ Exporters which adopt ESG Framework and comply with some basic ESG principles will become preferred suppliers.



Example:
An aluminum manufacturer in India investing in renewable-powered smelting will have lower embedded emissions than a fossil-based producer — giving them a pricing edge in the EU market due to low carbon embedded.

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CBAM calculation example

A non-EU (Indian) company exports **100 tonne of steel** to the EU.
Lets calculate the CBAM certificate obligation and cost based on the embedded emissions, carbon price and CBAM phase-in rate.

Step	Description	Formula / Value
1	Imported quantity	100 tonne steel
2	Embedded emissions (verified)	2.0 tCO_2e / tonne
3	Total Emission	100 x 2 = 200 tCO_2e
4	CBAM Phase-in rate (2026)	2.5%
5	Effective emissions subject to CBAM	200 × 2.5% = 5 tCO_2e
6	EU ETS carbon price	€80 / tCO_2e
7	CBAM cost = (Effective emissions × ETS price)	5 × 80 = **€400**
8	Total CBAM Cost to be paid in 2026	**€400**

As the **phase-in rate increases** to 100% by 2034, the CBAM obligation will proportionally rise each year — reaching approximately **€16000** by 2034

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Impact of Carbon Intensity on CBAM Cost – India vs. Vietnam

Comparison of the same product exported from India and Vietnam — showing how differences in carbon intensity affect the total **CBAM cost for EU importers**.

Parameter	India	Vietnam
Product	Steel	Steel
Imported quantity	100 tonne steel	100 tonne steel
Embedded emissions	2.5 tCO_2e/tonne	1.8 tCO_2e/tonne
CBAM Phase-in rate (2026)	2.5%	2.5%
EU ETS price	€80 / tCO_2e	€80 / tCO_2e
Total emissions	100 x 2.5 = 250 tCO_2e	100 x 1.8 = 180 tCO_2e
Effective Emission	250 × 2.5% = 6.25 tCO_2e	180 × 2.5% = 4.5 tCO_2e
CBAM cost = (Effective emissions × ETS price)	6.25 × 80 = **€500**	4.5 × 80 = **€360**
Total CBAM cost (year 2026)	**€500**	**€360**
Total CBAM cost (year 2034)	**€20000**	**€14400**

Carbon reduction in manufacturing will help improve competitiveness of Indian exporters

- ✓ Default Values of emission based on country of origin published
- ✓ European Commission will publish the applicable price directly in the CBAM Registry accounts of authorised declarants
- ✓ A physical site visit must occur at least every two years (verification & validation of CO2)
- ✓ Details rules on data elements to be shared, timing, frequency and methods of communicating with customs authorities

New Proposal

180 new products categories are proposed to be added. The expansion is expected to bring an additional 7,500 importers into compliance scope.

CBAM Preparedness: Steps to Follow

✓ Calculate your carbon footprint (Scope 1, 2, and 3 emissions)

✓ Align your reporting with EU CBAM requirements

✓ Establish MRV systems (Monitoring, Reporting & Verification)

✓ Improve processes to reduce emissions and become more energy-efficient

✓ Streamline your compliance roadmap & guide you to reduce your carbon emission with help of expert

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Important Reference Materials

CBAM Legislation & Guidance Material

Sectoral Information

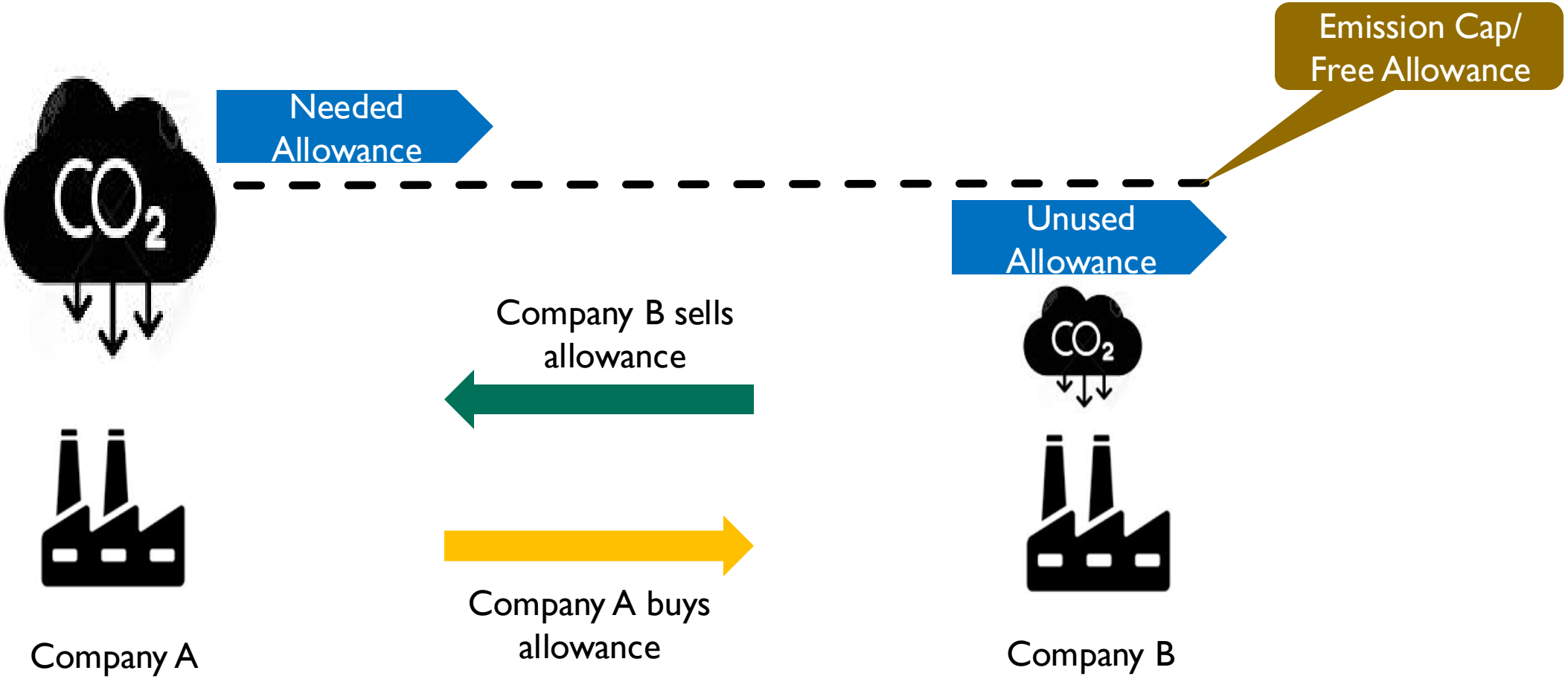
Recent Amendments

https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism

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Q&A



1 Allowance= 1 ton of CO2e