

A proposal for the design of an European Carbon Border Adjustment Mechanism ("CBAM")

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Carbon Border Adjustment Mechanism:
greening the EU trade?

Bruegel event, February 4th 2021



Introduction

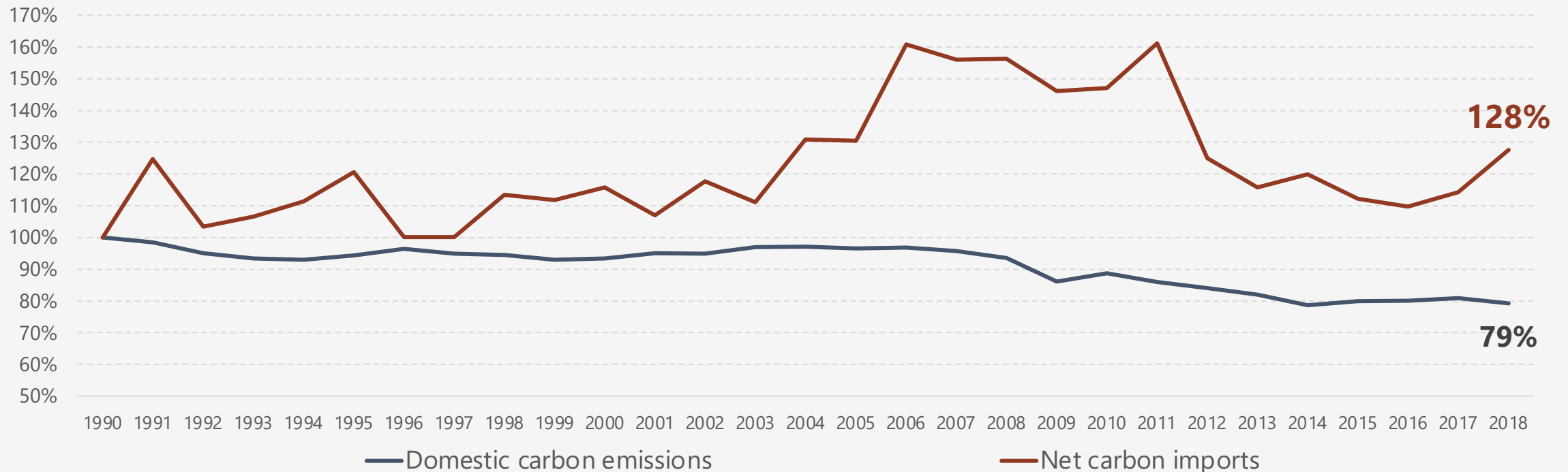
- **Aim of the talk: discuss and explain the European Parliament opinions on the CBAM**, in particular the one approved by the ECON Committee on December 10th, and the one being voted today by the ENVI Committee, the leading committee for this file.
- **The presentation will cover the following points:**
 - Why do we need a CBAM?
 - Key proposed design elements of the CBAM
 - Next legislative steps in relation to the CBAM
 - Discussion with panellist and Q&A

Why do we need a CBAM?

In the absence of a global price for carbon, the EU's unilateral climate action pricing carbon emissions, even if it has led to a reduction of EU GDG emissions, has been offset by increasing imports from countries that have a more carbon-intensive production process ("carbon leakage")

Greenhouse gas (GHG) emissions and net imports evolution

Base 100 in 1990



Source: Our World in Data, Peters et al. (2012) and the Global Carbon Project (2018), author analysis

Why do we need a CBAM? (II)

By ensuring that the price of imports reflects their carbon content, the CBAM will reduce the risk of carbon leakage, while providing incentives to our trade partners to start pricing carbon

