



BACUTI

Solutions for a Cleaner Planet

BACUTI Primer

**CARBON BORDER
ADJUSTMENT MECHANISM
- WHAT EXPORTERS
SHOULD KNOW**

CONTACT

WEBSITE: www.bacuti.com

EMAIL: hello@bacuti.com

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KEY TAKEAWAYS

- **Impacts 6 Sectors:** CBAM will tax European companies on emissions associated with steel, aluminum, cement, electricity, hydrogen, and fertilizer imports.
- **Reporting began Oct 2023:** CBAM requires quarterly reporting on emissions immediately, making this an imminent issue for companies importing covered products.
- **Scope 3 Emissions Included:** Scope 3 emissions reporting consists of detailed and involved evaluation of embedded emissions at the product level.
- **Significant Penalties:** Failure to report correctly can incur fines, reputational damage, and loss of access to imported goods.
- **Product level emissions needed;** Scaling hard using a consulting approach: Software to automate calculation and reporting of CBAM emissions is the best way forward.

OVERVIEW

The Carbon Border Adjustment Mechanism (CBAM) is a carbon border tariff introduced by the European Union beginning Oct 2023. It will initially tax imports of products in the six most carbon-intensive sectors: **aluminum, iron/steel, cement, electricity, hydrogen, and fertilizers** on their embedded carbon content. The tax will be implemented beginning in 2026. A tariff will be applied to imports of CBAM goods depending on the average auction price of EU ETS allowances on a weekly basis; in recent years this has ranged from €50 to 100 per metric ton of emissions. Greenhouse gas (GHG) emissions reporting requirements began in Q4 of 2023.

BACKGROUND

The European Union and its member states have been at the forefront of environmental responsibility policy. The EU has pioneered a wave of regulations intended to achieve a series of emissions reduction goals over the next several decades as part of the European Green Deal. The EU intends to achieve carbon neutrality by 2050. The initial step is to achieve a reduction of 55% in net carbon emissions by 2030 from 1990 baseline. The Fit For 55 Package, which consists of two pieces of legislation (primarily

CBAM), will help the EU accomplish this goal, and is intended to facilitate a drastic decrease in overall emissions from the continent by incentivizing companies to heavily reduce their carbon output.

The European Commission estimates that the six affected sectors (viz., steel, aluminum, cement, electricity, hydrogen, and fertilizer imports) alone account for 55% of import-associated carbon emissions. The CBAM, which is focused on the six sectors, is a major step in the European Union's goal of becoming fully carbon-neutral by 2050. The primary aim of CBAM is to mitigate carbon leakage, in which emissions are lowered in countries with stringent regulations and are in turn concentrated in external countries. By levying an import tax on carbon-intensive products, the European Commission intends to reduce this leakage.

“Six sectors alone account for 55% of import associated carbon emissions.”

Prior to full implementation, the CBAM is undergoing a transitional phase that began in October 2023 and will conclude at the end of 2025. During this phase, importers of goods from the aforementioned sectors are required to produce a quarterly report on greenhouse gas emissions related to those imports. Following this transitional period in 2026, a carbon border tax will be introduced for imports in these six sectors, proportional to the embedded carbon dioxide “emitted during the production of carbon intensive goods.” After a survey of the CBAM's results within the initial sectors, in 2030, the regulation will be expanded to other industries in accordance with the EU Emissions Trading System.

REPORTING REQUIREMENTS AND METHODOLOGY

Starting in January 2024, companies covered by CBAM will be required to report on their greenhouse gas emissions on a **quarterly** basis, beginning initially with Oct to Dec 2023 quarter, extending to each of the three “scopes” of emissions.

“Scope 1 emissions” refers to direct greenhouse gas emissions generated from sources owned by a company, such as energy production, heating, and cooling.

“Scope 2 emissions” refers to indirect greenhouse gas emissions from electricity, energy, and heating that are produced off-site and purchased by a company. CBAM currently requires reporting of scope 2 emissions for the cement and fertilizer sectors only.

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CBAM only mandates reporting of a subsection of upstream scope 3 emissions, referred to as precursor materials for CBAM-

“Scope 3 emissions” covers all other indirect upstream and downstream emissions. These are associated with a company across the supply chain, such as the production of raw materials used in manufacturing and the transportation of produced goods. CBAM only mandates reporting of a subsection of upstream scope 3 emissions, referred to as precursor materials for CBAM-covered goods.

The methodology to be used for calculating emissions, as well as a full list of impacted products, can be found [here](#).

