

Ensuring the Acceptability of Border Carbon Adjustments

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As part of the European Green Deal, the European Union plans to impose a border carbon adjustment to ensure a level playing field with its trading partners. So far, the discussion has mostly focused on the technical design and implementation challenges raised by this complex instrument. Even the most robust design will mean little, however, if the measure fails to secure buy-in from relevant stakeholders in Europe and abroad.

This brief essay identifies some of the red-line issues that are likely to prove decisive in the political and diplomatic process to adopt a border carbon adjustment, including compliance with World Trade Organization rules, the principle of common but differentiated responsibilities in international climate cooperation, use of revenue, treatment of exports, interaction with current leakage protection measures, and consideration of foreign climate policy efforts. Fostering an early, transparent, and inclusive debate on these issues will be critical to secure the acceptability of border carbon adjustments.

Background

As countries start implementing measures to meet their nationally determined contributions (NDCs) submitted under the Paris Agreement, it is rapidly becoming evident that domestic climate policies are asymmetrical in their ambition and will remain so for the foreseeable future. In the latest round of NDC updates, the EU has submitted one of the more ambitious targets, and Figure 1 provides an indication of where the process stands five years after adoption the Paris Agreement.

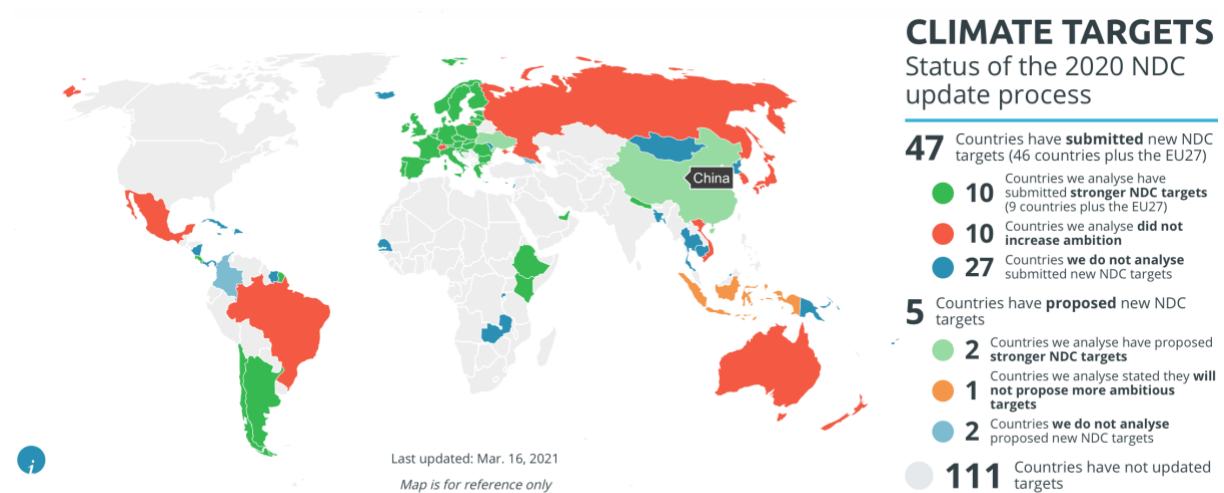


Figure 1: Status of the 2020 NDC Update Process (Source: Climate Action Tracker, 2021)

A Rapidly Evolving Context

European business leaders and policy makers have always been concerned about the impacts of ambitious climate policy – especially as expressed through high carbon prices in the European Union’s Emissions Trading System (EU ETS) – on the competitiveness of industry and ‘carbon leakage’ – there is a risk of carbon leakage, either because production is transferred from the EU to other countries with lower ambition for emission reduction, or because EU products are replaced by more carbon-intensive imports.

So far, free allocation of EU ETS allowances (EUAs) for direct emissions, combined with compensation for indirect costs of carbon passed through via higher electricity prices, has mitigated these concerns. Low EUA prices in the wake of the 2008-2009 financial and economic crisis, and availability – at least initially – of a cost containment option in the form of international credits from the Clean Development Mechanism, further allayed any leakage concerns.

With the European Green Deal, which sets out a new EU-wide emissions reduction target of 55% below 1990 levels (that is likely to translate to a mid-60% target for the EU ETS), the situation is rapidly changing. Prices for EUAs have jumped eight-fold since 2018, and at the time of writing this, hover around 42 euros. Going forward, this upward momentum is unlikely to change, and while the rapid pace of price growth witnessed recently may slow down, the long-term trend still points upward. Also, continued availability of free allocation, the main tool currently used by the EU to deal with carbon leakage, will be called into question in the not-so distant future.

