

Guide

The Carbon Border Adjustment Mechanism (CBAM) Handbook

From Carbon Complexity to Compliance Clarity

Assent

CBAM: Raising the Supply Chain Due Diligence Bar

The demand on your business for carbon accounting has skyrocketed over the past decade. At first, it was a nice-to-have. Manufacturers could estimate their in-house emissions, plant a few trees, and claim to be carbon neutral on a brochure.



But things are different now. Governments are setting ambitious climate targets and requiring companies like yours to dig deeper into their global supply chains to collect real Scope 3 carbon data. And they're enforcing requirements using financial incentives.

The EU's Carbon Border Adjustment Mechanism (CBAM) is one of the best examples of this today. It lays out strict requirements for EU companies to calculate and report the embedded emissions for key materials they import, and then use that data to purchase carbon certificates.

If you do business in the EU, or have customers in the EU market, you need to know how to comply with CBAM and how it will affect your bottom line. It's a complex regulation with very real financial implications and an impact on competitive strength.

The expert insights in this guide will help you understand whether you're in scope, what to do if you are, and why acting now is essential to avoiding business disruptions.

Unpacking the Regulation

The EU aims to be carbon neutral by 2050, and is building a long-term regulatory framework that will drive a net-zero emissions economy over the next 25 years.[1] That might sound like a long time, but it's not. The near-term strategy includes targets like a 55% emissions reduction by 2030. And under the European Climate Law, these goals are legally binding and enforceable.[2]

CBAM is one of the tools the European Commission is using to address climate impacts from the manufacturing sector. It creates a carbon pricing system and requires importers to buy CBAM certificates to match the domestic carbon costs mandated by the EU Emissions Trading System (EU ETS). Basically, it equalizes the cost of generating emissions inside and outside the EU in order to prevent carbon leakage that could set the EU's climate goals back.



What Is Carbon Leakage?

Carbon leakage is when manufacturers relocate their production to countries with less stringent environmental regulations, and then bring those materials back into the EU. It's a bit like hiding money in an offshore account to avoid taxation, only for carbon tax evasion. It makes it hard for regulators to tell how much carbon is actually being generated by EU manufacturing.

1 European Commission. (n.d.). *2050 long-term strategy*. https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2050-long-term-strategy_en

2 Official Journal of the European Union. (2021, June 30). *Regulation (EU) 2021/1119 of the European Parliament and of the Council. Establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')*. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021R1119

To comply, EU manufacturers need to work with their global suppliers to calculate and report on the embedded emissions of goods they're bringing into the country — and then use that data to purchase the correct number of CBAM certificates.

Failure to get the right data or register as an authorized CBAM declarant puts you at risk and can lead to serious financial penalties. Importers face having their shipments blocked until they can provide the proper documentation and purchase enough CBAM certificates. Suppliers who can't assist their EU customers may find themselves replaced by suppliers with emissions data on hand or by domestic EU competitors.

It can take time to collect all the necessary data, so if you're affected by CBAM, you need to take action now.

Scope Check: Who & What

A big challenge with CBAM compliance is knowing whether you're in scope. That's because it's not just about which materials are being imported, but also where in the supply chain to engage and how much is being imported.

Under CBAM, importers and suppliers need to track, manage, and disclose embedded emissions data for carbon-intensive products like iron, steel, and aluminum. There's an Omnibus Simplification Package proposal that would exempt small importers that bring in less than 50 tonnes of CBAM goods per year from reporting, but until it passes, the de minimis threshold is €150 worth of CBAM goods per shipment.

Out-of-scope small businesses may still be expected to submit data if they're serving larger in-scope customers. International suppliers are not technically in scope of CBAM, but they'll also have to track and report on embedded emissions to their EU customers, or risk saying goodbye to that business deal.

What's in Scope?*

- Aluminum
- Cement
- Electricity
- Fertilizers
- Hydrogen
- Iron
- Steel

*The scope is expected to expand to other goods currently under the EU ETS in the next few years.



CBAM also requires primary data from installations, meaning the facilities where your raw materials are being produced. Reaching out to a parts supplier might not get you the supply chain emissions data you need. Your request may need to be cascaded down the chain to the primary source required by the European Commission. There's even a chance non-EU suppliers will have no idea they're in scope or what data they need to supply.

And if you're a supplier to an EU customer, you'll need to know if you're the primary installation or if there's someone further down the supply chain that needs to get looped in.

