Carbon Border Adjustment Measure (CBAM)

Non paper on excise duty tax design

17 February 2021

EUROPEAN ALUMINIUM

In view of the European Commission's proposal for a Carbon Boarder Adjustment Mechanism (CBAM), one of the design options currently debated is to have a tax to be applied on products produced by energy-intensive industries (EIIs) under the form of a consumption charges. This would be based on the carbon footprint of the basic materials in the final product. Such tax would be complementary and co-exist with existing carbon leakage protection measures.

This paper complements our response[1] to the European Commission's Public Consultation on CBAM and elaborates on the findings of the European Think Tank on Climate Consumption Charges, DIW Berlin. Its focus is on one of the three design options currently being assessed by the Commission's impact assessment Study[2] in support to the preparation of the legislative proposal. Our understanding is that such charge would be an excise tax based on a reference emission value per ton of the material, irrespective of the specific production process and location. It would apply to Basic materials, also as part of manufactured products.

Following our analysis, we clearly see that even a **CBAM designed in the form of a consumption charge – to be introduced as a co-existing measure with ETS free allocation and ETS indirect costs compensation – will not be an effective measure to reduce global emissions in our sector, protect our industry against carbon leakage nor to stimulate decarbonisation investments in our value chain in Europe. In short, it is not an adequate tool to achieve the main objectives EU policymakers would like it to achieve.** This is because:

- If based on a default value considering carbon emitted during the production process (both direct & indirect emissions) it would likely lead to a higher charge for aluminium compared to other competing materials: **an excise tax will neither take into account that metals like aluminium can be re-used indefinitely without losing quality nor the emission savings during the recycling process and use-phase. An excise tax will only increase the price of products with aluminium, and reduce demand compared to commodities with different Life Cycle Assessment (LCA) on use-phase and recyclability (some commodities can only be re-used few times before ending up as waste).** Such tax would be inadequate and unfair because it would **not be able to distinguish between recycled aluminium and primary aluminium and there would be no incentive for more recycling and a support for the circular economy, which is a more optimal way to drive emission reductions in our value chain.**

- Also, to avoid a distortion of competition between commodities, a consumer charge would need to be applied on all products which have raw materials as components above a certain level. **It will neither be practical to cover all different end-products nor possible to cover all relevant type of commodities like pvc/plastic, paper & pulp, copper, composites, carbon-fibre, etc.**

- Finally, since the excise tax will have the same default value at the border, **there will be no climate effect outside EU and no incentives for non-EU producers to reduce their climate footprint. For EU producers the incentive to reduce the CO2 footprint will continue to be the emission trading system (ETS).**

Therefore, Aluminium should not be included among the pilot sectors for the measure, even if the design will be in the form of a consumption charge.

[1] See here our response to the EC Public Consultation questionnaire on the EU Carbon Border Adjustment Mechanism (CBAM), 27 October 2020.

[2] The three design options were discussed in detail in an interview with European Aluminium organised last 4 November by Ramboll, DIW and Umweltbundesamt, in the context of the impact assessment "Study on the possibility to set up a Carbon Border Adjustment Mechanism on selected sectors" by the European Commission, DG TAXUD

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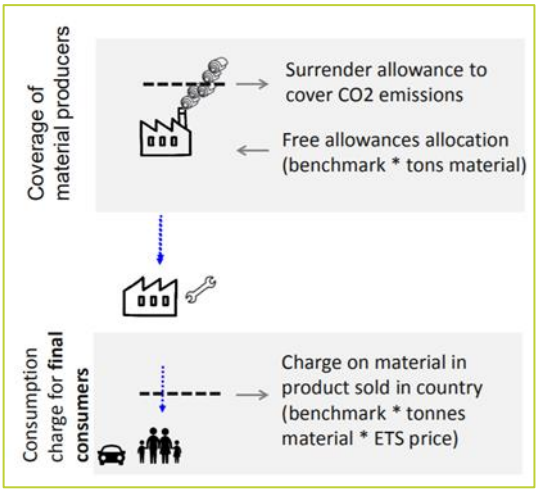
The Climate Consumption Charge



The proposed climate consumption charge on basic materials seeks to replicate the excise duties applied to products like fuels, tobacco, and alcohol with the double objective of:

- Restoring the carbon price signal along the entire supply chain;
- Achieving better materials efficiency use.

In practical terms, **charges would be levied on targeted carbon-intensive materials sold in Europe, irrespective of their type of production or location**. The contribution would be "*fixed per ton of basic material at the product benchmark level used for determining the number of free allowances multiplied by the carbon price of the preceding year. The charge would be imposed at the stage of 'final' consumption*."[3] Given that the charge by itself does not provide carbon leakage protection, DIW proposes to implement this charge as a **complement** to output-based free allocation and indirect costs compensation for producers that are deemed to be at risk of carbon leakage[4].

