

POLICY PAPER

**Closing the CBAM gap:
Including indirect emissions for
EU competitiveness & global
decarbonisation**

SEPTEMBER 2025

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Executive Summary

With the Carbon Border Adjustment Mechanism (CBAM) set to fully enter into force in 2026, the exclusion of indirect emissions across all CBAM sectors poses risks for the instrument’s climate credibility. The European Commission is mandated to assess whether the CBAM’s scope should be extended to cover these emissions. **With this paper Bellona aims to address the issue and put forward concrete, feasible and legally sound solutions to ensure a swift inclusion of indirect emissions across all CBAM sectors without harming EU competitiveness or exposing European industry to carbon leakage.**

This paper examines two major obstacles currently preventing the integration of indirect emissions into the CBAM: existing carbon leakage measures under the EU Emissions Trading System (EU ETS) and the methodology used to calculate indirect emissions.

First, the **Indirect Cost Compensation (ICC) system is fundamentally flawed**: by compensating emitting and fossil electricity, it weakens decarbonisation incentives, lacks transparency and consistency across Member States, and blocks the inclusion of indirect emissions across sectors. Reform is therefore essential: ICC should only compensate for the spillover carbon costs embedded in non-emitting electricity, while ensuring fossil-based power remains fully exposed to the ETS carbon price.

| Identified pitfall of ICC | Bellona’s proposed solution |
|-------------------------------|---|
| Weak conditions | ICC reform only covering non-emitting share of electricity consumed and purchased and subjected to carbon cost. |
| Flawed implementation formula | |
| Misuse of ETS revenues | Earmark at least 50% of ICC to climate action and energy efficiency |
| Lack of transparency | Ensure transparency and oversight of ICC allocation |
| Fragmentation | Harmonise ICC distribution across Member State |

Second, **the CBAM's current methodology for calculating indirect emissions is not fit for purpose.** Of the default options considered, only national grid averages meet the Commission's criteria of preventing carbon leakage and safeguarding environmental integrity. At the same time, vague requirements for Power Purchase Agreements (PPAs) create loopholes that could threaten fair competition and climate ambition. A robust methodology should therefore use country grid averages as the standard, while permitting actual values only where importers can demonstrate lower emissions. This should happen only through renewables direct connections or PPAs meeting strict requirements on additionality temporal and geographical correlation as in the Renewable Fuels of Non-Biological Origin (RFNBOs) Delegated Act.

| Identified pitfall of CBAM Methodology | Bellona's proposed solution |
|--|--|
| EU grid average default underestimates emissions in origin countries putting European industry at disadvantage | Use country of origin grid average as standard, updated regularly to account for progress in origin countries. |
| Price-setting source default impractical, unfair, undermines integrity | |
| Technical link unclear, may allow fossil electricity | Allow only grid-independent renewable connections |
| PPA rules vague, risk of fossil-based loopholes | Allow only renewable PPAs with strict RFNBO criteria (temporal, geographical, additionality) |
| Lack of safeguards enables double counting and circumvention | Require third-party verification and transparency mechanisms |

Addressing these two shortcomings as outlined in this paper would unlock CBAM's full potential, enabling it to function as the effective carbon leakage measure it was designed to be. A CBAM that covers indirect emissions across all sectors with a strong methodology will not only protect European companies from the risk of carbon leakage, but also incentivise producers in third countries to transition to renewable energy, thereby delivering global climate benefits in line with CBAM's underlying rationale.

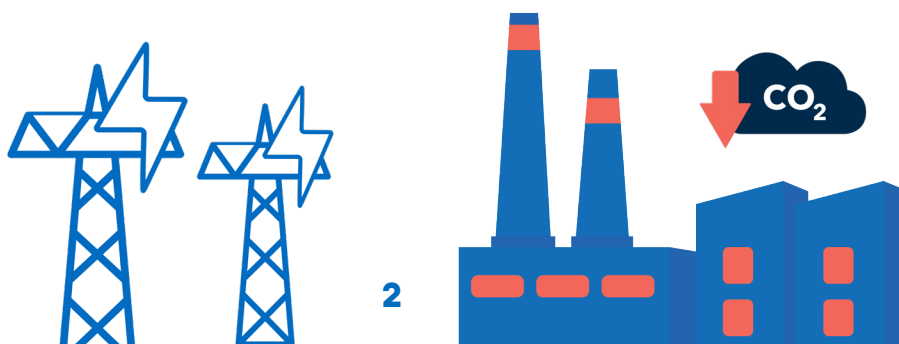


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Introduction: A half-built bridge to decarbonisation

With the full implementation of the Carbon Border Adjustment Mechanism (CBAM) in 2026, the European Union (EU) will begin applying a carbon price on imports in key high-emitting sectors, namely cement, iron and steel, aluminium, fertilisers, electricity, and hydrogen. This mechanism is designed to mirror the EU Emissions Trading System (ETS), ensuring that imported goods bear a comparable carbon cost to that paid by European producers. Concretely, this means that the EU importers of CBAM-covered goods (CBAM goods) will have to declare the emissions embodied in the imported good and pay the corresponding carbon cost. By doing so, the CBAM provides protection against carbon leakage¹, allows for the gradual phase-out of free allowances under the ETS, reinforces the Polluter Pays Principle and helps level the playing field for cleaner production technologies.

In its current form, the CBAM does not cover indirect emissions for goods listed in Annex II of the CBAM Regulation², which means that almost all goods in the iron and steel, aluminium, and hydrogen sectors are excluded. Concretely, this means that the emissions resulting from the production of electricity used to produce CBAM goods in these energy-intensive sectors will not be priced at the border. **This represents a significant shortfall as it ignores the lion's share of the climate footprint of energy-intensive products³, fundamentally undermining the credibility of the Mechanism⁴.**

This policy paper examines the exclusion of indirect emissions from the most energy-intensive sectors, focusing on the key challenges that have so far prevented their inclusion.

Bellona Europa has identified two main issues in this regard:

1. The CBAM vs. Indirect Cost Compensation (ICC)

Most energy-intensive CBAM-covered sectors (CBAM sectors) are currently eligible for compensation under the EU ETS State Aid Guidelines (ICC Guidelines)⁵ to mitigate the impact of carbon costs passed through electricity prices. Indeed, these sectors are classified as being “exposed to a genuine risk of carbon leakage due to indirect emission costs” (Annex I, ICC Guidelines), which makes them eligible for Indirect Cost Compensation (ICC): a mechanism considered crucial for maintaining the competitiveness of the EU’s energy-intensive industries.⁶

If these sectors were brought under the CBAM without changing the way ICC operates, they would effectively be ‘protected’ twice: through the CBAM and again through ICC. This “double protection” would make the expansion of the CBAM to cover indirect emissions incompatible with international trade rules and undermine its intended goal of fostering decarbonisation within and beyond Europe. Building on previous work⁷, **this policy paper**

1 Defined as “the situation that may occur if, for reasons of costs related to climate policies, businesses were to transfer production to other countries with laxer emission constraints. This could lead to an increase in their total emissions”. European Commission. (n.d.). [Carbon leakage](#)

2 European Parliament and Council. (2023). [Regulation \(EU\) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism](#).

