



# Going beyond default intensities in an EU carbon border adjustment mechanism

EPRG Working Paper 2026

Cambridge Working Paper in Economics 2087

Michael A. Mehling and Robert A. Ritz

As part of its Green Deal, the European Union is preparing a Carbon Border Adjustment Mechanism (CBAM) to address concerns about carbon leakage—uneven climate policies causing production, investment, and emissions to relocate outside the EU. All CBAM design options that are currently under consideration apply a carbon price to products imported from outside the EU. The European Commission has estimated that a CBAM could raise annual revenue of €5-14 billion for the EU. However, implementing a CBAM raises complex technical and administrative challenges. One of the more difficult steps involves determining the carbon intensity of imports, where lack of data as well as procedural and methodological obstacles will likely prompt reliance on default values—for instance, the average carbon intensity of domestic producers in a sector.

In this paper, we propose a CBAM design with a voluntary “individual adjustment mechanism” (IAM) that allows non-EU producers to demonstrate that their *actual* carbon intensity lies below the default value. A CBAM based solely on default intensities runs counter to the economic logic of carbon pricing by distorting the incentives for emissions abatement. We suggest that the use of an IAM offers a superior policy option compared with such a “one size fits all” policy design. Specifically, an IAM captures additional economic benefits of carbon pricing—notably by rewarding the decarbonization efforts of producers outside the EU—and improves the legal prospects of a CBAM. Past case law suggests that it can help a CBAM comply with the free trade rules of the World Trade Organization (WTO). Moreover, the voluntary nature of the IAM also sidesteps obstacles under general international law that would arise from making the disclosure of individual carbon intensities mandatory within the CBAM. Finally, implementing an IAM as part of the CBAM is practically feasible, drawing on the existing procedures for monitoring, reporting and verification of emissions under the EU ETS.

***Economic considerations.*** A CBAM design based solely on a default intensity runs counter to the economic logic of carbon pricing, which is based on polluters being charged according to their *actual* carbon intensities. There are two economic drawbacks. First, relatively clean producers get overcharged compared with high-carbon rivals. Second, it provides no incentives for abatement; the only way for a foreign producer to reduce its carbon costs is to reduce its sales to the EU. This means that key benefits of

Contact  
Publication  
Funding

M. Mehling ([mmehling@mit.edu](mailto:mmehling@mit.edu)), R. Ritz ([r.ritz@jbs.cam.ac.uk](mailto:r.ritz@jbs.cam.ac.uk))  
September 2020  
NLMK (M. Mehling)

carbon pricing are lost, in a way that favours high-carbon companies. Use of an IAM as part of the CBAM design gives companies exporting to the EU the option to demonstrate that their actual carbon intensity lies below the default value. Relatively clean producers are then no longer disadvantaged, and efficient abatement incentives are at least partially restored. A CBAM design with an IAM can be adjusted to take into account possible continuing free allocation for EU producers as well as the increasing use of carbon pricing outside the EU. We suggest that concerns about contractual “resource shuffling” under an IAM for industrial sectors may be significantly less pronounced than for California’s border adjustment on electricity imports.

**Legal considerations.** An IAM improves the prospects that a CBAM will be found in alignment with WTO rules on non-discrimination. It helps ensure greater symmetry in the treatment of domestic and foreign goods by giving foreign producers the option to follow the same process of emissions monitoring, verification and reporting (MRV) that domestic producers follow under the EU ETS. Because it strengthens the environmental effectiveness of the CBAM by providing a stronger incentive for foreign producers to reduce their carbon intensity, the IAM also increases the likelihood that the measure can be justified through recourse to the general exceptions set out in the GATT. Past case law, including a GATT panel decision affirming the design of a border tax adjustment imposed by the United States, supports this assessment. In another case, the WTO Appellate Body determined that use of a statutory or default baseline for foreign gasoline importers was discriminatory as long as domestic refiners were assessed against individual baselines, a practice that should be extended to importers. Finally, by obviating the need for the EU to collect emissions data from foreign entities, the voluntary nature of the IAM lowers the risk of the CBAM being considered a violation of the sovereignty of affected trade partners under general international law.

**Practical considerations.** An IAM can be rendered operational by including a general provision in the legislative text establishing the CBAM, with technical details left to delegated acts adopted by the European Commission. Importers seeking to avail themselves of the IAM would have to furnish information documenting the actual emissions associated with production of the imported goods. Ideally, the modalities of this process will follow those applied to comparable domestic products and avoid imposing an excessive burden on foreign producers. Under the EU ETS, the relevant modalities form part of an annual compliance cycle based on an approved monitoring plan, guidance documents setting out detailed emission measurement and calculation methodologies for different activities, and independent verification of reported emissions by an accredited third party. Importers choosing to exercise the IAM could thus be required to furnish a monitoring plan for each installation producing the imported goods, and include an emissions certificate with each product shipment that applies the same calculation methods as their EU counterparts. Likewise, importers could be required to obtain independent verification by an accredited verifier as a means of ensuring the integrity of reported data. To limit the burden on importers, verification could be allowed by entities accredited in the country from which imported products originate.