Assent takes the guesswork out of CBAM compliance. Our experts can help you identify which supply chain entities and goods are in scope so you won't need to take a shotgun approach and blast out emissions surveys to every supplier, hoping to find the right ones.



Are You in Scope? Find Out Now

Want a step-by-step guide to knowing if you're in scope of CBAM? Check out our *CBAM Scoping Guide*.

Download Now ›

A Rule in Constant Motion

CBAM today looks very different from when it first came into effect. It follows a phased approach that gets stricter over time. It was designed to give manufacturers space to adapt, but in practice, it's evolving at a pace that leaves almost no breathing room for companies that don't already have a structured supply chain sustainability program in place. Let's take a look at how CBAM is evolving.

PHASE ONE

Transitional Phase

Until December 31, 2025

- Importers of in-scope goods must register and submit **quarterly** CBAM reports detailing:
  - Total quantity of goods imported
  - Total embedded direct and indirect emissions
  - Carbon price paid in the country of origin
- Emissions calculations must use at least 80% primary data from installations; default emissions value estimates are not accepted
- Only the approved EU method for calculating emissions is accepted

PHASE TWO

Definitive Regime

From January 1, 2026

- Only authorized CBAM declarants will be allowed to import CBAM goods
- Importers purchase and surrender CBAM certificates for imported goods to offset the carbon cost difference
- By **May 31, 2027**, importers submit an annual, independently verified CBAM declaration for the preceding calendar year to the CBAM Registry





Your CBAM Compliance Blueprint

Supply chain data is at the heart of CBAM compliance. It's all about collecting emissions data from suppliers, reporting it to EU authorities, and buying the appropriate number of CBAM certificates. This cycle continues quarter after quarter, creating a need for constant supply chain communication and transparency.

Getting supply chain data is already difficult enough (that is, unless you're using Assent), but CBAM ups the ante with specific reporting requirements. Here's what you need to know about collecting and calculating embedded emissions under CBAM.

Primary Data

When CBAM first came into force, importers were allowed to use default emissions value estimates in their reports. These default values were published by the European Commission, based on average factors for direct and indirect emissions.

But as of July 31, 2024, companies can no longer rely on these default values. Instead, they're required to use **primary data**. While the Omnibus Simplification Package proposes to keep allowing the use of default emissions values, the outcome has yet to be determined. For now, CBAM requires real-world data from the installations producing the in-scope goods.



Suppliers will need to track these data types to accurately calculate embedded emissions:

- Type(s) of fossil fuels used in production processes
- Volume of fuels consumed during production
- Emissions factors related to the types of fuels used
- Amount of electricity consumed
- The output of CBAM goods produced
- The calculated amount of carbon dioxide equivalent tonnes (CO_2e) generated

In theory, this isn't that many data points to keep track of. However, they aren't typically required by other regulations, and many suppliers don't keep careful track of this information beyond utility bills. And even fewer are segmenting their data in a way that makes determining direct and indirect emissions simple or fast.

If you are a supplier of CBAM goods to EU manufacturers, it's crucial that you start collecting this carbon footprint data now. You may already have access to all these data points, but they're probably hidden in other departments or in the wrong formats. To transform it into verifiable, part-level emissions data, you'll need to create a cross-functional team, assign someone to handle customer sustainability data requests, and equip them with a solution to make it cost-effective.

Calculating Emissions: The EU Methodology

Even if suppliers have all their data on hand (and that's unlikely), they will need to follow the approved EU calculation methodology. And that makes things a little more complicated. Especially since the businesses doing the calculations are based outside the EU.

The EU method is comprehensive, but complex. It's laid out in Annex IV of the CBAM legislation,[3] and there's a 252-page guidance document available for installation operators outside the EU.[4] That alone should be enough to tell you just how complicated the calculations can get. You're going to need support from regulatory experts (or an advanced degree in mathematics).

Don't panic, though. Assent's CBAM solution includes a built-in emissions calculator that follows the EU method — plus, our team of regulatory experts provides program guidance to help you understand the letter of the law and work more efficiently with your suppliers and customers.