3 Aluminium: more than 70% of emissions are associated with electricity coming from the production process ([International Aluminum, 2024](#)). Electrolytic hydrogen: almost the entirety of emissions associated with the production of electrolytic hydrogen result from the electricity consumed in the process ([IEA, 2023](#)). Iron and steel: emissions coming from electricity are the biggest share of the DRH+EAF route and the secondary EAF route.

4 See Fact box: Why CBAM must cover indirect emissions across all sectors (p.6-7)

5 European Commission. (2020). [Guidelines on certain State aid measures in the context of the system for greenhouse gas emission allowance trading post-2021](#)

6 European Commission. (n.d.). [Carbon leakage](#)

7 Bellona Europa. (2025, June 23). [A CBAM without indirect emissions? A half-built bridge to decarbonisation](#).

by Bellona analyses this issue and proposes a way to include indirect emissions in the CBAM through a reform of the ETS State Aid Guidelines. Under the suggested approach, ICC could still be used to compensate European energy-intensive industries, but only for the spillover carbon cost on the zero-emissions electricity consumed. Electricity from emitting sources would still bear its carbon cost, thus allowing the CBAM to serve as an effective carbon leakage protection measure.

2. The CBAM's methodology to account for indirect emissions

At the time of writing (September 2025), indirect emissions are included in the CBAM for fertilisers and cement sectors only. However, as this paper will show, **the current methodology for calculating the intensity of indirect emissions lacks sufficient rigour, which heightens the risk of manipulation, circumvention, and ultimately carbon leakage.** This not only undermines the integrity of the CBAM in the cement and fertiliser sectors but would become particularly problematic if the scope was extended to energy-intensive sectors, where indirect emissions represent the majority of embedded emissions. As such, the methodological shortcomings pose a major obstacle to expanding the CBAM to these sectors. **In this policy paper, Bellona outlines methodological improvements designed to ensure stricter and more reliable accounting, both to prepare for a future CBAM expansion and to strengthen the process for sectors already covered.**

Premises

Before addressing the core issues, a few premises should be considered.

First, this paper addresses the issue of indirect emissions in the CBAM from a horizontal and holistic perspective. Bellona recognises that certain CBAM sectors face specific and unique challenges, which are not covered here.

A sector-specific analysis will be developed in due course, and readers are welcome to contact the authors to discuss particular challenges in more detail.

Second, this paper rests on the understanding that the Mechanism has two equally important objectives, both essential to maintaining its climate credibility as stated in article 1 of the Regulation. **At the EU level (internal dimension),** the CBAM ensures that European producers face a carbon price signal that drives decarbonisation while protecting them from carbon leakage and ensuring their competitiveness. **At the global level (external dimension),** it encourages the EU's trading partners to adopt or strengthen climate policies, either by introducing their own carbon pricing systems or by reducing the carbon intensity of industrial production.

Third, Bellona recognises and shares certain concerns raised by key stakeholders and acknowledged by the European Commission in various communications.⁸ These include the treatment of EU exporters, the treatment of downstream products, and the risk of circumvention. While the Commission is exploring solutions to these issues, the exclusion of indirect emissions across all CBAM sectors goes beyond them and can be addressed in parallel. **The focus of this policy paper is to propose practical solutions for including indirect emissions in the CBAM, on the assumption that any measures developed by the Commission to address the above-mentioned concerns will also apply to indirect emissions once included.** As such measures have not yet been adopted, even for direct emissions, this paper does not address those broader gaps.

Finally, because this paper focuses on indirect emissions -defined as "emissions from the production of electricity consumed during the production processes of goods, irrespective of the location of the production of the consumed electricity"⁹ - it does not address in detail the treatment of electricity as a CBAM sector. **While some of the solutions outlined in Part 2 may also be relevant to electricity when covered by the CBAM, a specific analysis of this issue falls outside the scope of this paper.**

8 [Clean industrial Deal, Steel and Metals Action Plan, Delivering on the Clean Industrial Deal I](#)

9 As defined in article 3.34 of the CBAM Regulation

Why the CBAM must cover indirect emissions across all sectors

The exclusion of indirect emissions from the aluminium, iron and steel, and hydrogen sectors is highly problematic and weakens the CBAM's climate impact. **This fact box categorises these concerns under three dimensions: legal, climate, competitiveness.**

LEGAL DIMENSION

Several European legislations mention the issue of indirect emissions in carbon pricing and consequent measures to protect from the risk of carbon leakage. From the EU ETS Directive to the CBAM Regulation itself, there are many legal references calling on an inclusion of indirect emissions in the CBAM:

- **Recital 19 (CBAM Regulation):** "The CBAM should also apply to indirect emissions" and "Indirect emissions should [...] not be taken into account *initially* for the goods in respect of which financial measures apply in the Union that compensate for indirect emissions costs incurred from greenhouse gas emission costs passed on in electricity prices".
- **Recital 65 (CBAM Regulation):** "The Commission should [...] collect the information necessary *with a view to the further extension of the scope of this Regulation to embedded indirect emissions in the goods listed in Annex II as soon as possible*".
- **Recital 7 (ETS State Aid Guidelines):** "Following [...] the creation of a Carbon Border Adjustment Mechanism, the Commission will check whether any *revision or adaptation of these Guidelines is necessary* to ensure consistency with, and contribute to, the fulfilment of the climate neutrality objective while respecting a level playing field".
- **Art. 30.2 (ETS Directive):** It highlights the need for ongoing review of support measures for energy-intensive industries, particularly in relation to carbon leakage and the effectiveness of the CBAM. It notes the importance of reviewing the compensation of indirect costs, suggesting that more harmonised and robust treatment, such as including indirect emissions in the CBAM, may be warranted to ensure environmental integrity and fair carbon pricing across the board.

Including indirect emissions in the CBAM would mean aligning CBAM's scope with the EU ETS and ensuring cross-sector coherence. In principle, the CBAM is designed to mirror the EU ETS. While the two systems differ, with the EU ETS being process-based and CBAM product-based, the ETS covers both direct emissions from installations and indirect emissions thanks to the coverage of emissions coming from the power sector. **For any carbon pricing system to be effective, it must ensure full exposure to the carbon cost.**



CLIMATE DIMENSION

Indirect emissions constitute the largest share of embedded emissions in key sectors such as aluminum, hydrogen, and iron and steel. Their exclusion means that a significant portion of emissions from CBAM-covered products remains unaccounted for, weakening the policy's climate impact.