STATUS AND IMPLEMENTATION TIMELINE



CBAM was officially implemented on October 1, 2023. Initially during its transitional phase only emissions reporting is required. No carbon certificates are currently necessary. The first mandatory quarterly reporting was for the quarter ending January 31, 2024.

Many companies have had trouble complying with its immediate requirements. The European Commission expected 239,000 CBAM-related transactions to be completed each year; however, only 13,000 transactions were reported upon accurately and on time for the first reporting period. According to the German Federal Environment Agency, under 10% of 20,000 affected German companies were able to report correctly during this period. Representatives of the agency have stated that this is to be expected, as CBAM is still in its transitional phase, however as the definitive phase draws nearer companies will be expected to report on time and correctly each quarter to avoid penalties.

On January 1, 2026, the CBAM carbon tax will be fully implemented. Companies importing products in the affected sectors must pay a proportional tax on associated carbon emissions.

The European Commission is evaluating the current state of CBAM reporting to determine the feasibility of expanding its reach. While only upstream scope 3 emissions are covered right now, in Q4 2024, this will be formally reevaluated to consider potentially mandating downstream scope 3 reporting.

“The European Commission expected 239,000 CBAM-related transactions each year; however, only 13,000 transactions were reported accurately and on time for the first reporting period.”

In 2030, the CBAM tax will no longer solely be applied to the six initial sectors; It will be expanded to every sector covered under the EU Emissions Trading System including aviation, transportation, organic chemicals, papers, and glass. More details [here](#).

PENALTIES

It is critically important that companies remain in-line with CBAM’s reporting guidelines for numerous reasons, extending beyond corporate transparency. First and foremost, failure to correctly report emissions accurately can incur a fine from the National Competent Authority of **€10 to 50 per tonne of unreported emissions**. Misreporting less than 1% of total emissions could result in fines amounting to several million euros per year for many of Europe’s medium and large companies.

If emissions associated with imported products and materials are unreported or misreported, emission amounts drawn from those imports’ respective default data will be used. Importantly, the fifth-percentile default numbers will be applied, thus presenting the impression that the company in question is particularly poor with respect to GHG emissions, potentially impacting the reputation of that company among consumers and investors.

Financial

- Fines can be as high **€50/ton of CO2 for unreported emissions**
- Worst 5% values applied when emissions not reported; increases landed costs

Reputational

- Bottom 5 percentile classification impacts reputation negatively and can impact sales
- Can impact investor confidence and reputation

Business Disruption

- CBAM licenses can be revoked for non-compliance
- Access to imported goods is potentially lost

Thirdly, noncomplying companies are at risk of having their CBAM licenses withdrawn, disallowing the importing of CBAM goods entirely.

Due to the novelty of the regulation and the stringency of its reporting requirements, penalties will not be applied liberally for the initial reporting periods. This increased flexibility will no longer be allowed for the 2024 Q3 reporting period.

CHALLENGES

While there has been a lot of enthusiasm with the roll of CBAM, it is not without its critics. India may issue a challenge against the CBAM via the World Trade Organization, as the country believes that such a drastic move will result in a major shifting of global markets and negatively impact the state of international trade. India's claim is that the CBAM applies to several trade-exposed industries, and so it can have an adverse effect on other countries which participate in exports associated with those industries. Commerce and Industry Minister of India Piyush Goyal has said that

"India will address the problem of CBAM with confidence, and we will find solutions. Of course, I will retaliate."

The European Commission has defended its position as being compliant with WTO rules. Valdis Dombrovskis, the EU trade chief, specifies

"The European Commission had designed CBAM carefully so that it was compatible with WTO rules, applying the same carbon price on imported goods as on domestic EU producers".

It is important to note that WTO has not provided preapproval of European Commission's CBAM policies. Given European Union's past success of similar regulations (e.g., GDPR) we expect that CBAM will move forward.

IMPLICATIONS FOR COMPANIES

Europe's success with GDPR regulations on consumer data privacy is a good indication of how CBAM can become a de facto standard for taxing embedded carbon emissions. European officials are actively promoting the CBAM model and encouraging other countries to adopt something similar. There is early indication that countries like Singapore, UK, and US may follow suit. If adoption of CBAM is as widespread as GDPR, all companies will have to implement scalable solutions to track and report product level carbon emissions (Scope 1, 2 and 3).

Importers:

Support Tier 1, 2 and Tier 3 suppliers:

While large companies may have dedicated resources to invest in solutions and software, a vast majority of smaller suppliers will not have the technical expertise or the investment resources to calculate product emissions and report it to their customers. The OEMs may have to invest in supplier enablement technologies to accelerate CBAM compliance.