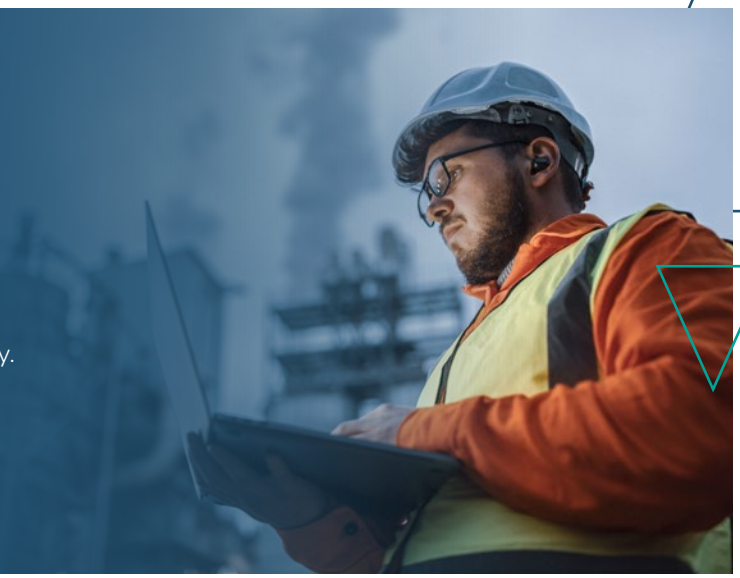
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3 European Parliament and Council. (2023, May 10). *Regulation (EU) 2023/956 Establishing a Carbon Border Adjustment Mechanism. Official Journal of the European Union.* https://eur-lex.europa.eu/eli/reg/2023/956/oj

4 European Commission. (2023, December 8). *Guidance Document on CBAM Implementation for Installation Operators Outside the EU.* https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en#guidance

A Built-In Emissions Calculator You Can Trust

We've partnered with forward earth, a Berlin-based provider of AI-powered environmental management software, to give suppliers an integrated emissions calculator that follows the approved EU methodology. Our CBAM solution makes it easy to correctly quantify emissions at the CN code and parts level, and share it with customers.



The Omnibus Simplification Package & CBAM

One of the factors making CBAM hard to keep up with is that its scope, thresholds, and reporting requirements could change with very little notice thanks to the EU's proposed Omnibus Simplification Package. It's a set of proposals that cover CBAM, the Corporate Sustainability Reporting Directive (CSRD), and the Corporate Sustainability Due Diligence Directive (CS3D).

The goal of the proposals is to simplify and streamline requirements across the EU's complex web of sustainability regulations. Today, some proposals have been adopted into law, while others are still under review.[5]

For CBAM, the proposals would affect scope, reporting parameters, enforcement, and carbon pricing, such as:

- Removing imported electricity from the list of in-scope goods
- Changing the de minimis threshold from €150 per shipment to 50 tonnes of CBAM goods/year
- Delaying the verification deadline for CBAM declarations from May to August 2027
- Reducing the number of CBAM certificates required to cover embedded emissions from 80% to 50%



There's a possibility that the Omnibus Simplification Package will also reintroduce a simpler calculation that allows for default emissions in the future. However, default values are typically overinflated to cover potential worst-case scenarios and frequently return CO2e amounts above your real-world emissions. When it comes time to buy CBAM certificates, you'll end up paying more if you use the less accurate method.

The Omnibus Simplification Package is expected to reduce the burden on suppliers and EU manufacturers, but it's important to note that **CBAM's supply chain data requirements aren't going away.** You will still need to collect and share embedded emissions data with customers and suppliers.

5 European Commission. (2025, February 26). *Commission simplifies rules on sustainability and EU investments, delivering over €6 billion in administrative relief.* https://ec.europa.eu/commission/presscorner/detail/en/ip_25_614



CBAM Challenges & Opportunities

Unlike some other sustainability regulations, the primary driver for CBAM isn't just the threat of non-compliance fines. Instead, it's about the opportunities to improve your competitive standing in a global marketplace.

Suppliers that can provide part-level emissions data will demonstrate their reliability and that they're aware of what's on the regulatory horizon. Companies that have defensible supply chain sustainability programs face fewer obstacles bringing products to market, and less risk of disruption getting compliant parts.

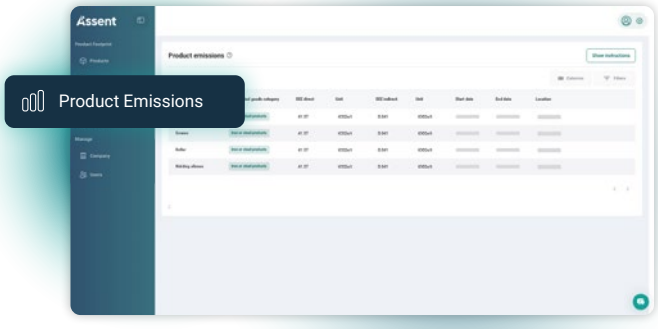
By investing time and effort into supply chain emissions management now, you're setting your organization up for long-term success — especially as product sustainability requirements, like the Ecodesign for Sustainable Products Regulation (ESPR), emerge.