- **Not pricing high-carbon imports:** *Excluding indirect emissions allows goods with high-embedded carbon footprints to enter the EU market unpenalised, undermining the CBAM's environmental objectives. This omission is especially concerning in sectors where the majority of emissions stem from electricity use. For example, hydrogen produced through fossil-fuel-powered electrolysis would be treated at the border in the same way as electrolytic hydrogen produced with renewable energy in Europe.*
- **Increasing fossil fuel dependency:** The exclusion of indirect emissions preserves the current energy mix in origin countries and discourages the shift towards cleaner power sources. *Importers have little incentive to prioritise goods produced with renewable electricity.* By treating products powered by renewables and those powered by fossil fuels equally at the EU border, the Mechanism risks making fossil-based production more economically attractive in origin countries, thereby increasing fossil fuel dependency and long-term carbon lock-in.
- **Carbon accounting:** When it comes to carbon accounting methodologies, *it is crucial to set up a robust environmental impact assessment of industrial production, together with a robust carbon accounting and life-cycle assessment practices.* Excluding indirect emissions undermines this process.
- **Undermining the EU's climate leadership role:** The exclusion of indirect emissions from the CBAM weakens its international climate objective, as outlined in Article 1 of the Regulation, which includes *"reducing global carbon emissions and supporting the goals of the Paris Agreement."* Without covering indirect emissions, the CBAM fails to fully incentivise cleaner electricity use abroad, missing a key opportunity for the EU to leverage its market influence to promote global climate action and the adoption of carbon pricing in origin countries.

COMPETITIVENESS DIMENSION

With the introduction of the CBAM, the carbon footprint of a product will become a key element of its competitiveness in the market. The exclusion of indirect emissions in the CBAM undermines this principle, particularly for sectors like aluminium, hydrogen, and iron and steel, by failing to acknowledge the competitive advantage of producers with a cleaner electricity mix, especially in Europe.

- **Ensuring fair competition for EU producers:** The EU's electricity grid has one of the lowest carbon intensities globally, providing a strategic edge to producers who rely on renewable energy. Excluding indirect emissions from the CBAM neutralises this advantage, effectively equating high-carbon imports with low-carbon European goods. This creates an uneven playing field for EU industries at the forefront of decarbonisation with EU producers investing in decarbonisation being unfairly treated vis a vis high-carbon imports, weakening the business case for clean industrial transformation in Europe as well.
- **Sending the right investment signals:** During the CBAM transitional phase, importers have already been required to monitor and report indirect emissions, prompting action from both EU and countries of origin's producers. As emerged from conversations with producers in origin countries, several international producers have begun investing in renewable electricity to prepare for future CBAM compliance. Maintaining this momentum requires a stable and predictable regulatory framework. Including indirect emissions would reinforce investor confidence, align the mechanism with its long-term climate goals, and drive further decarbonisation investments both within and beyond EU borders.
- **Consistency across CBAM sectors:** The treatment of indirect emissions among CBAM sectors is currently not consistent, included for some sectors, like cement and fertilisers, while being excluded for others, such as aluminium, iron and steel, and hydrogen. This difference in treatment creates intra-CBAM distortions, granting a competitive advantage to sectors not exposed to the full carbon cost, even when their emissions are largely driven by electricity use. It also risks incentivising trade or production shifts toward less regulated sectors, undermining both climate ambition and industrial fairness.

Without covering indirect emissions, CBAM will fall short of its full potential from climate, legal, and competitiveness perspectives. Including indirect emissions would transform it from a half-built bridge to decarbonisation as it could be viewed today into a complete mechanism, ensuring positive climate impacts both within the EU and globally.

^[1] In particular on the DRI+EAF route and the secondary EAF route.

1. Indirect Cost Compensation (ICC) and the CBAM: a step ahead

As outlined in the introduction, indirect emissions are currently excluded from energy-intensive CBAM sectors such as aluminium, iron and steel and hydrogen. **To assess this shortcoming, it is necessary to first examine the interaction between the EU electricity market and carbon pricing, and the challenges this creates.** The EU electricity market operates on a marginal pricing model, meaning that often consumers do not distinguish between sources of electricity when making the purchase. Because the power sector is covered by the ETS, the carbon price spills over onto non-emitting electricity. As a result, most of the time the carbon price is applied equally to both non-emitting and emitting electricity. This not only increases industrial electricity costs but also underpins the rationale for ICC, a state aid mechanism intended to offset these additional costs and prevent carbon leakage.

However, the current ICC design does not take into account the carbon footprint of the electricity consumed. This flaw is one of the main barriers preventing the cross-sectoral inclusion of indirect emissions in the CBAM. Bellona has long argued, however, that with the right reforms, swift inclusion would be possible.¹⁰

Bellona therefore recommends restructuring ICC distribution and ensuring the CBAM is flexible enough to treat all covered goods equally. This is feasible with how the electricity market functions today.

The following section explains how this can be achieved. First, it describes the operation of the EU electricity market and the current distribution of ICC. Second, it examines the shortcomings of the existing system and how these limit the CBAM's effectiveness as a decarbonisation tool. Finally, it presents concrete solutions to address these shortcomings and enable the inclusion of indirect emissions in the CBAM.



OVERVIEW OF THE ISSUE

European energy-intensive industries face high electricity costs due to certain features of the design of the EU power market combined with the additional carbon cost on electricity. This combination **increases the risk of carbon leakage, which Indirect Cost Compensation (ICC) was created to mitigate.**



IDENTIFIED PROBLEMS

ICC's current design undermines EU decarbonisation goals by compensating emitting electricity use, lacks transparency and harmonisation across Member States and **prevents the CBAM from including indirect emissions across all sectors.**



BELLONA'S SOLUTION

Revising how ICC is distributed within the EU by compensating energy-intensive industries only for the share of non-emitting electricity they consume that is nevertheless subject to carbon costs. **Expose emitting electricity to the carbon price on power**, enabling the CBAM to function as a carbon leakage measure, providing enough flexibility to ensure equal treatment of goods.

1.1 The EU electricity market

A clear analysis of carbon leakage risks in the power sector must begin with an examination of their root causes, rooted in the unique structure of the European electricity market. In Europe, industries can purchase electricity through various mechanisms. While a comprehensive overview lies beyond the scope of this paper, two key methods dominate among energy-intensive sectors: the short-term market and over-the-counter (OTC) contracts, such as power purchase agreements (PPAs). In the short-term market, electricity is procured via power exchanges where prices fluctuate daily. In contrast, OTC contracts are bilateral agreements directly negotiated between the producer and the industrial consumer, often to secure long-term price stability.

The short-term electricity market

In the European short-term electricity market, prices are determined by a marginal pricing mechanism. The market price of electricity – often referred to as the ‘spot’ price – is set by the last and most expensive producer needed to meet demand, which is frequently a gas-fired power plant.¹¹ As these plants are both carbon-intensive and costly, the spot price reflects their higher generation costs paired with the carbon cost on power. Importantly, this means that, when buying electricity in the short-term market, a company that consumes cheap non-emitting electricity (ex. renewable) often pays a price influenced by the most expensive unit on the market.

Although marginal pricing is sometimes criticised¹², it is a main feature that was maintained in the most recent Electricity Market Design Reform¹³; due to the argument that it underpins cost-efficient dispatch and investment signal.