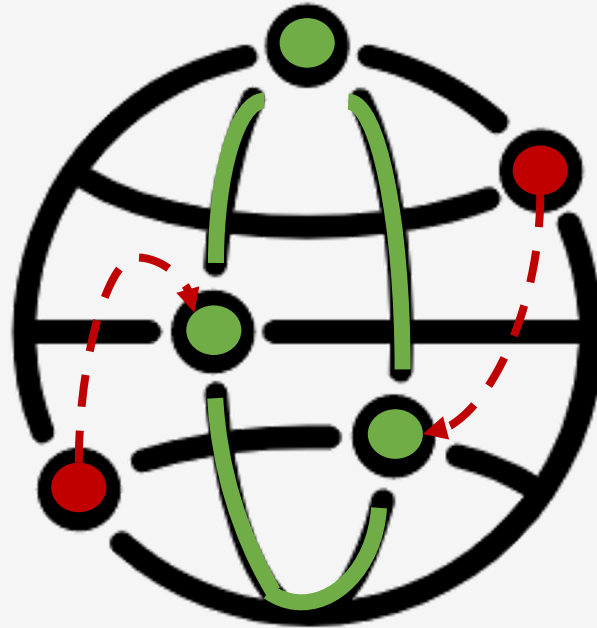
- **In the absence of a CBAM, producers from other regions of the world that are not subject to a carbon price will be increasingly advantaged relative to EU producers. This situation is not sustainable:**
 - ✗ On the one hand, the planet does not improve, because the Earth does not care where the CO₂ is generated
 - ✗ On the other, it creates perverse incentives to move production outside of Europe (where regulation of carbon intensive production is less ambitious or inexistant, hence potentially leading to even more emissions)
- **The CBAM would help assure that the EU's green objectives are not undermined by the relocation of production or by increased imports from countries with less ambitious climate policies**
 - ✓ The CBAM is required to support the EU's unilateral decarbonisation efforts
 - ✓ It will also create the incentives to our trading partners to start pricing carbon and/or shift towards greener energy sources
 - ✓ Hence helping reduce global greenhouse gas emissions

Towards a Climate Club

As proposed by William Nordhaus during his Nobel prize speech, the development of climate clubs can help solve the free riding problem. The CBAM is the key element to develop such “climate clubs”

● Members of the Climate Club

- ✓ Have **carbon pricing schemes**
- ✓ **Commit to carbon neutrality** in the medium term
- ✓ **Invest in climate abatement**



● Non members

- ✓ Are penalized through “**penalty tariffs**” on export to the club region
- ✓ Such “**penalty tariffs**” are a **CBAM** (—▶)

➤ Through the introduction of these properly designed CBAM, one can envision an end state in which the number of members of such club is sufficiently large, and the tariffs sufficiently high, that all have an incentive to contribute to carbon abatement and “join the club”

Key proposed design elements of the CBAM

- **The European Parliament position concerning the CBAM focuses on the following design parameters:**
 - ✓ The **aim** of the mechanism
 - ✓ The **policy instrument** that is best suited
 - ✓ The **scope / coverage** the CBAM should have
 - ✓ The **assessment method** of the carbon content of imports based on feasibility and accuracy considerations
 - ✓ The **articulation with existing decarbonisation measures** at the EU level
 - ✓ The necessary **WTO-compatibility**
- **Let's go through each of these points**

Aim: it needs to have a clear environmental objective

The aim of a carbon adjustment mechanism needs to be environmental (not fiscal, nor competitiveness)

- **The environmental aim is key to comply with World Trade Organization (WTO) rules** and minimize the risk of trade retaliation measures
- **Design elements to take into consideration the environmental aim:**

Mirror the price being charged to EU producers

to ensure **fairness** and **non-discrimination**

Avoid importers pay twice for their carbon content

to **incentivize the development of new carbon pricing schemes in third countries**

Allow importers to demonstrate their real carbon emissions level

to **incentivize decarbonisation investments in third countries**

Policy instrument: it should be based on the EU ETS

Between the three main policy options available, the EU Parliament recommends designing the CBAM as an instrument based on the EU ETS, in order to mirror the carbon costs paid by EU producers