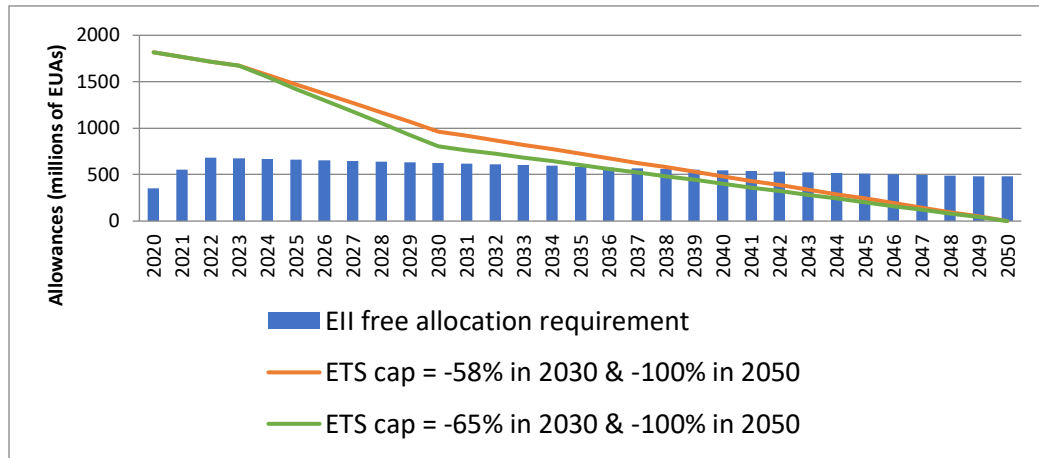


Figure 2: Projected free allocation requirements vs. EU ETS cap under more ambitious EU 2030 target scenarios (Source: Agora Energiewende)

Adjusting Carbon at the European Border

The intention to reach carbon neutrality by 2050 as well as the increase in ambition of the 2030 EU target from a 40% to a 55% emissions reduction prompted the President of the European Commission, Ursula van der Leyen, to announce in 2019 that she would propose a ‘Carbon Border Tax.’ More generally known as a border carbon adjustment (BCA), this instrument is applied to traded goods in order to address the challenges associated with asymmetrical climate efforts between trading partners, such as carbon leakage. A legislative proposal for this measure is now expected in June 2021, and the political commitment to its passage has only increased since its initial announcement.

The announcement of a BCA caught many by surprise across Europe, as the EU institutions had not previously been seen to favour the implementation of a BCA, and the only practical experience with a carbon adjustment at the border was, and remains, a measure imposed under the Californian ETS, where the track record has been at best mixed. However, that BCA is relatively narrowly defined, covering only electricity imports from neighbouring states.

Also, discussions of a BCA always recalled a previous attempt to impose unilateral climate obligations on foreign entities, namely the inclusion of international aviation in the EU ETS. Largely seen as a failed effort that backfired diplomatically, it ended with the EU ultimately deferring its unilateral aspirations with a ‘stop-the-clock’ decision to allow for a multilateral solution to emerge under the International Civil Aviation Organization (ICAO).

As such, there are serious concerns not only about the technical design and administrative implementation of a potential EU ‘Carbon Border Adjustment Mechanism’ (or CBAM, as the BCA has been designated by the EU Commission), but even more so about its political acceptability. Such acceptability will be decisive for the fate of this unilateral EU initiative, and will have to be considered both at the domestic as well as at the international level. It is therefore important to identify the main factors that will determine that acceptability, and where the proverbial ‘red lines’ will fall.

While it may be speculative to anticipate where the latter will lie before a concrete proposal has been released, the debate in the European Parliament under its ‘Own Initiative’ procedure has given observers a

preview of where the political battle lines may be drawn at the domestic level. Meanwhile, a growing number of statements by foreign government officials and other stakeholders serve to illuminate some of the concerns held by trade partners internationally.