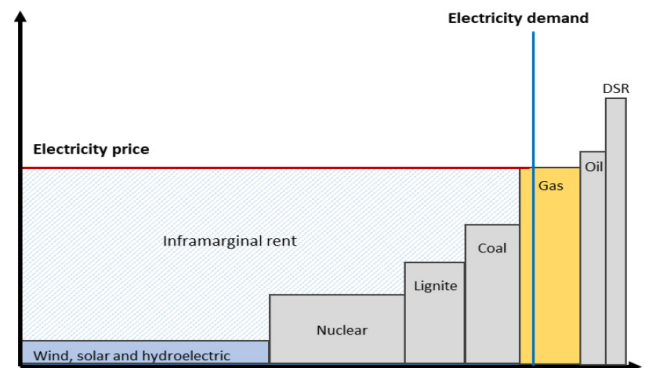


Figure 1: Simplified merit order supply demand stack, EC JRC

The EU electricity market is particularly subjected to high electricity costs also because of its interaction with the EU Emission Trading System (ETS). Because the European power sector is covered by the ETS, electricity generators that emit greenhouse gases must purchase and surrender ETS allowances. However, the cost of these allowances is not absorbed by the producers but passed on to consumers. As a result, when an emitting (often fossil) source is setting the price, industrial consumers pay electricity prices that reflect not just generation costs but also a spillover carbon cost, even if consuming electricity with no associated emissions.

This interaction between the marginal pricing system and the carbon cost on power has several implications for the EU electricity market:

1. **Incentivises renewables:** Renewable energy sources, typically cheaper to produce, benefit from higher market prices set by fossil fuels, improving their competitiveness and attracting investment. Additionally, increasing the share of renewables reduces the frequency at which fossil fuel generators set the marginal price.

¹¹ In 2022, fossil fuel-based plants set the price around 86% of the time, while generating 34% of electricity in 2022 (Gasparella A., Koolen D. and Zucker A., *The Merit Order and Price-Setting Dynamics in European Electricity Markets*, European Commission, Petten, 2023, JRC134300).

¹² Hirth, L. (2022). *The merit order model and marginal pricing in electricity markets*.

¹³ Council of the European Union. (2023). *Council conclusions on a new European competitiveness deal*

2. **Higher electricity costs:** Consumers often pay more for electricity than its average production cost, especially when expensive and high-emitting sources set the marginal price.
3. **Spillover carbon cost on renewables:** When emitting sources set the marginal price, a carbon price is imposed on the entirety of the electricity produced, including the renewable share, even though renewables have zero carbon emissions and should not incur any carbon costs.

Over-the-counter contracts (OTC)

Given the unpredictability of purchasing electricity in the short-term market, many industrial consumers negotiate electricity purchase agreements directly with power producers. These OTC contracts are bilateral, privately negotiated deals that do not go through organised exchanges.

A key form of OTC contracting is the PPA. PPAs allow an industrial consumer to lock in a relatively stable price over a long period (often 5–15 years), reducing exposure to short-term price volatility and providing the generator with predictable revenues¹⁴. This makes them particularly attractive for energy-intensive industries seeking to hedge against market risk, and for renewable developers seeking bankable offtake agreements.

Price formation in OTCs and PPAs is based on private negotiation, but is usually benchmarked against day-ahead (spot) market future expectations¹⁵. While such contracts can insulate consumers from day-to-day volatility and from the full pass-through of the carbon price in the spot market, they remain indirectly linked to the broader market structure, since negotiated prices often reflect forward projections of marginal pricing and carbon costs.

The consequences of the EU electricity system on the competitiveness of energy intensive industries

As highlighted by the Draghi Report “The future of European Competitiveness”, the electricity market’s dynamic outlined above significantly impacts the competitiveness of energy-intensive industries. **These sectors, in Europe, face structurally higher electricity and gas prices compared to major global competitors, with EU electricity prices that are two to three times higher than in the US, while natural gas prices are four to five times higher.** Although decarbonisation presents a long-term opportunity for Europe to lead in clean technologies and circular solutions, current energy prices often driven by fossil fuels pose a near-term challenge.¹⁶

This is further exacerbated by the carbon cost on power which in certain circumstances is passed through into wholesale electricity prices even if the electricity consumed is from non-emitting sources. **While this cost raises overall electricity prices, it reflects a deliberate and necessary policy choice driven by the EU’s climate ambition: a strong carbon price is essential to correct market failures that currently favour high-emission products over low-carbon alternatives.** In fact, the EU’s carbon pricing has played a key role in decarbonising the power sector, with emissions from electricity and heat production dropping by nearly 45% since 2011.¹⁷

This climate policy, while necessary, creates an uneven playing field between the EU and its international competitors that might result in carbon leakage, with European industries delocalising to countries with lower climate ambition. To mitigate this risk, the EU has introduced carbon leakage protection measures such as ICC, which aims to limit the impact of carbon pricing on electricity costs for energy-intensive sectors.

14 European Commission. (2023). *Commission staff working document: Impact assessment*

15 Tagliapietra, S., & Zachmann, G. (2023). *Phased European Union electricity market reform*

16 Draghi, M. (2024). *The future of European competitiveness*

17 LIFE ETX (2021) *EU ETS 101 – A beginner’s guide to the EU’s Emissions Trading System*

1.2 Indirect cost compensation: origins and shortcomings

Overview of the Indirect Cost Compensation (ICC) Mechanism

ICC is a state aid measure established under the EU ETS Directive, with guiding principles set out in the “*Guidelines on Certain State Aid Measures in the Context of the System for Greenhouse Gas Emission Allowance Trading Post-2021*” (ICC Guidelines). It is defined as a financial support mechanism “[...] in favour of sectors or subsectors which are exposed to a genuine risk of carbon leakage due to significant indirect costs that are actually incurred from greenhouse gas emission costs passed on in electricity price”¹⁸. The current aid granting period goes from 2021 until 2030.

In practice, **ICC functions as a carbon leakage protection tool, aiming to mitigate the cost burden that the ETS imposes on electricity prices, cost ultimately passed on to industrial consumers.** As a form of state aid, it is up to each Member State to decide whether or not to implement the measure. ICC is financed through revenues generated from the auctioning of ETS allowances (ETS revenues). Member States are permitted to allocate up to 25% of their annual ETS revenues for this purpose. This represents an exception within the ETS Directive, which, since its 2021 revision, requires that all ETS revenues be directed towards climate action.¹⁹

The ICC Guidelines detail the technical and procedural aspects of the measure. Here are the most relevant for this paper:

- **Eligible sectors:** Among the sectors deemed to be exposed to a genuine risk of carbon leakage due to indirect emission costs, therefore eligible to receive ICC there are manufacture of basic iron and steel and ferro-alloys, aluminium production and hydrogen.²⁰ (Annex I).
- **Formula to calculate the aid:** The standardised formula to calculate the maximum aid payable per installation links compensation to factors such as electricity consumption, production volume, average of electricity emissions, and a static aid intensity (capped at 75%). Crucially, this approach does not distinguish electricity from emitting versus non-emitting sources. (Point 28)
- **Conditions:** Large beneficiary companies need to respect either one of the following conditions: implement energy audit recommendation, consume at least 25% of renewable energy, or invest at least 50% of compensations towards greenhouse gas reduction (Point 55).
- **Transparency requirements:** the guidelines include transparency requirements to ensure public oversight of ICC. Specifically, Member States, the Commission, economic operators, and the public must have easy access to all relevant acts and information regarding aid granted. (Points 56, 57, 58).

