



POLICY BRIEF CARBON BORDER ADJUSTMENT MECHANISM (10/2020)

EU carbon border adjustment - opportunity for climate protection and competition

In order to achieve the climate targets, a carbon price is necessary which reflects the true costs of emissions. Concerns have been raised that companies from Germany and Europe could shift production to regions where environmental protection standards and costs are lower. A border adjustment mechanism, which imposes a carbon price on imported goods, could remove this hurdle and contribute to an effective pricing of emissions. This policy brief shows how such a mechanism can be implemented in practice and which issues play a key role.

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1 Why a carbon border adjustment mechanism is needed

Pricing of emissions is a key component in achieving climate objectives. It can be used to achieve three key objectives:

- The climate costs of emissions can be internalised; prices thus represent the real costs of a good;
- Sustainably produced goods, which are often more expensive, will become more competitive. This creates incentives for consumers to choose less climate-damaging alternatives;
- Incentives to transform production in order to reduce carbon costs and produce more sustainable goods.

But these objectives will only be achieved if the carbon price both in the EU emissions trading system and Germany's national emission trading system (from 2021) is not in the low price range as it is now. However, there are concerns that a higher carbon price could lead to a shift of production, especially of energy-intensive goods, to regions where environmental standards and production costs are low (carbon leakage). These concerns have so far also legitimised the exemptions from environmental taxes and charges, particularly for the most climate-damaging companies. As a result, on the one hand there are too few incentives for climate protection measures in these sectors, and on the other hand the carbon price signal does not reach end consumers such as private households, retailers or service sectors.

In an "optimal" market economy, the costs of goods for climate protection would be fully priced worldwide. In the near future, however, global internalisation of environmental costs is unlikely to be feasible, which is why "second-best" solutions must be developed. Only if the EU and

its Member States take an ambitious approach it can expect and demand more commitment from other countries. Up to now, the EU and its Member States have given priority to the "third-best" solution "exceptions for companies", for example through free allocation of carbon certificates or relief from taxes and levies on energy and electricity prices. **This means that neither imported carbon emissions from products nor large parts of the EU's industrial emissions are actually subject to a carbon price.**

EU border adjustment is an alternative second-best solution which is more costly to implement but can provide a more effective carbon price signal. In the case of climate-damaging products, it should help to ensure equal treatment of EU and non-EU products in order to protect against carbon leakage. In this way, it will enable higher carbon prices and, as a consequence, incentives for sustainable production and consumption. These effects would potentially be effective beyond the EU borders if non-European producers were given incentives for efficiency measures in line with their share of exports to Europe.

Border adjustment is primarily a mechanism to protect against carbon leakage and does not automatically lead to higher carbon prices. Additional instruments are therefore needed to improve the economics of more ambitious climate protection investments more quickly and effectively. For example, Carbon Contracts for Difference (CCfD) are a possible solution, which can close the gap between the carbon price and higher carbon abatement costs (DIW 2019; carbon Abgabe e.V. 2020).

2 Requirements for border adjustment

A key factor in the design of border adjustment is that it must comply with the rules of the World Trade Organisation. It must be ensured that European products will not have a better position than imported goods. Implementing this is a challenge and is often cited as a central obstacle to the introduction of border adjustment (Mehling et al. 2019). Moreover, border adjustment should be designed in such a way that climate-friendly, innovative and energy-saving production processes are rewarded.

Finally, the revenues from border adjustment should be used to push the transformation towards a climate-neutral economy both in the EU and globally.

Furthermore, the administrative design must be practicable, both for the implementing and controlling authorities and for importers and exporters.

3 Policy design of a carbon border adjustment mechanism

There are several possible alternatives for the implementation of border adjustment. The European Commission has already outlined proposals and is currently (as of October 2020) conducting a public consultation on this. The most important questions regarding the design of the mechanism are presented in the following section:

3.1 Which products to include?

A first question is which products or product groups should be subject to border adjustment. Here it makes sense to concentrate first on those products which generate high emissions in production, are internationally comparable and relatively "homogeneous" and are traded across European borders. Two possibilities are conceivable:

- Inclusion of basic materials such as cement, iron and steel, paper and cardboard, aluminium and the petrochemical and chemical industries. These are already responsible for around 25 percent of global carbon emissions (DIW 2020).
- Inclusion of both raw materials and processed products containing these raw materials (e.g. car parts containing steel).