Overcoming CBAM Hurdles

Sharing Emissions Data Across Your Global Supply Chain

Even though only EU importers are in scope of CBAM, the workload is shared with global suppliers that technically have no legal obligation to provide data. If you're an EU-based company, you'll need to give your suppliers tools to make it as simple as possible to share supply chain data.

Assent provides an intuitive supplier platform and AI-powered support to make sharing emissions data simple and convenient. With the Assent Sustainability Platform, there's no need to deal with complicated spreadsheets or formatting. Suppliers can upload data easily, and their customers can access emissions data on demand. We even automate supplier outreach, sparing you from endless back-and-forth emails and phone calls to get data.



Supply Chain Disruption Risks

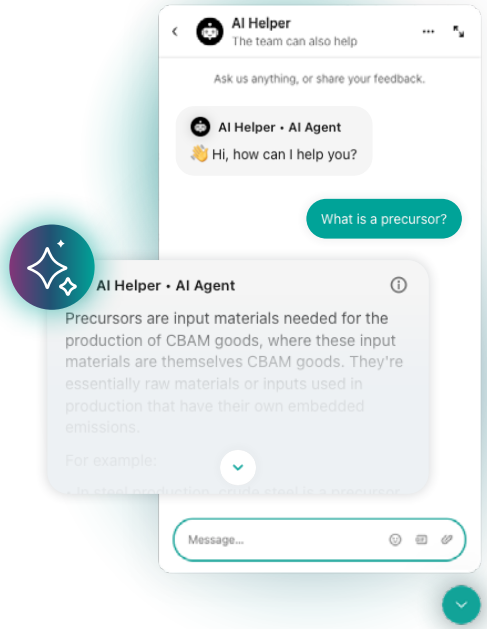
Suppliers that can't provide embedded emissions information risk losing their major EU customers. Importers that don't support their global suppliers could see delays getting the parts they need from the global market. Both groups should be proactive about CBAM compliance and treat having product sustainability data as a competitive advantage that protects them from costly disruptions.

Assent's CBAM solution keeps you ahead of regulatory changes and gives you timely insights into your supply chain sustainability risks. We help you maintain a competitive advantage, making it possible to rapidly request and share embedded emissions data. Suppliers can use our platform to confidently (and quickly) respond to EU customer requests, and EU importers get defensible product sustainability data that lets them get materials into the country at the lowest CBAM certificate cost.

Low Sustainability Maturity in Supply Chains

Sustainability requirements look different across the globe. What's standard practice in the EU may look different in the Americas. CBAM asks entire supply chains to rise to the same level of carbon footprint management maturity. EU importers will need to educate their suppliers about CBAM and the EU method. Some suppliers may not have a program in place and will need extra support.

> *Assent provides free resources and expertise to educate suppliers on CBAM. We help demystify which suppliers are actually in scope, and our supply chain sustainability management platform helps you track supplier engagement and risks. Suppliers can provide feedback to their customers and let them know if/when CBAM data will be available.*



Product Sustainability: Things to Consider

- Embedded emissions at the part level
- Total product carbon footprint
- Packaging sustainability and recyclability
- Product end of life management
- Ecodesign for the environment



Future-Proofing With Product Sustainability

Make no mistake: Just because CBAM only affects specific products entering the EU market, it's a huge step toward broader product sustainability requirements. Even if you aren't in scope (yet), it lays out an important framework for product-level carbon emissions accounting.

Product sustainability requirements are evolving fast, and the line between sustainability and product compliance is getting blurred. Regulators and customers are demanding granular data that goes beyond the compliance reporting you're familiar with. Without it, you're putting your market access and ability to compete at risk. It's not enough to be a sustainable company. You must design and build sustainable products — and have the data to prove it.

You need to take advantage of the opportunity created by CBAM by building product sustainability considerations into your supply chain due diligence. You'll get a competitive advantage by being ahead of the curve, and you'll be proactively prepared for future regulations. Assent's CBAM solution helps you get started, and we provide a holistic platform solution for supply chain sustainability management.

Let's get started! Assent's CBAM solution has everything your supply chain needs to automate supplier engagement to collect and share embedded emissions at the part and CN code levels. Get in touch with one of our experts to learn how we help simplify this complex regulation or to get a demo of the solution in action.

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