18 ETS Directive, art. 10a(6)

19 Bellona Europa. (2024). [How to allocate carbon pricing resources: Directing ETS and CBAM revenues towards effective climate action](#)

20 NACE codes 24.10, 24.42, 20.11.11.50

The shortcomings of ICC

While ICC helps mitigate carbon leakage, its current design presents significant shortcomings from both climate and governance perspectives. On the one hand, it prevents the full exposure of carbon costs, hindering efforts to decarbonise the EU economy. On the other, its inconsistent and non-transparent distribution across Member States creates disparities and limits effective public scrutiny.

The **main concerns** include:

- **Fragmentation:** ICC is distributed by Member States in an uneven manner with some Member States making abundant use of this instrument while others not using it at all.²¹ **This exacerbates the differences between Member States, in a period in which industrial decarbonisation and competitiveness of the whole Union is at stake.** Even though the ETS Directive specifies that “[...] the Commission shall also consider whether measures in relation to the compensation of indirect costs should be further harmonised”, for now no improvement has been made in this direction.
- **Misuse of ETS revenues:** Under the reformed EU ETS Directive, revenues generated from the auctioning of the allowances “shall” be fully allocated to climate action. However, **ICC represents an exception, allowing Member States to use up to 25% of ETS revenues collected for this purpose, although ICC itself does not qualify as climate action.** On the contrary, they currently function as an indirect subsidy for fossil-based power generation as well, contradicting the overarching goal of the ETS to drive decarbonisation.
- **Flawed implementation formula:** The formula in point 28 allows compensation based on fossil electricity consumption and overall output, regardless of the actual electricity mix used. This means **companies using emitting (often fossil) electricity are still compensated, effectively negating the carbon price signal, violating the polluter-pays principle and undermining overall EU climate objectives.**
- **Weak conditions:** The conditions in point 55 of the Guidelines are minimal and only require companies to meet one of the three. Accordingly, in a hypothetical scenario where an eligible energy-intensive installation is directly connected to a fossil-based power plant and consuming 100% fossil-based electricity, it could still qualify for ICC merely by implementing energy audit recommendations, which is already part of other EU legislations. While this would align with the ICC objective of mitigating carbon leakage risks, **this outcome highlights how the current design of ICC contradicts the EU climate objectives by often subsidising fossil-based power production.** Member States have the option to strengthen these conditions, but whether to do this or not is left to their discretion. These risks increasing disparities in implementation across the EU.
- **Lack of transparency:** Despite the transparency requirements set out in the ICC Guidelines, in practice the allocation of ICC lacks sufficient oversight. **This results in unclarity as per whether the compensation accurately reflects the spillover effect of carbon pricing on electricity costs.** According to the Guidelines: “Member States, the Commission, economic operators and the public must have easy access to all relevant acts and to pertinent information about the aid awarded thereunder.” In reality, this information is not easy to find, making it hard for public scrutiny.

21 In 2023, the following Member States made use of ICC: Austria, Belgium, Czechia, Finland, France, Germany, Greece, Italy, Luxembourg, Poland, Portugal, Romania, Slovakia, Slovenia, Spain. European Commission. (2024). *Report from the Commission to the European Parliament and the Council on the functioning of the European carbon market in 2023*

The future of ICC

As it currently stands, ICC and a CBAM that includes indirect emissions across all sectors would not be compatible, as this would result in double protection for EU energy-intensive producers. Such a setup would be unfair to producers in origin countries and could raise concerns regarding compliance with international trade rules.

ICC is regulated only until 2030, but their extension has been openly addressed by the Steel and Metals Action Plan (SMAP), a Communication from the European Commission aimed at addressing specific competitiveness issues faced by the European steel and metals industry. In this document, the Commission encouraged Member States to make use of this instrument and announced that “in the context of 2026 ETS and CBAM reform” it will “work towards ensuring adequate measures (Guidelines or another form) for indirect ETS cost compensation post-2030”.²²

Bellona supports the temporality of ICC, which must be phased out eventually when the spillover effect of the carbon cost on the electricity prices will not be that impactful. This will also depend on the assessment on what the future of the ETS on power will be once the EU electricity grid will be close to being fully decarbonised. In the meantime, the EU should reform the ICC scheme addressing the pitfalls presented in this article, allowing for a swift inclusion of indirect emissions across all CBAM sectors.



1.3 Bellona's solution: a temporary and reformed ICC system for a CBAM as comprehensive measure of carbon leakage

To ensure a fair and effective integration of indirect emissions in the CBAM, Bellona proposes a reform of the Indirect Cost Compensation scheme. Concretely, **ICC should only cover the share of electricity purchased and consumed that is not emitting but still subjected to the carbon cost, fully exposing emitting power sources to the carbon price.** If this reform was implemented, it would be possible to include indirect emissions under the CBAM without creating double protection for EU producers. This would maintain competitiveness while upholding the integrity of the carbon pricing system.

While Bellona's proposal fits perfectly within the unique context of carbon market and EU electricity market, doubts may arise concerning equal treatment of goods on both sides of the border.²³ Accordingly, while emissions arising from electricity production would be priced equally, EU industries would receive compensation for the spillover effect of carbon costs on renewable electricity. While this spillover is quite unique to the European context, origin countries could face similar unintended consequences as they adopt more ambitious climate policies, one of the CBAM's core objectives.

In such cases, **the CBAM should remain flexible and allow producers in origin countries to demonstrate that comparable carbon cost spillovers occur in their electricity markets and are not mitigated locally or nationally in the origin country.** When such proof is provided, a corresponding adjustment equal to the identified spillover in the third country at the border should be possible to ensure fair and consistent treatment.

²² European Commission. (2025). *Communication: Steel and Metals Action Plan*

²³ This is particularly relevant in light of recent international disputes between countries that focused on carbon-cost relief directly or indirectly linked to trade exposure/exports. See U.S. Environmental Protection Agency. (2023, May 9). Greenhouse gas standards and guidelines for fossil fuel-fired power plants (US vs. South Korea) and World Trade Organization. (2025). European Union – CBAM dispute (Russia vs. EU)

RECOMMENDATIONS

A CBAM covering indirect emissions across all sectors together with reformed ICC

To ensure the inclusion of indirect emissions in the CBAM, Bellona Europa recommends the following steps to be carried out by the Commission in the months leading up to the instrument's full phase in:

1

Reform the ICC Guidelines

To ensure that ICC is both climate-effective and compatible with the inclusion of indirect emissions in the CBAM, the current ICC Guidelines should be revised. Specifically, **ICC should only apply to the share of electricity consumed originating from non-emitting energy sources that is nevertheless unfairly subjected to the extra costs of carbon pricing.** The following reform principles are proposed:

- **Short-term market purchases:**

- Whenever the marginal price is set by non-emitting electricity sources (e.g. renewables) in a given period, no ICC should be distributed for that share of electricity, since no carbon cost spillover occurred.
- Conversely, when the marginal price is set by emitting electricity sources (e.g. fossil gas) in a given period, ICC should be distributed exclusively to compensate for the extra costs applied on non-emitting electricity and allow appropriate exposure to the carbon price signal for emitting electric.

| Price setting source | Type of electricity purchased and consumed | Indirect cost compensation |
|---------------------------|--|----------------------------|
| Emitting power source | Emitting electricity | ✗ |
| | Non-emitting electricity | ✓ |
| Non-emitting power source | Non-emitting electricity | ✗ |

- **Over the counter (OTC) contracts:**

- Allowing for companies to demonstrate the amount of carbon cost that has spilled over in the cost of electricity set out in the OTC.