The second option would be better from a climate policy point of view and would also reduce carbon leakage risks, but would lead to a higher bureaucratic burden: it would be necessary to provide a precise breakdown of how much steel is contained in a car, for example. In times of digitisation, it is not impossible but costly to record and check this information. Therefore, (initially) **the inclusion of raw materials in border adjustment seems to be the more practicable and realistic solution.**

Nonetheless, in order to enable higher carbon prices in the future, the options for a wider scope including processed products should be examined.

3.2 At what level should border adjustment take place? Consumption vs. production/import

A border adjustment can be applied on the production or on the consumer side:

1. In the case of a carbon tax as a **consumption tax or product tax**, the carbon price is levied at the end of the value chain when a product (e.g. a tonne of steel) is sold to the final customer. It does not matter whether the steel was produced in Germany or China. The "border adjustment" does not actually take place "at the EU border", but is levied on the consumer, similar to the VAT or excise duty on alcohol or energy

sources. This also **reduces the risk of conflicts with WTO law** (SWP 2020).

The tax levied is based on a standard value (benchmark) for a specific product (e.g. a tonne of steel) and is independent of the place or process of production. The advantage of this is that it does not require a **time-consuming verification of the actual carbon emissions or carbon footprint** (especially for imported goods). Nonetheless, it would still enable those who believe that their product is much "better" than the benchmark to prove this individually.

The **free allocation of carbon allowances in the EU would, however, remain with this model**, as otherwise European products would pay the carbon price twice: once in production (EU ETS), and once in consumption. Thus, the consumption levy does not give producers (e.g. of steel) any additional incentives to become more climate-friendly – but the consumption levy ensures that the price signal reaches the consumer. This has so far been largely prevented by free certificates. The incentives in production must (continue to) be achieved through the free allocation of allowances based on production volumes and product benchmarks (so-called "dynamic allocation", see DIW 2020 p.5).

2. Price incentives are greater if **border adjustment is applied at producer level**. Here, the carbon price is levied on producers within the EU (through the EU ETS or a tax) and on imports of the corresponding products as a tax or duty. At the same time, carbon costs for exported goods are reimbursed. Options are a "symmetrical border adjustment" (levying and reimbursement for exports and imports) or the inclusion of imported goods in the EU ETS.

The challenge in this model is the **administrative effort** to organise revenue and reimbursement and to determine the carbon footprint of each imported product: Renewable energies and efficiently produced imported goods would have to be treated differently from fossil fuels or very inefficiently produced imports – a monitoring, reporting and certification system would have to be established worldwide. There is also the risk of resource shuffling: producers abroad could declare their "green" electricity or recycled materials for EU goods, but continue to use fossil fuels for the rest of their production (DIW 2020).

To simplify matters, the use of (fall-back) product benchmarks would also be possible in this model.

The free allocation of allowances within the EU can be replaced or phased out, which is a key advantage of this option.

Taking into account the advantages and disadvantages outlined above, a consumption levy seems to be the more practicable solution, at least for the introduction of border adjustment, even if the additional incentives are in the beginning primarily on the consumption side (cf. also recommendation of the DIW and IfW). A central question remains how to deal with processed products (e.g. steel in car doors). In order to include these, either suitable standard values for the carbon content or an elaborate procedure for recording the carbon content is needed.

3.3 Which emissions to include?

Similar to the question of which product groups should be included, there is also an optimal and a pragmatic solution to the question which emissions should be included.