Impact of a charge on Aluminium

A consumer charge based on a carbon intensity default value **will have the effect of a relative price increase in the European market for the products which contain commodities[5] subject to such charge** and **offer no carbon leakage protection.**

If applied to Aluminium, it will have the following consequences:

- **Failure to factor in Aluminium's circular emission reduction potential and in the use phase:** For a climate consumption to be applied on aluminium, it is essential to integrate the emissions reductions incurred during the use-phase and recycling. So far, it seems that the current design might not be able to consider a Life Cycle Assessment. In its 2020 report[6], DIW proposes the ETS product benchmarks (for direct and indirect emissions) as default values. However, these production benchmarks **completely disregard the emission reductions that aluminium can achieve during the use phase,** which offset the increased emissions during production. In our case, aluminium's lightweight properties (1/3 density compared to steel) enabled cars produced in Europe in 2019 to prevent 50 million tons of unwanted CO2 in vehicle emissions during their lifetime.
- **Lack of climate effect outside the EU:** Since it will be the same default value for domestic and imported products, there will be no climate effect outside EU. The climate incentive inside EU will be a continuation of ETS, in addition to reduced consumption, as a result of higher prices due to the consumer charge. DIW[7] points

[3] DIW, 2020. Border Carbon Adjustment and Alternative Measures for the EU ETS.
[4] Output-based free allocation is slightly different to the current EU ETS free allocation. The EU ETS currently references an average of previous years' production and multiply this by the corresponding benchmark. While the output-based allocation directly multiplies the production in the current year or precedent year with such a benchmark so that the allocation responds to the changes in production volume.
[5] Commodities being considered are non-ferrous metals, steel, cement and plastics.
[6] DIW, 2020. Border Carbon Adjustments and Alternative Measures for the EU ETS
[7] DIW 2019. The impact of implementing a consumption charge on carbon-intensive materials in Europe

out that 25% of the global emissions are linked to the production of basic materials. Thus, decreasing their consumption via charges would be one potential way to reduce their emissions. However, one important fact to contemplate is that over 55% of the global aluminium capacity is located in China, which has a considerable higher carbon footprint than European production, mostly due to the contrasting sources of power generation (China's largely coal based power generation). Europe's primary aluminium carbon footprint is 7 tCO2 versus China with 20 tCO2. **Thus, the imposition of a climate consumption charge would neglect the environmental externalities of importing basic materials from trade partners with a higher carbon footprint**

- **Distortions between competing materials:** A consumption charge based on carbon emitted during the production process (both direct & indirect) will lead to a higher charge for aluminium than other competing materials for example steel. Thus, aluminium products will unfairly turn out to be relatively more expensive, regardless, of the decarbonisation achievements and potentials in the use phase. **This will very much depend on the default values to be used for the design**:
    - **Default value based on a global average:** If the default value were to be based on the global average, the consumption charge applied **in the European market would be increased artificially by more carbon intensive regions for domestic products**. In particular:
        - The carbon footprint of Chinese aluminium production would blow up the average as the Chinese aluminium production is up to 5 times higher than the European one. Based on IAI data, the world averageCO2 emissions for primary aluminium production is 18t CO2/t (direct and indirect emissions). The world average for both primary and recycled aluminium is 11.5 t CO2/t. For steel, a value based on the global average would be 1.85 t CO2/t (covering only direct emissions).
        - If only emissions reductions in the production process are considered, then competing materials would have an innate lower average footprint than auminum. For instance, as already mentioned, 1 tonne of steel would account for 1.85 tCO2 and producing glass (which we compete with in packaging) is 8.4 tCO2/t. Both are considerably lower than the average footprint of producing aluminium. This would proportionately decrease our sector's comparative competitiveness.
    - **Default value based on a European average:** In the case of a value drew on the European emissions intensity:
        - While the competition distortion would be less exacerbated than the global average, it would still create concerning competitive disadvantages for aluminium producers in Europe.
        - Furthermore, its 2020 report[8], DIW proposes the ETS product benchmarks (for directs and indirects) as default values. However, these production benchmarks **do not take into account the emission reductions that aluminium can achieve during its use phase,** which often offset the increased emissions during production. In our case, aluminium's lightweight properties (1/3 density compared to steel) enabled cars produced in Europe in 2019 to prevent 50 million tons of unwanted CO2 in vehicle emissions during their lifetime.

[8] DIW, 2020. Border Carbon Adjustments and Alternative Measures for the EU ETS

With all these design shortcomings in mind, the European aluminium industry cannot support a climate consumption charge.

Looking ahead however, should a life-cycle assessment be worked out covering all aspects of use and recyclability, we do see a potential for a similar mechanism to pass on the carbon cots down the value chain.

However, as previously noted, this would not be a carbon leakage measure but rather an additional measure on top of the existing carbon leakage provisions which today seems to bring more risks than opportunities for European producers and consumers.

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