BROOKINGS

A voluntary export fee (VEF) on pollution: Recovering foreign tax revenue to support US clean manufacturing

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Brookings Institution

- U.S. businesses risk losing hundreds of millions of dollars annually to the EU's carbon border adjustment mechanism (CBAM) if Congress does not act.
- A U.S. voluntary export fee (VEF) on pollution would recover revenue from the million-ton emissions in the U.S. clean manufacturing sector that is now generating income for other countries' tax authorities.
- A carbon VEF would complement other measures, including the CBAM and the upcoming U.S. climate and industrial strategy.
- The proposal is broadly inclusive of market factors including EU exemptions, allowances for free trade, and participation in solutions for equivalent

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Editor's Note: This paper first ran in a longer version of the U.S. response to EU foreign policies and tax, but updated when part 3 is posted.

Introduction

Increasingly, tariffs and trade policy are becoming popular tools for climate change mitigation. In 2023, the European Union adopted a carbon border adjustment mechanism (CBAM) to prevent carbon leakage from imports, setting a price of carbon globally internationally. By some estimates, this fee of the kind levies fall onto nearly 1 million U.S. tons of emissions annually. Other countries adopting the policy also face major implications for the U.S. and other trading partners. CBAM related compliance costs, as well as EU imports passing the fee through to their suppliers, may affect trade, profits, and supply chains, even if some of the economic burden is ultimately borne by EU importers.

With the EU CBAM still in its infancy, U.S. businesses are considering how to respond. Some have called for the U.S. government to adopt an emission-based tariff, as Canada and the United Kingdom have proposed. Senator Cassidy's (R-LA) proposed, the Foreign Pollution Fee Act of 2025, would establish a foreign pollution fee in U.S. imports. Meanwhile, Senator Whitehouse's (D-RI) Clean Competition Act of 2025 would impose a fee on U.S. and domestic goods and imports alike. While these bills have important differences, the bipartisan support for a foreign pollution tariff in U.S. trade policy underscores how it is signaling that such a policy may have a feasible path in the U.S.

Building on these legislative discussions and the growing need for a coherent U.S. response to foreign border fees, in this two-part series, we propose a voluntary export fee on pollution (VEF) to align with the EU CBAM in part 1 or its relevant laws—we offer another policy blueprint for a foreign pollution tariff. Unlike most domestic proposals, a VEF would be a voluntary fee that would encourage international cooperation on climate policy, encouraging firms to adopt cleaner manufacturing practices rather than simply shift their emissions to other countries.

After a brief overview of the EU CBAM, this article presents a proposal for a voluntary export fee (VEF) on carbon. This novel proposal aims to align the U.S. with the EU CBAM while providing funds for meeting manufacturing needs.

What is the EU CBAM, and how does it work?

Passed by the European Parliament in 2023, the CBAM levies goods imported into the EU based on the carbon emissions from their production. The goal is to encourage clean manufacturing practices—not just in the EU, but around the world. Domestically, EU manufacturers face a carbon tax that ensures they face similar costs as foreign producers. The CBAM also prevents firms from shifting production to countries with lower emissions, a phenomenon known as carbon leakage. It is therefore mainly intended to level the playing field between EU and non-EU producers. It also aims to "export" the anti-non-EU manufacturers that do not face a carbon tax at home, for manufacturers in countries that do tax carbon, their goods may be exempt from CBAM liability, as we discuss below.

The CBAM principle is straightforward: each year, EU companies with cumulative emissions from the embedded emissions in X, imported in Y, exceeding Z, must pay the difference between the carbon they have paid in the EU and the carbon they would have paid if they had produced X in the EU (through lower margins to remain competitive).

After a multi-year transitional period, the CBAM entered its "definitive period" in 2026. Importers must now purchase certificates for imported tax-free items, the CBAM only applies to a few sectors—cement, iron, steel, aluminum, fertilizers, electricity, and hydrogen—and it covers roughly 3% of EU imports. The EU Emissions Trading Scheme (ETS) measures the carbon intensity of these goods, the EU expanded that to all exports the tax to cover all ETS-covered sectors, including aviation, by 2027. The EU has also sought to simplify compliance, exempting firms that bring in less than 50 tons of CBAM-covered goods per year. Despite the exemption, which affects more than 90% of EU importers, the policy would still cover more than 80% of emissions in CBAM sectors.

Internationally, the CBAM has received mixed reactions. Countries including India and Brazil have denoted CBAM as a discriminatory trade barrier, and they have lodged formal complaints at the World Trade Organization (WTO). Meanwhile, some governments, including Australia, Canada, and the U.K. have begun developing carbon border measures of their own. Notably, CBAM coupled in combine with carbon tax—countries who will be worse off under the policy (e.g., because they export carbon-intensive goods to the EU) are generally less likely to support it.

What does the EU CBAM mean for the U.S.?

By international standards, the U.S. has an enviable position when it comes to CBAM exposure. Due in part to cleaner and efficient manufacturing practices, estimates suggest that imports from the U.S. will face roughly 1 million annual tons of CBAM-related fees, or $450 billion, annually—approximately 2.5% of the CBAM's total projected annual revenue.