For the climate impact it would be desirable to include all emissions, e.g. in the form of carbon equivalents. For example, the climate impact of methane is much higher than that of carbon dioxide. An extension of the emissions pricing system would also make it possible to include, for example, agricultural goods such as meat and dairy products, which make a very relevant contribution to greenhouse gas emissions and where little greenhouse gas reduction have been achieved to date compared with other sectors, as efficiency measures cannot keep pace with increasing meat and dairy consumption. However, the practical implementation of border adjustment would be made considerably more difficult by such an extension and so, at least for the time being, the pricing of carbon emissions is the most realistic solution. An expansion can be pursued as a medium-term goal.

3.4 Maintaining free allocation?

Currently, free emission allowances are still being allocated in Europe, given that the EU ETS should not endanger the domestic economy and should ensure that European goods remain competitive on the world market. This was one of the reasons for very low EUA prices and thus the limited impact of the ETS in the past. The so-called free allocation should be steadily reduced. Border adjustment would provide an opportunity to accelerate this process. A co-existence of border adjustment and free allocation, as some industry associations (Cembureau 2020) argue, would however give unilateral preference to EU industry. While foreign competitors would have to take into account carbon costs in production, EU producers would have no incentive to produce in a more climate-friendly way.

Only in the consumption levy model a dynamic allocation of free allowances can be maintained to avoid double pricing (cf. section 3.2).

3.5 Exempting exports from ETS costs?

The question of whether the cost of the ETS should be reimbursed for exported goods also needs to be discussed. The argument against this is that producers who cannot meet the EU's climate standards or are not able or willing to invest into more sustainable production processes can in this case export their "more climate-damaging" goods to countries where emissions are not priced.

On the other hand, goods produced more sustainably in the EU, which would not be competitive on the world market if burdened by a carbon price, could continue to be traded globally in this way as long as other countries and regions do not (partially) internalise the climate costs and thus contribute to more sustainable consumption worldwide..

3.6 Which carbon price?

For effective climate protection incentives, a carbon price of at least 100 €/tonne would be desirable, as from this level significant climate-friendly innovations in industrial processes will pay off (BCG & Prognos 2018). From a climate policy perspective, a carbon price of 180 €/tonne of carbon would be necessary in order to fully internalise the costs of climate change in accordance with the polluter-pays principle.

1. However, **if border adjustment is applied to the producer**, such a price level would be difficult to comply with international trade law as long as the ETS is well below these levels – as otherwise intra- and extra-European goods would be treated very differently.
2. In the case of a **consumption levy** on both European and non-European goods, a levy above the ETS price and thus a real internalisation of the costs of climate change would be more feasible.

However, the inclusion of processed products becomes more urgent if the carbon price rises: Otherwise, the imported car door without carbon costs is much cheaper than

the car door whose steel contains additional costs of 100 €/tonne.

Therefore, border adjustment must first be based on the ETS price. As free allocation declines and the supply of allowances becomes scarcer, the ETS price will rise, so that imported products can also be subject to increasing border adjustment.

In the case of products from countries or regions that also price emissions, the carbon price should be offset as far as possible in order to reward the climate protection measure and avoid double taxation. Even those who can prove that a product has been produced in a significantly more sustainable way than the average products in this category should be charged less in order to stimulate innovation and efficiency also beyond the EU borders.

At the same time, this "adjustment of accuracy" requires a higher administrative effort, as ultimately more products have to be checked for their exact origin and production method. It also increases the risk of resource shuffling (see section 3.2)

3.7 Use of revenues?

If carbon pricing is successful, emissions will decrease substantially over time, and thus the revenue from their pricing. Thus, the revenues should not be earmarked for long-term financing. In the case of border adjustment, it is also important to bear in mind international trade law, and therefore revenues from the emission pricing of imported goods should not be used to promote the domestic economy. Instead, the funds should be used to finance climate protection measures in Europe and worldwide (SWP 2020).

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[Link to EU Green Deal](#)

[Link to EU Consultation](#)

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Forum Ökologisch-Soziale Marktwirtschaft, internationally known as Green Budget Germany, is a think tank and an environmental organisation, a network of experts and a policy consultant for a sustainable economic order. The association is a forum in the classical sense – a space for political and economic discussions from which positive impulses for the society emanate.