(i) Excise duty/tax on consumption

- ✗ It **would not fully address the risk of carbon leakage**
- ✗ **Technically challenging** given the complexity to trace carbon in global value chains (if design in a similar way as the VAT);
- ✗ **Lack of public and political support;**

(ii) Customs duty/tax on imports

- ✗ **Fails to ensure WTO compatibility** given its fixed nature in relation to the evolving price of the EU ETS;
- ✗ Could be **perceived as a protectionist** measure by trade partners;

(iii) Instrument based on the EU ETS

- ✓ It facilitates WTO-compatibility as a **“mirror” system of the EU ETS**, hence avoiding discrimination between domestic producers and foreign importers;
- ✓ It ensures **automatic price adjustment** at the same level as domestic producers are paying;
- ✓ It **avoids an additional burden on EU producers**, who already face de-carbonization policies through the ETS;
- ✓ It will benefit from **stronger public support.**

Scope: it should cover the same products as the EU ETS

While it might seem intuitive or preferable to “start small”, we believe that this might be a very dangerous position that might backfire in some sectors

- **Potential distortions that might arise if the CBAM does not cover all the same sectors as the EU ETS**
 - ✓ **Distortions between “substitute products” in the domestic market**
 - If only a subset of sectors is covered, this might trigger significant substitution effects and competition distortions between sectors
 - ✓ **Distortions between raw materials and intermediate or end-products:**
 - Might exacerbate the risk of carbon leakage in the production of raw materials

- **The CBAM should therefore cover all the products embedding materials covered by the EU ETS**
 - Although it might prove challenging, we believe there is a feasible way to implement such a broad scope (through the weight of raw materials in imported products)
 - If it were to be too challenging to cover all basic materials covered by the EU ETS as early as 2023, then sectors deemed to be at highest risk of carbon leakage might be prioritised

Assessment method: trade-off between accuracy and feasibility

Obtaining the actual level of carbon emissions for every imported product is unfeasible. This is why a feasible approximation is needed. The proposal is to measure the carbon content of imports using the weight of the raw material embedded in the products and multiplying them by a default carbon intensity values

Carbon content of a product =	
Weight of basic materials	Carbon intensity value per product
<p>Assess the GHG emissions of imported products through the carbon content embedded in the basic materials, excluding from the calculation the emissions related to industrial processes or logistical transportation</p> <ul style="list-style-type: none">✓ Good approximation (more than c.90% of the emissions are embedded in the basic materials)✓ Feasible (only traceable elements are considered)✓ Provides undisputable evidence for the determination of the tax base	<ul style="list-style-type: none">○ Differentiated carbon intensity values (by country)<ul style="list-style-type: none">▪ Better approximation, however, issues about the reliability of the data may arise and higher administrative burden (tracing needs)○ Uniform default values (same for all countries)<ul style="list-style-type: none">▪ Technically and administratively feasible○ In parallel, importers should be allowed to demonstrate if their specific production process is more carbon efficient

Articulation with existing EU ETS – Phase out of free allowances

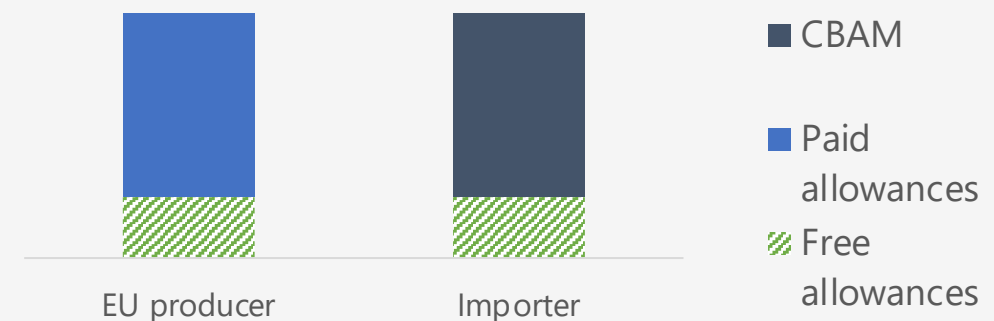
The implementation of the CBAM offers, from an environmental and fiscal perspective, the opportunity to abandon the free allocation of allowances. A transition period should be considered for the progressive removal of free allowances

What are “free allowances” ?