Design Options for a CBAM

In order to identify the key factors likely to feature in the political discussion, it is first necessary to understand how a BCA operates, and that requires dissecting it into its constituent elements. Generally speaking, BCAs can be “unpacked” into the following design elements:

- *Coverage of trade flows*: does the BCA cover imports, exports, or both?
- *Policy mechanism*: how is the BCA implemented, e.g. as a tax, customs duty, or as an extension of a climate policy such as an ETS?
- *Geographic scope*: does the BCA cover all countries, or does it allow for exemptions?
- *Sectoral scope*: does the BCA cover basic materials (such as cement and steel) only, or also semi-finished and finished goods? Does it cover electricity?
- *Emissions scope*: does the BCA cover direct (Scope 1) emissions only, or also indirect (Scope 2 or even Scope 3) emissions?
- *Determination of embedded emissions*: is the carbon intensity of traded goods determined on the basis of actual product-specific data, or based on default or reference values?
- *Calculation of adjustment*: what policy does the BCA adjust for, and how is the BCA level calculated? Does that calculation consider policy efforts in foreign countries, and how?
- *Use of revenue*: does the revenue of the BCA flow into the general budget, or is it earmarked for specific investments domestically or abroad?

As this non-exhaustive list already shows, each design element offers a number of alternative options for its operationalization, and identifying the most suitable option will have to be guided by a number of criteria, such as the environmental benefit it provides, including how well it counteracts carbon leakage; closely linked, how well it safeguards the competitiveness of producers; its technical and administrative feasibility; its legal viability; and, finally, its political feasibility.

These criteria are mutually interdependent, yet all feed into the last – and arguably most important – criterion of political feasibility, and all thus affect the acceptability of a BCA. Another relevant evaluation criterion could be considered that of what is ‘good for the people’, but that consideration can be equally rolled into “political feasibility”.

Furthermore, it bears noting that a EU CBAM cannot be seen and evaluated in isolation: it needs to be seen in the broader context of EU climate change policy, and especially of the sweeping European Green Deal. Specifically, with its focus on traded goods, the CBAM is closely interconnected with the EU ETS, for which it serves as a flanking measure, and with the role of carbon pricing more generally in the drive for European decarbonization. How the CBAM will interact with the price signal from the EU ETS will therefore be an important consideration.

Acceptability of a BCA

While all design features of a BCA will be important for the acceptability of a CBAM, a number of them can be singled out as issues that will impact the acceptability of a CBAM, both domestically and among trade partners and international stakeholders. The list of considerations below is by no means exhaustive, and many of the features are interrelated, which makes the analysis even more complex.

Compliance with WTO Obligations

From the outset, the European institutions have emphasized the importance of respecting the international obligations of the EU when designing and implementing a CBAM, specifically highlighting the commitments under the World Trade Organization (WTO). Volumes have been written about the admissibility of BCAs under international free trade disciplines, and while there is a growing consensus that a BCA can be designed to comply with WTO law, it is also clear that the precise design matters, and that some legal uncertainty will remain until the measure has been the subject of a judicial decision by the WTO dispute settlement mechanism.

Respecting the Principle of CBDR

For nearly thirty years, the international community has cooperated on climate change under the UN Framework Convention on Climate Change (UNFCCC). A core principle of this convention is the principle of common but differentiated responsibilities (CBDR), and whether a unilateral policy initiative such as the CBAM is seen to respect this principle or not will become the subject of close scrutiny and heated debate.

Use of Revenue

Significant funds could be raised through application of a CBAM, and how these funds are spent will likewise be an important issue for domestic and international stakeholders. Funds could be invested into climate change mitigation and adaptation, or they could be put to other uses that are not related to climate change. How the funds are ultimately used may impact both the assessment of a CBAM under WTO law as well as its political acceptability, domestically and internationally.

A number of options are currently under consideration, including allocation of revenue to the ‘own resources’ of the EU, that is, to its general budget, or earmarking it for climate-related investments through one of the climate funds established under the EU ETS or through a new mechanism, such as carbon contracts-for-difference (CCfDs). Developing countries may expect that the money be used for adaptation or to fund mitigation in countries whose products incur the CBAM payment obligation at the border.

Treatment of Exports

Early statement and policy documents announcing the CBAM only mentioned its application to imported goods, yet simultaneously declared it an alternative – and thus, implicitly, a substitute – for existing measures against carbon leakage, such as free allocation. A CBAM on imports would only level the climate

policy playing field for the European market. EU products exported to foreign markets would still face the full cost imposed by the EU ETS without any adjustment for asymmetrical climate policy efforts.