Automate sharing:

Sharing between OEM and supplier using excel sheets and emails is fraught with intellectual property leakage risk. Small industry clusters are emerging to standard data exchange formats. All companies, especially smaller suppliers will struggle to implement and stay compliant with these standards. OEMs must adopt standards and encourage convergence to a single standard through incentivizes.

Suppliers:

Minimize CAPEX and keep OPEX low:

Smaller suppliers will look for subscription services with limited CAPEX. Investing in large teams of consultants every quarter or year will not be sustainable. Easy-to-use SaaS solutions that link directly with operational ERP systems would be ideal.

Outsource reporting:

Mid and small tier suppliers will need someone to stay on top of changing regulations. A 3rd party handles the complexity of changing regulation is important for suppliers.

FREQUENTLY ASKED QUESTIONS

How is CBAM reporting completed? Is there a standard format for reporting?

[The European Commission's website](#) contains a link accessible to registered importers for submitting reports. Reporting is to be completed digitally via this link, according to the terms of the Commission's [guidance document](#).

Who can file CBAM reports?

CBAM reports are either filed directly by the importer, or indirectly by an indirect customs representative in the EU. Any importer based outside the EU must utilize an indirect representative to declare embedded emissions for products.

How will CBAM reports be audited and verified?

Currently, there are no explicitly defined procedures for verification of correct reporting by the Commission. Beginning in 2026 with the definitive period, reporters will be required to obtain third-party verification from an accredited verifier. Provisions for verifiers to obtain accreditation will be established before the end of 2024.

What happens if reporting is completed incorrectly, or not at all?

Until July 2024, penalties have not been applied to companies for misreporting emissions. However, all future CBAM reporting periods will have fines of up to €50 per tonne of unreported emissions, among other penalties listed [here](#).

Will CBAM goods be taxed when they are imported or when their resulting products are sold?

The carbon tax is applied directly to imported goods and materials, rather than sales. If a company imports its supply of precursor materials on a yearly basis and sells the resulting product throughout the year, the tax will be paid when the materials are imported into the EU.

What happens if imported goods are subject to similar regulations in third countries?

If a carbon price has already been paid for imported goods in a third country, importers will be able to claim a reduction on the tax levied by CBAM. This ensures that importers will be paying an equivalent carbon price regardless of which external countries were involved in the production process, helping to achieve CBAM's goal of reducing carbon leakage.

SUMMARY

The Carbon Border Adjustment Mechanism imposes a major sustainability reporting task on companies in Europe. Companies must be adequately prepared to disclose their climate data and greenhouse gas emissions, however the calculation and reporting of product-level, scope 3 emissions pose a significant challenge that must be swiftly addressed.

Many companies affected by CBAM, and other emissions reporting regulations import an extensive number of products to evaluate, and the specificity of scope 3 emissions means that sustainability

consulting is likely not sufficient moving forward. The rapid implementation of the CBAM and the imminence of its stringent requirements means many companies are ill-prepared to accurately evaluate and report on their scope 3 emissions. **The most viable solution for this problem, in the future, will be utilizing software to automate the related processes.** The software must conduct a product-level analysis and calculation of greenhouse gas emissions, enable efficient sharing of data, and comply with scope 3 reporting regulations. Additionally, it is critical for the software to automate the processes of calculating emissions and report emissions compliant with continuously evolving global reporting regulations.

APPENDIX

About BACUTI

BACUTI offers a SaaS platform to calculate and report Product Emissions Footprint (PEF) including Scope 1, 2 and 3 accurately and cost effectively, share data securely across the entire supply chain and build realistic plans and forecasts. Certification workflow is integrated in the platform.

With BACUTI, customers get accurate emissions (Scope 1, 2 & 3) to meet their regulatory requirements (e.g., CBAM). Early adopters of CBAM compliance will have a competitive advantage serving EU customers. PEF estimation processes become cheaper & collaboration with customers improves. Furthermore, customers can grow revenue through value added services around sustainability. Overall, customers should see enhanced brand value due to better sustainability posture.

BACUTI offers a ML-based estimation tool to calculate product level emissions cost effectively and at scale, a secure enterprise platform to share fine-grained emissions data with selected partners without exposing IP, and a SaaS platform that automates reporting, certification, planning and forecasting makes BACUTI unique.

About the Author(s)

Nikhil Shah is a third-year environmental analysis student at Pitzer College interning as a policy researcher and content writer for BACUTI.

Rajesh Srinivasaraghavan is the co-founder of BACUTI. He has almost 30 years of experience in enterprise software, technology, consulting and business transformation.