- **Free allocation of allowances represent the current mechanism to protect sectors at highest risk of carbon leakage** (sectors with large level of emissions and highly exposed to international trade)
- In practice, the level of free allowances is set by the **level of emissions of the 10% most efficient producers**. Any emissions above this “10% most efficient benchmark” has to be paid at the market price.

The CBAM and free allowances could coexist

CBAM and free allowances could coexist during the transition period without representing double compensation. The level of free allowances would be deducted from the CBAM

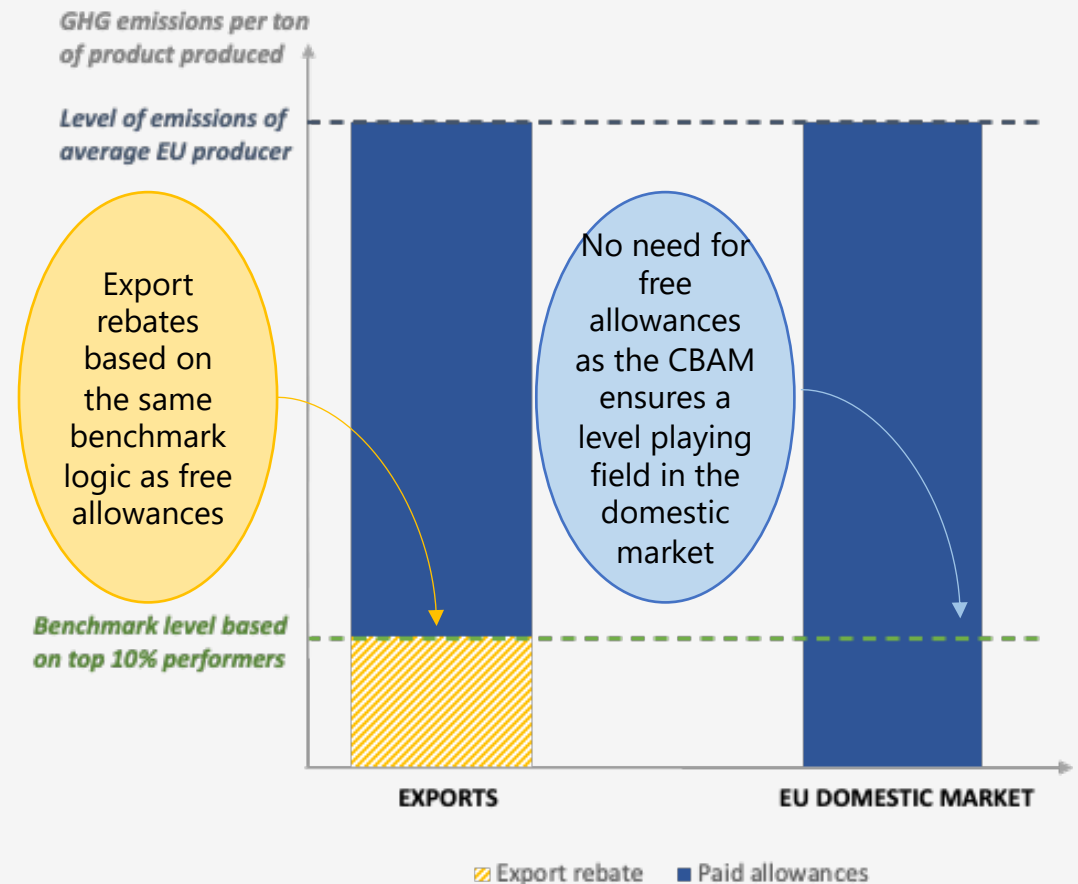


Articulation with existing EU ETS – Introduction of partial export rebates

We propose to couple the removal of free allowances with the introduction of partial export rebates in order to address the risk of carbon leakage in export-oriented sectors, while keeping strong decarbonisation incentives