In foreign markets with more relaxed environmental standards, they would be placed at a competitive disadvantage, resulting in a loss of global market share. Due to the already high climate policy standards in the EU, many goods exported from the EU are, on average, less carbon intensive than foreign goods they compete with. A loss of market share would, thus, result in an increase in more carbon intensive foreign production and higher emissions overall. For EU producers who rely on exports for a significant share of their turnover, this question will be critical.

Calculation of the Adjustment

Calculation of the amount charged at the border can be based on a number of different approaches, as outlined in Table 1 below.

	Scenario	Approach to calculating CBAM	Explanatory notes
No crediting of foreign carbon price	(1)	$EU A_{CO_2 price} * EU_{CO_2 intensity}$	<ul style="list-style-type: none"> Carbon price for imports to EU equals price of EU ETS allowances ($EU A_{CO_2 price}$) Exporters emissions determined based on average CO₂ intensity of EU producers ($EU_{CO_2 intensity}$)
	(2)	$EU A_{CO_2 price} * non - EU_{CO_2 intensity}$	<ul style="list-style-type: none"> Carbon price for imports to EU equals price of EU ETS allowances ($EU A_{CO_2 price}$) Exporters emissions determined based on average CO₂ intensity in exporting countries (non-$EU_{CO_2 intensity}$)
	(3)	$EU A_{CO_2 price} * \Delta_{CO_2 intensity}$	<ul style="list-style-type: none"> Carbon price for imports to EU equals price of EU ETS allowances ($EU A_{CO_2 price}$) Exporters pay for the part of average CO₂ intensity in exporting countries in excess to the average EU CO₂ intensity ($\Delta_{CO_2 intensity}$)
With crediting of foreign carbon price	(4)	$\Delta_{CO_2 price} * EU_{CO_2 intensity}$	<ul style="list-style-type: none"> Crediting for foreign carbon pricing policies (carbon tax or ETS), carbon price for imports equals the difference between EU ETS allowance price and carbon prices in exporting countries ($\Delta_{CO_2 price}$) Exporters emissions determined based on average CO₂ intensity of EU producers ($EU_{CO_2 intensity}$)
	(5)	$\Delta_{CO_2 price} * non - EU_{CO_2 intensity}$	<ul style="list-style-type: none"> Crediting for foreign carbon pricing policies (carbon tax or ETS), carbon price for imports equals the difference between EU ETS allowance price and carbon prices in exporting countries ($\Delta_{CO_2 price}$) Exporters embedded in imports determined based on the average CO₂ intensity in exporting countries (non-$EU_{CO_2 intensity}$)
	(6)	$\Delta_{CO_2 price} * \Delta_{CO_2 intensity}$	<ul style="list-style-type: none"> Crediting for foreign carbon pricing policies (carbon tax or ETS), carbon price for imports equals the difference between EU ETS allowance price and carbon prices in exporting countries ($\Delta_{CO_2 price}$) Exporters pay for the part of average CO₂ intensity in exporting countries in excess to the average EU CO₂ intensity ($\Delta_{CO_2 intensity}$)

Table 1: Calculating the Adjustment Level under a CBAM (Source: ERCST)

As this table shows, two central variables (aside from product weight) have to be considered when calculating the CBAM adjustment at the border: price and carbon intensity. One possible scenario envisages charging at the border the amount of carbon emissions exceeding the EU benchmark, which follows from free allocation being retained for domestic producers under that scenario.

What calculation method is used has direct implications for another important aspect for the acceptability of a CBAM, and that is the absolute amount that importers have to pay under each scenario. Charging the full carbon cost at the border – that is, the full EU carbon price on the entire amount of emission embedded in imported products – will likely result in a real shock for some importers as well as the countries from which the products originate.

There can be a significant difference between the amount that is charged under a full amount scenario and one that adjusts for different factors. The example in Figure 3 below shows the payment obligation that may be incurred by steel importers selling Indian steel in the EU, illustrating the scale or potential payment obligations.