In practical terms, the most effective approach would be to base ICC on actual electricity consumption and emissions data, thereby ensuring it accurately reflects the real spillover cost in line with the principles outlined above. However, this may be challenging to implement in practice. **Bellona looks forward to engaging in detailed discussions with relevant stakeholders on potential alternative solutions. One option could be the use of default values that mirror the actual spillover cost on non-emitting electricity.** In the short-term market, this would account for the proportion of time emitting sources set the price compared with the time they were actively generating electricity. For OTC contracts, a standardised adjustment factor could instead be applied to reflect the average spillover effect of carbon pricing on OTC prices.

2

Harmonise ICC distribution across Member States

With the introduction of the CBAM as an EU-wide policy, the European Union should address the carbon cost spillover effect on electricity prices from a Union-wide perspective, ensuring a more harmonised and consistent approach to the distribution of ICC.

3

Earmark ICC spendings to climate action

Require that at least 50% of ICC received be earmarked for climate action and energy efficiency, making mandatory one of the conditions already included in point 55 of the ICC Guidelines. This would ensure effective use of ETS revenues and spending should be guided by clear criteria: climate impact, system effect, timing and scalability, and compliance with the Do No Significant Harm (DNSH) principle.²⁴

4

Ensure transparency and oversight of ICC allocation

Ensure that information on ICC distribution is published in a clear, accessible and standardised format across Member States. This should include the amount of aid granted per installation, justification of eligibility and documented use of ICC revenues. The Commission should monitor compliance with transparency rules and publish an annual EU-wide summary to enable effective public and stakeholder scrutiny.²⁵

5

Assess phase out ICC post-2030

Evaluate the phase-out of ICC after 2030, in line with the decarbonisation of EU electricity grid and decreasing exposure to carbon cost spillovers. As fossil-based sources increasingly cease to set the marginal price, the rationale for compensating indirect carbon costs will weaken.

6

Ensure CBAM flexibility for fair treatment of origin countries' producers

Guarantee equal treatment between EU and non-EU goods under the CBAM by providing the possibility of a CBAM adjustment if origin country's producers can demonstrate that they face a similar spillover of carbon costs on non-emitting electricity sources without receiving any local compensation mechanism. The adjustment must reflect the real cost in the origin country and not simply mirroring the ICC distributed in the EU.

²⁴ Read more about the criteria here: Bellona Europa. (2024). *How to allocate carbon pricing resources: Directing ETS and CBAM revenues towards effective climate action*. <https://eu.bellona.org/publication/how-to-allocate-carbon-pricing-resources-directing-ets-and-cbam-revenues-towards-effective-climate-action>

²⁵ As foreseen in point 55 of the ICC Guidelines.

How to account for indirect emissions

A key challenge in expanding the CBAM to include indirect emissions across all sectors is determining how to account for emissions resulting from the electricity used in producing imported CBAM goods. Currently, the CBAM covers indirect emissions for the cement and fertiliser sectors, and a provisional methodology for doing so is already outlined in the CBAM Regulation. However, this existing approach has certain weaknesses that could create loopholes and opportunities for circumvention, potentially undermining the competitiveness of European industry.

If indirect emissions inclusion was extended to additional CBAM sectors using the current methodology, the associated risks could outweigh the benefits.

The following section analyses the current CBAM methodology for indirect emissions. First, it outlines the methodology's design and operation. Second, it highlights its shortcomings and limitations. Finally, it presents recommendations to strengthen the methodology, both in general terms and with a view to supporting the broader inclusion of indirect emissions across all CBAM sectors.



OVERVIEW OF THE ISSUE

The current **CBAM methodology allows for the use of either default values based on electricity's carbon intensity or actual emissions through direct connections or general PPAs**. The Commission will come up with a definitive methodology considering two criteria: **preventing carbon leakage and ensuring the environmental integrity of the system**.



IDENTIFIED PROBLEMS

Two of the three default value options do not comply with the Commission's criteria, leaving only the country of origin's national grid average as a balanced solution. Additionally, **vague requirements for PPAs open the door to loopholes, which could undermine the competitiveness of EU producers and the CBAM's environmental integrity**.



BELLONA'S SOLUTION

Use country of origin's grid averages as the primary method for reporting indirect emissions under the CBAM. **Allowing actual values** only when importers can prove lower emissions **through direct connections with renewables sites or PPAs that meet strict criteria** such as temporal and geographical correlation, and additionality, ensuring climate integrity and fair competition.

2.1 State of the play (current methodology)

Indirect emissions are included in the CBAM's scope only for the cement and fertilisers sectors. While the definitive methodology is yet to be published, the CBAM legislative texts provide some temporary indication on how indirect emissions will be accounted for in the Regulation. **If the scope of indirect emissions was to be expanded to all CBAM-covered sectors, it is likely that the same approach would be applied**, which makes having an accurate methodology even more important. **Currently, there are two ways importers can declare emissions arising from electricity embedded in the imported products:**

1) **Default values** (CBAM Regulation, Annex IV, paragraph 4.3)

To account for indirect emissions in imported goods, EU importers of CBAM goods can apply default values based on the average carbon intensity of electricity used in production. These values will be determined using one of the following emission factors:

- The **EU electricity grid emission factor**
- The **national grid emission factor** of the country of origin
- The **emission factor of price-setting electricity sources** in the country of origin

Origin countries can challenge these values by demonstrating to the European Commission that their electricity mix is cleaner, in which case a targeted new default value will be established for potentially securing a lower carbon cost for their exports.

Finally, the Regulation says that, by June 2025, the Commission should define which method will apply, using data collected during the CBAM transition period. **In doing so, two criteria must be taken into account: preventing carbon leakage and ensuring the environ-**

mental integrity of the system²⁶.

2) **Actual emissions and PPAs** (CBAM Regulation, Annex IV, paragraph 6)

Importers of CBAM goods can declare actual indirect emissions instead of default values if one of the following two conditions apply:

- **Technical link:** There is a direct connection between the electricity source and the production plant in the country of origin. This requires a dedicated physical connection, theoretically preventing the electricity from entering the national grid.
- **Power purchase agreement (PPA):** The producer of CBAM goods in the origin country can declare actual indirect emissions if it has a PPA with an electricity producer in that country for an amount of electricity equivalent to the volume used in producing the CBAM goods.

In this context, the CBAM Regulation defines a PPA as a "contract under which a person agrees to purchase electricity directly from an electricity producer", with no further specification on the substance of the provisions of the contract.

2.2 Problems and risks with the current methodology

The Methodology outlined in the CBAM Regulation provides a starting point for accounting for indirect emissions. However, as currently designed, **it presents several shortcomings, concerning both the use of default values and the treatment of actual emissions data.**

²⁶ Both criteria reflect what mentioned in the introduction of CBAM having two objectives: one internal (prevention of carbon leakage while allowing for decarbonisation) and one external (encourage cleaner production abroad).