Rationale for the introduction of partial export rebates

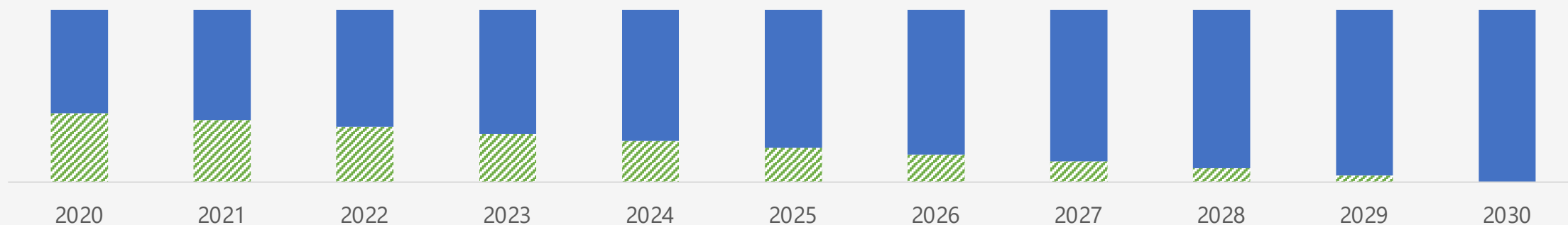
- ✓ **The CBAM ensures a level playing field in the domestic EU market.** However, the position of EU producers will be exacerbated in foreign markets as free allowances are removed
- ✓ **The phase out of free allowances should be accompanied by the introduction of export rebates,** in order to address the risk of carbon leakage in export-oriented sectors



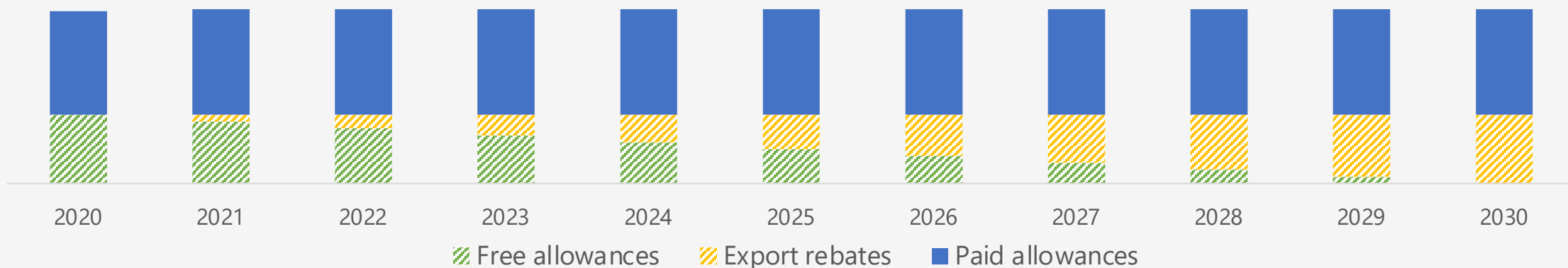
Articulation with existing EU ETS – Transition period

During the transition period free allowances would be phased out and partial export rebates would be “symmetrically” introduced (dates are just for reference – non-binding – just an example)

Domestic EU Market -> progressive phase out of free allowances as CBAM ensures level playing field



EU Exports -> progressive introduction of partial export rebates (up to the current level of free allowances)



WTO compatibility

We believe our proposal complies with the 1994 General Agreement on Tariffs and Trade (“GATT”) and its two main basic principles

1 Non-discrimination between imported and domestic goods (art. III.2 GATT)

- The extension of the EU ETS ensures that the proposed CBAM applies to “like” domestic products;
- Both domestic producers and importers would pay exactly the same carbon price;
- The transition period for ending the allocation of free allowances does not entail a discriminatory treatment, as those free allowances would also be deducted from CBAM;
- Importers have the opportunity to demonstrate the specific carbon content of their imports in order to avoid a discriminatory treatment in the assessment process (Gasoline case, WTO 1996);

2 The Most-Favoured Nation clause (art. I.1 GATT)

- The method to determine the carbon content is the same for all imports (i.e. weight of each basic material in the final product multiplied by a carbon intensity value);
- Allowing importers to deduce the carbon price already paid in their home country is not discriminatory, given that the same conditions do not prevail in third countries.