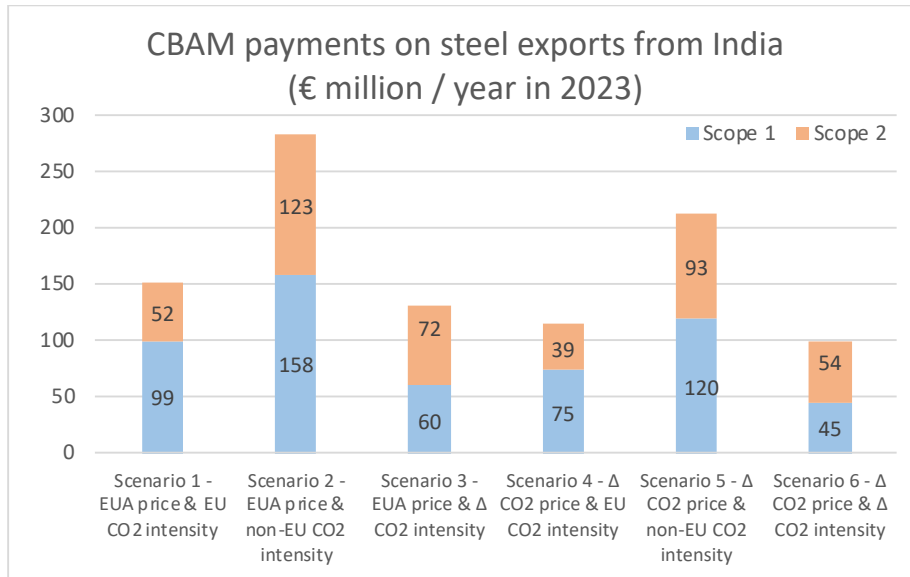


Figure 3: CBAM Payments on Steel Exports to the EU from India (Source: ERCST)

Evaluation of Levels of Effort

Among the factors whose consideration can significantly affect the level of the CBAM payment obligation are climate policies in force in the country of origin of imported products. In order to avoid discrimination of foreign producers or imposing a ‘double burden’ on them, a CBAM is likely to consider climate policies they are subject to and that result in a carbon cost. Such policies are, after all, part of the playing field that a CBAM is meant to level, and if they are considered, foreign producers may be more amenable to growing climate ambition in their jurisdictions.

Again, however, the devil lies in the details. Calculating and adjusting for the carbon cost incurred by foreign producers can be highly complex and methodologically challenging. A number of options can be considered. One option would be to only take into account explicit carbon prices paid by foreign producers in the country of origin, largely narrowing the range of eligible climate policies to an ETS or carbon tax. Another option would be to evaluate the costs of all climate-related policies – whether they generate an explicit carbon price or not – that foreign producers have to bear, and use that as an aggregate proxy for the level of effort that is to be compared to the EU ETS.

As these two options already show, however, there is no simple solution. Limiting consideration of foreign climate policies to explicit carbon prices risks ignoring significant and costly regulatory policies, such as the performance standards that are likely to make up the bulk of federal carbon constraints introduced by the US administration in coming years. Opting for a broader approach, in turn, that considers non-pricing policies requires a robust methodology and data to estimate the implicit or effective carbon cost borne by

producers, and also raises the question of whether and how policies other than the EU ETS should be adjusted for on the EU side.

Some observers have even contended that consideration of foreign climate policy efforts in the application of a CBAM might violate the nationally determined spirit of the Paris Agreement, as it creates an external incentive for countries to adjust their domestic climate policies. While that argument could be countered with the common commitment to greater climate ambition under the Paris Agreement, it is certain to be raised by those trade partners of the EU who are opposed to its unilateral imposition of a CBAM. And as initial statements by several foreign governments, including in the WTO Committee on Market Access this past November, suggest, there will be no shortage of critics.

Interaction with Current Measures against Carbon Leakage

Currently, the EU addresses concerns about carbon leakage (and competitiveness impacts) through free allocation (in the case of direct emissions for covered installations) and indirect cost compensation (for the cost of carbon emissions related to electricity procured by covered installations). In this context, the question is whether a CBAM will altogether replace or – temporarily or permanently – co-exist with free allocation.

A fundamental notion that seems to be gaining wide acceptance is that domestic EU producers must not enjoy ‘double protection’, that is, cannot be simultaneously protected from carbon leakage through both free allocation and an adjustment at the border. Addressing this question requires a closer look at the available options and their respective implications.

Free Allocation and CBAM

The one issue that attracted fierce political debate during the recent vote of the European Parliament on its ‘Own Initiative’ [resolution on the CBAM](#) has been that of how to treat free allocation after a CBAM is introduced. Coming from the previous vote in the Environment (ENVI) Committee of the Parliament, the explanatory statement still declared that “[a]n effective CBAM should spell the end of free allowances”, and the draft resolution stressed that “the implementation of the CBAM should therefore go hand in hand with the parallel, gradual, rapid and eventual complete phasing out of those measures for the sectors concerned so as to avoid double protection for EU installations” (para. 28).