Default Values

Among the three options for determining default values presented below, only the 'country of origin's grid average' one would meet the objectives of the CBAM Regulation. The other two options fall short of fulfilling the Regulation's core criteria: "preventing carbon leakage" and "preserving the environmental integrity of the system", both essential for selecting the appropriate default value in the final phase.

- **EU grid's average:** Using the EU grid's emission factor as a default value for origin countries would be an overly optimistic estimation of their share of emitting electricity and thus fail to send an effective price signal to enhance decarbonisation efforts. Indeed, the EU electricity grid is significantly less carbon-intensive than those of many trading partners. If indirect emissions from country of origin's producers were calculated using this value, a large share of emissions from more carbon-intensive origin countries' grids would be overlooked. This poses a serious climate concern and creates a competitive disadvantage for EU producers. Moreover, the emission factor of the EU grid has no relevance to how electricity is produced or priced in third countries, making it an illogical reference point for calculating their carbon intensity.²⁷ In summary, this option fails to meet either of the key criteria set out in the Regulation: it neither protects the EU industry from carbon leakage nor it incentivises origin countries to decarbonise, ultimately weakening the environmental integrity of the CBAM.
- **Price-setting source in origin country:** According to this approach the default value would be set assuming that the price of electricity in the origin country is set by the most expensive and often carbon intensive source, as is typically the case under the EU's marginal pricing system. However, in many countries, electricity markets are structured differently, and data on the actual emission intensity of marginal,

price-setting electricity sources may be unavailable or unreliable. Even if such data was accessible, using the highest-emitting source as the benchmark would unfairly disadvantage producers in origin countries by ignoring national progress in decarbonisation of the power sector. These make this approach overly complex and risks being punitive for origin countries producers, as it lacks mechanisms to recognise progress in decarbonising their power sectors. Overall, given the difficult implementation and variation of electricity pricing systems in origin countries, it is unlikely that this approach would effectively prevent carbon leakage. What is certain is that it would undermine the environmental integrity of the CBAM by failing to reflect ongoing low-carbon energy developments in origin countries.

- **Country of origin grid's average:** This approach strikes a balance between protecting EU industry from carbon leakage and upholding the environmental integrity of the CBAM, as envisioned by the Regulation. This approach reflects an average of the actual emissions associated with electricity generation in each country, offering a more accurate and fair representation of country of origin's contexts. It ensures that EU producers are not placed at a competitive disadvantage, while also creating a strong incentive for origin countries to decarbonise their power sectors at the national level. If the European Commission were to review these values periodically (e.g. every year), progress in expanding renewable electricity at national level in origin countries would be recognised and rewarded through the CBAM.

Although the Commission was mandated to determine the methodology for default values by June 2025, this deadline has not yet been met. While the delay is concerning, it is now crucial that the upcoming decision is made thoroughly and based on the most robust and comprehensive data available from the transitional period.

Actual Values

Allowing producers in the country of origin to demonstrate a lower carbon footprint for their indirect emissions compared to the default value is essential to uphold CBAM's external objective of encouraging emission reductions in origin countries. However, to ensure this flexibility does not undermine protection against carbon leakage, a robust carbon accounting methodology is crucial.

By looking at the current methodology, **shortcomings** are evident with both options provided.

- **Technical link:** This option fails to specify the conditions under which a technical link would be eligible under CBAM. First, it does not explicitly state that the connection between the power plant and the producer of the CBAM-covered good must be a physical link, separate from the national grid. Second, it does not define the type of electricity that may be supplied through this link, leaving open the possibility that fossil-based sources could qualify, thereby undermining the incentive to use renewable electricity.
- **PPAs:** As currently defined, the requirements for recognising PPAs under CBAM lack details regarding the content and verification of the PPAs themselves and thus is open to circumvention.

As currently drafted, any PPA could qualify –even fossil-based– since there is no requirement for renewable sourcing. PPAs should only be recognised if renewable-based and with clear strings attached. This can be implemented by requiring that stringent conditions such as temporal correlation, geographical correlation and additionality are met for a renewable PPA to be recognised under the CBAM methodology.

Allowing CBAM goods producers in origin countries to use direct connections and renewable PPAs, under strict conditions, to demonstrate lower embedded indirect emissions than the applicable default value would create a strong incentive to switch to sustainable power sources, particularly renewables. While cleaner energy in general can reduce emissions, prioritising renewable electricity ensures a genuine low-carbon transition. Embedding this preference into the CBAM's methodology would send a clear demand signal for renewables in origin countries, driving targeted investment and accelerating the shift away from fossil fuels.



2.3 Bellona's solution: How to account for indirect emissions

Bellona proposes a solution whereby default values would be the primary element that EU importers would use to report on the indirect emissions embedded in the imported CBAM good. If importers can prove lower emissions, this should only be possible via renewable direct connections or PPAs with strict criteria. By doing so, the CBAM methodology for accounting indirect emissions would respect the Mechanism's dual objective: protect EU industries from the risk of carbon leakage and encourage cleaner production in origin countries.

Firstly, **default values based on the emission factor of the country of origin's electricity grid should be the primary method for European importers to declare indirect emissions of the imported CBAM good(s).** These values should be updated periodically to keep track of progress (or regression) of the origin country in power-related emissions.

Secondly, **only if the importer can demonstrate that the indirect emissions of the imported CBAM good(s) are lower than the default value, reporting actual values should be allowed.** This should be demonstrated either via direct connection between the renewable energy producer and the installation, or via PPAs with stringent criteria. **This can be done by using the methodology for Renewable Fuels of Non-Biological Origin (RFNBOs)**²⁸, established in the Delegated Regulation establishing a Union methodology for RFNBOs (RFNBOs DA). In particular the following criteria should be considered:

- **Temporal Correlation:** PPAs must show that the electricity used by the producer is matched in time with renewable generation. Hourly matching should be the default goal. Like the RFNBO rules, set a short, clearly dated transition from monthly to hourly (e.g., begin with monthly for a brief start-up phase, then switch to hourly by a fixed date), while pushing projects to adopt hourly as soon as feasible.
- **Geographical Correlation:** Renewable electricity should come from the same bidding zone as the CBAM good production plant. It can also come from a connected neighboring zone if prices show power could flow that way at that time, or from a connected offshore zone.
- **Additionality:** Producers should prove that the renewable electricity used under PPAs originates from capacity built after a specific cut-off date. This ensures that PPAs lead to new renewable deployment rather than diverting existing clean electricity from other consumers or regions.

In addition, to ensure environmental integrity and avoid circumvention or double counting of renewable attributes, CBAM should clarify additional safeguards already foreseen in the CBAM framework such as:

- Third-party verification and certification.
- Transparency and accountability mechanisms that can also be applied or adapted by origin countries.