WTO compatibility (II)

Should some of the proposed design features of the CBAM be challenged, we can resort to Article XX

Art XX: “Nothing in the GATT shall prevent the adoption of measures”:

- b) “necessary to protect human, animal or plant life or health”
- g) “relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption”


Art. XX also requires that measures are not applied in a manner that would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade

- ✓ Importers can prove that they perform better than the default values => incentives to reduce their emissions;
- ✓ Importers do not pay twice for the carbon content of their product (thus, not a disguised protection of EU industries);
- ✓ The proposed design implements the phasing out of free allowances;
- ✓ Export rebates, as designed in this proposal, will help prevent carbon leakage while at the same time provide incentives to EU producers to be more carbon efficient
- ✓ A significant % of the revenues will be devoted to climate measures through the EU budget

3. Next legislative steps in relation to the CBAM



Next legislative steps in relation to the CBAM

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- **February 4th 2021**, the ENVI Committee, the leading committee for this file, will proceed with their Opinion vote
 - **In February / March 2021**, a Plenary vote about the CBAM is expected
 - **Mid-2021**: the Commission is expected to table a specific proposal for a CBAM, taking into account the results of the ongoing impact assessment, and the recommendations of the European Parliament
 - **2023**: expected introduction of the CBAM

Thank you for listening. Time for Q&A



Appendix




Scope


Example of distortions that could erase if only a subset of sectors were to be covered by the CBAM

- We use here the cement sector as an example

Basic materials covered by the EU ETS

Fuels / refined mineral oil	cement / clinker	paper	ammonia
steel	lime	cardboard	hydrogen
iron	glass	acids	synthesis gas
aluminium	ceramics / bricks	chemicals	soda ash
Metals (ferrous and non-ferrous)	pulp	Mineral wool	sodium bicarbonate
Coke	fertilizers	Carbon black	Metal ore

 Usually proposed sectors to be covered by the CBAM as a starting point (by those defending a "start small" approach)

 Cement substitutes materials

- Through the cement example we see that **if we were only to cover a subset of basic materials covered by the EU ETS** (the ones highlighted in orange here), there would be a **strong risk of generating distortions and substitution effects** among sectors within the EU domestic market (with potentially irreversible damage)

Source: 1) Annex I of Directive 2003/87/EC: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1598978186477&uri=CELEX:02003L0087-20200101>

2) <https://www.greenspec.co.uk/building-design/concrete-cement-substitutes/>; <https://www.constrofacilitator.com/alternative-cement-substitutes-materials/>

Assessment method

Application example: imported car

1. Determining the tax base

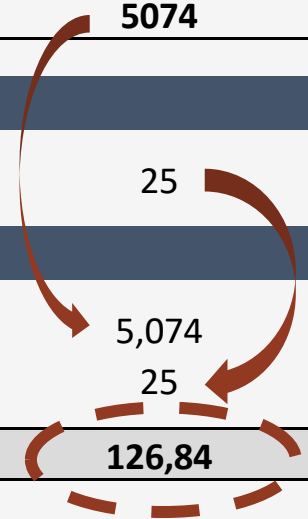
Material	Mass	GHG intensity	GHG content
<i>Unit</i>	<i>Kg</i>	<i>kg CO2 equivalent / kg of product</i>	<i>kg CO2 equivalent</i>
Steel	1000	3,01	3010
Glass	50	0,91	46
Aluminum	150	9,22	1383
Polyethylene	250	2,54	635
Total	1450		5074