Following the plenary vote, however, the final language of the resolution has evolved, and now merely states that the implementation of the CBAM “should avoid double protection for EU installations” and “follow a simple principle whereby one tonne of carbon should not be protected twice” (para. 28).

Evidently, a majority in the European Parliament held that phasing out free allocation altogether was a premature goal, yet a significant number of Members of the European Parliament (MEPs) also felt that combining free allocation with a CBAM might amount to ‘double protection’ and potentially undermine prospects of the CBAM under WTO law. Both issues deserve further examination.

Double Protection

In the end, the ‘Own Initiative’ debate in the European Parliament has highlighted widespread agreement that a CBAM must not afford ‘double protection’ for European producers. Currently, these producers receive free allocation for some of their emissions, and are required to pay only for emissions that exceed an EU-wide product benchmark. This creates an incentive for covered installations to lower their carbon intensity in order to minimize this payment obligation.

One option to uphold this principle of ‘no double protection’ is to have the CBAM replace free allocation to domestic producers, that is, to discontinue free allocation for those sectors that are covered by a CBAM. In such a scenario, imports into the EU would be charged for the full amount of carbon included in the product, just as domestic producers would have to purchase allowances for the full amount of their emissions. Such an approach would avoid any ‘double protection.’

An alternative approach that also avoids ‘double protection’ is to maintain free allocation for domestic producers, but charge importers of products into the EU only the amount of carbon emissions that represent the difference between actual emissions and the benchmark that determines the level of free allocation received by domestic producers. This approach would only lead to a payment obligation for importers whose emissions exceed the EU benchmark, and only for those emissions in excess of the EU benchmark. This may reduce the impact on trade flows and not expose EU producers to full compliance costs.

Both approaches would avoid ‘double protection’ for domestic producers, and both provide an incentive for domestic producers to lower their carbon intensity – the first option by requiring domestic producers to cover their entire emissions with purchased allowances, a significant cost; and the second option by incentivizing domestic producers to reduce their emissions below the ambitious product benchmark reflecting the carbon intensity of the 10% most efficient producers in the EU.

As the second option shows, however, any allowances allocated for free to domestic producers have to be factored into the calculation of the CBAM in order to avoid ‘double protection.’

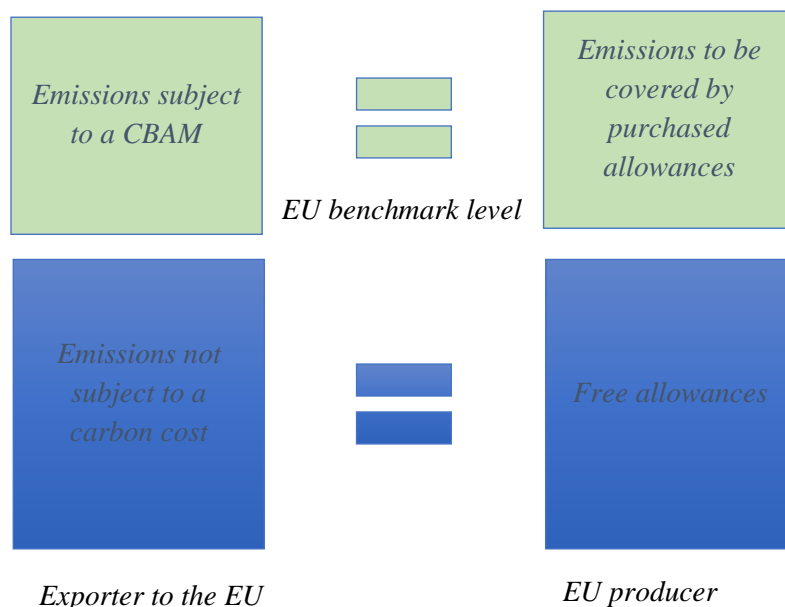


Figure 4: *Calculation of a CBAM in the Presence of Free Allocation (Source: ERCST)*

The only scenario that would result in double protection would be one in which continued free allocation for domestic producers is coupled with imposition of a CBAM on imported goods requiring payment of the full carbon emissions embedded in those goods. That would amount to discrimination of foreign producers, as these would be asked to pay more than comparable domestic producers. Such asymmetrical treatment would violate the free trade disciplines set out under WTO law.

In a scenario in which free allocation is retained alongside a CBAM, another issue that needs to be debated is whether free allocation should gradually transition into the CBAM as the former is phased out, or whether the transition should take place at a future date.