The criteria and provisions presented here have already been brought forward in other EU legislations in the RFNBOs DA which already applies to hydrogen, a CBAM-covered sector. **Using this already-approved methodology for CBAM would avoid reinventing the wheel, streamline implementation, and strengthen the regulation's overall consistency and robustness.**

28 European Parliament, & Council of the European Union. (2023). *Regulation (EU) 2023/1184 of the European Parliament and of the Council of 14 June 2023 on the making available on the Union market as well as export from the Union of certain commodities and products associated with deforestation and forest degradation*

RECOMMENDATIONS

A methodology to protect the EU industry and promote zero-emission energy abroad

Indirect emissions should be accounted for in a way that protects EU producers from the risk of carbon leakage, while encouraging greater uptake of renewable electricity by producers outside of the EU. For this to happen, **Bellona Europa recommends the European Commission to modify the CBAM methodology to calculate indirect emissions by:**

1 Country of origin's grid average

Using default values based on the emission factor of the country of origin's electricity grid as the primary method for European importers to declare indirect emissions of the imported CBAM good(s). Updating the values on a yearly basis.

2 Actual values based on direct connection and PPAs with strict conditions

Allowing importers to prove that the imported CBAM good has lower indirect emissions compared to the default values. This should be made possible through two methods:

- 1) Providing evidence of a **physical, grid-independent connection between the electricity production site and the producer** of the CBAM good, together with proof that the electricity supplied through this **link is renewable**
- 2) Providing evidence of a **PPA** between a renewable electricity production site and the producer of the CBAM good. The PPA must comply with the following criteria and conditions as regulated by the RFNBOs DA:
 - **Temporal Correlation**
 - **Geographical Correlation**
 - **Additionality**

3 Verification and transparency

Ensuring that the solidity of the CBAM methodology through verification systems and transparency mechanism as already foreseen by the CBAM Regulation. In particular:

- Third-party verification and certification
- Transparency and accountability mechanisms



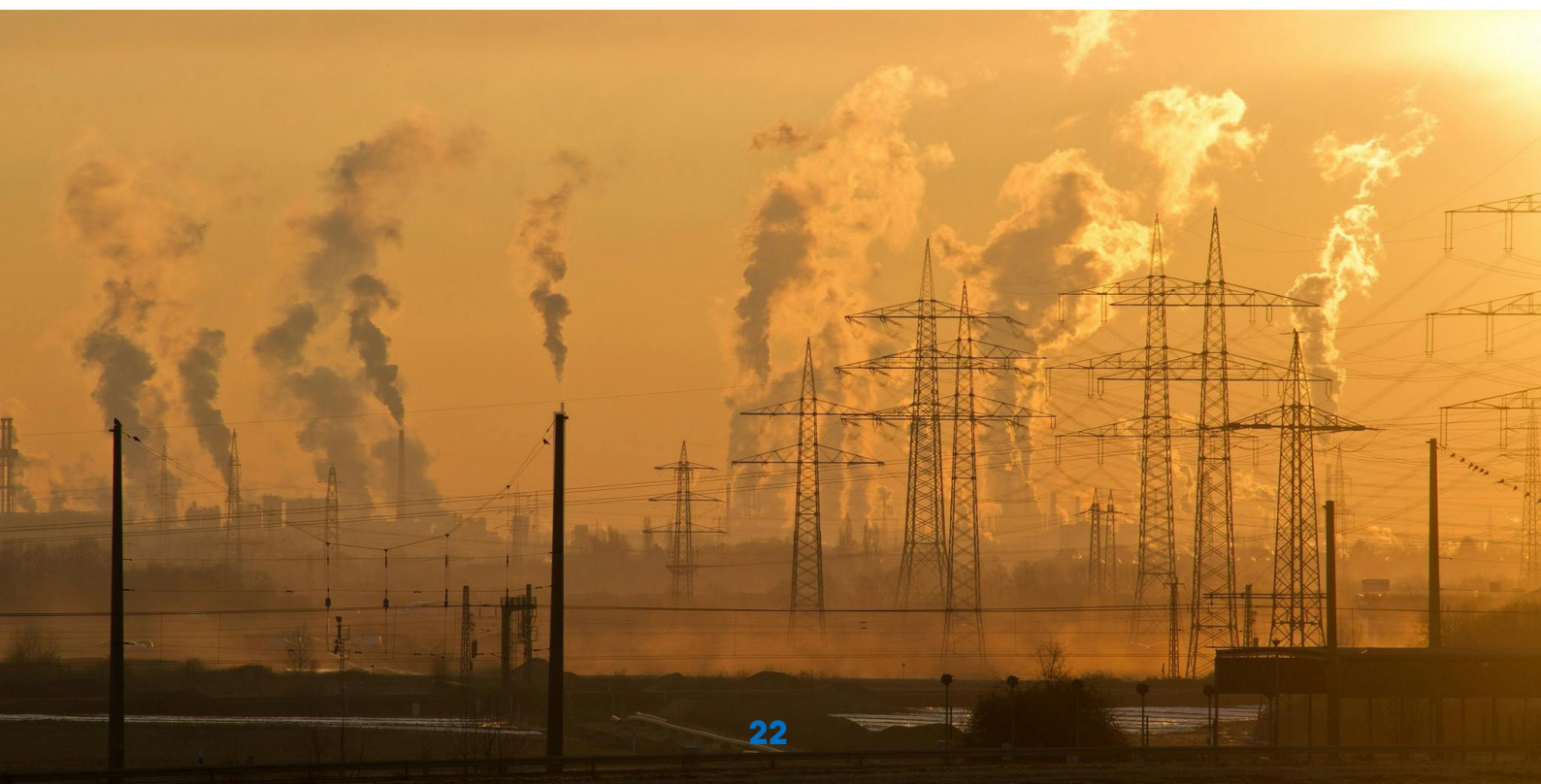
Conclusion

The Carbon Border Adjustment Mechanism (CBAM) has the potential to become a cornerstone of the EU's climate and industrial strategy, ensuring that European decarbonisation efforts are not undermined by carbon leakage while simultaneously driving global emissions reductions. However, its credibility and effectiveness will be compromised unless indirect emissions are fully and properly integrated into its scope.

This paper has identified two main obstacles preventing such integration: the flawed design of the Indirect Cost Compensation (ICC) scheme and the inadequacy of the current CBAM methodology for calculating indirect emissions. Reforming ICC to ensure that compensation is limited to the spillover carbon cost embedded in non-emitting electricity. This would still protect EU industries while exposing emitting electricity to carbon price, allowing CBAM to function as a true carbon leakage measure. Similarly, adopting a robust and transparent methodology for indirect emissions would safeguard environmental integrity, ensure fair competition, and create a clear demand signal for clean energy in origin countries. This can be done by basing default values on country-of-origin grid averages, complemented by actual values only where strict conditions for renewables are met.

Taken together, these reforms would not only strengthen CBAM as an instrument of climate policy but also reinforce its role as an enabler of Europe's industrial transition. A CBAM that accounts for indirect emissions across all sectors is essential for aligning climate ambition with industrial competitiveness, for levelling the playing field between EU producers and third-country exporters, and for maximising the EU's leverage in driving the global shift towards low-carbon production.

With CBAM fully entering into force in 2026, the time to act is now. Addressing the shortcomings identified in this paper will ensure that CBAM lives up to its dual promise: protecting European industry from unfair competition while catalysing a just and effective global decarbonisation pathway.





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