2. "Taking" the tax price

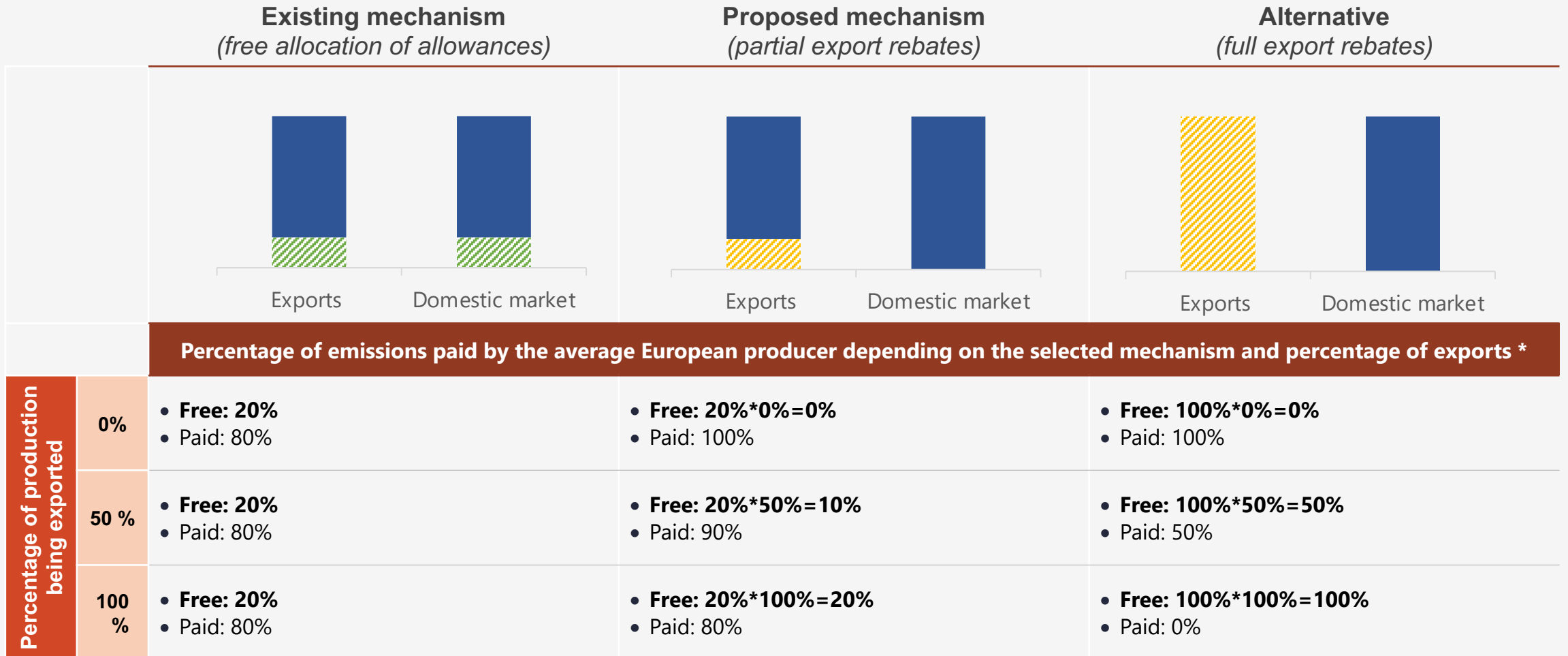
EU ETS market price	<i>in € / tonne CO2 equivalent</i>	25
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3. Total CBAM price for the car

Total CO2 equivalent emissions	<i>tonnes</i>	5,074
Price per tonne	<i>€ / tonne CO2 equivalent</i>	25
Total price	€	126,84



Articulation with existing EU ETS – focus on export rebates



Note: *assuming that the benchmark level based on top 10% performers represents 20% of the emissions level of the "EU average producer"