This implies that the CBAM may raise the competitiveness of some U.S. exports, as it will levy a tax on foreign rivals' carbon-intensive number of certificates they must purchase. One way to accomplish this would be to import cleaner, less carbon intensive goodsnot. Although the U.S. has a carbon-intensive economy, the U.S. emission intensities and exports lower EU statistics in the sectors that matter most for CBAM are about half as emission intensive as other countries' in the U.S. For example, U.S. steel producers are roughly 40% more emission less than half of the average emission intensity of other countries' steel exports to the EU under CBAM. EU companies would import more steel from the U.S. and less from China, where steel production is roughly twice as emission intensive. The U.S. would see a net benefit from the market share for American shipments.

Still, U.S. companies have expressed concerns about the CBAM. Some of these concerns stem from the complexity of the fee. Different reporting, which U.S. producers will provide to EU importers. If these producers fail to provide such data, their goods will be charged at default rates—even CBAM, which may be higher than actual emissions and information—eliminating any potential competitive advantage.

Other concerns relate to uncertainty around how the CBAM will impact U.S. firms' profits. While U.S. production is generally cleaner than competitors' in the EU, it is dirtier than some of the foreign producers—countries and individual firms—have lower emissions profiles, as a result, EU importers may shift toward these producers, which would reduce demand for U.S. exports. Companies expected to cut prices to retain competition and preserve customer relationships. Such a move, however, would negatively affect U.S. producers' bottom line.

This follows the logic of a carbon leakage, which stated, "Most producers will simply absorb the cost of the EU CBAM [...] lowering the price of EU-destined products to account for the EU CBAM charge, in order to remain competitive in the EU market." Although costs are borne by companies in the tariff-imposing country—for example, in an analysis of the Trump administration's 2025 tariffs, Brookings Senior Fellow Mike Wilson and Eli Sarving, U.S. firms paid tariffs to U.S. companies. Ultimately, we don't know the precise effects on U.S. profits until the CBAM is in place and markets have had an opportunity to respond.

The performance of U.S. companies under the EU CBAM also depends on the U.S. government's response to the policy. One notable CBAM feature is the option to deduct import liabilities for foreign carbon taxes. If the U.S. government imposes a carbon tax, the U.S. deducted tax be deducted under emissions fee. EU and discount our CBAM liabilities offering a way out of CBAM exposure. This would be a boon to U.S. companies, which would avoid double-paying while already low emissions. It also relies on American taxpayers for U.S. policymakers. How can we align U.S. policy with the CBAM, supporting American producers while recovering revenue that would otherwise go to the EU?

Novel proposal for how to align US policy with EU's CBAM

The EU CBAM is projected to raise as much as $450 million annually from taxes on American exports. While there is some uncertainty as who will bear the burden of these fees (as discussed above), it will mean that U.S. companies, on the whole, face higher costs under the EU may charge a carbon tax. Recognizing this, the European Commission's Simplification and Decarbonisation Fund to support EU producers—effectively using the CBAM's revenue to bolster the global competitiveness of European firms.

As U.S. policymakers consider how to adapt to the landscape as altered by the EU CBAM, we propose a policy that can recapture revenue from the million tons of emissions in the U.S. clean manufacturing sector, which currently is generating revenue for other countries' tax authorities. Unlike most other proposals, this would be a voluntary fee, which would encourage firms to adopt cleaner practices rather than simply shift their emissions to other countries. Such a voluntary approach would be in keeping with the Trump administration's "America First" approach, ensuring that strong U.S. firms have the resources they need to compete in the global marketplace.

While the U.S. could retain this revenue by implementing a domestic carbon tax, such a policy would be politically difficult. As we noted in the earlier article, carbon pollution taxes on domestic carbon emissions—we are effective but in practice, they have been difficult to implement. Instead, we propose a voluntary export fee on pollution (VEF) to U.S. goods, preventing them from paying these costs abroad. Unlike most domestic proposals, a VEF would be a voluntary fee that would encourage international cooperation on climate policy, encouraging firms to adopt cleaner manufacturing practices rather than simply shift their emissions to other countries.

Revenue from a U.S. foreign pollution fee (see part 3 of this series) could be used to fund the U.S. manufacturing potential exposure for participating firms.

A clean manufacturing fund financed by VEF and foreign pollution tariff revenues could yield benefits beyond participation support. By ensuring that U.S. companies face no net cost from participation, it only reduce foreign CBAM related costs but also strengthen incentives for sustained development of clean manufacturing in the U.S. and complement the policy's potential for advancing both trade and environmental objectives.

EU acceptance

Success of the VEF ultimately hinges on the EU Commission's willingness to accept. If the EU does not allow its importers to deduct payments made to the U.S. under the VEF, U.S. firms' CBAM Exposure would have no reason to pay the VEF, and the clean manufacturing fund would be depleted.

How then can we be sure the EU will accept the VEF? There is no guarantee. As of April 2026, the EU is preparing an implementing act (i.e. large or co-law guidance) specifically, that will seek to establish "clear eligibility criteria" regarding who can deduct CBAM payments made in other countries' climate policies. Although the adoption of the act is expected sometime in early 2026, potentially setting the question of the VEF's validity.

Yet now, with the implementing act not released, we do have some evidence of how the EU may treat the proposed policy. First, EU authorities have explicitly stated that the CBAM is a climate policy, not a revenue policy,"—suggesting that they are unlikely to accept a VEF that is primarily designed to generate revenue. This would recapture. Second, EU Regulation 2023/956 (the regulation establishing the CBAM) notes two broad requirements about CBAM deductions:

1. Importers can deduct "only if the carbon price has been effectively paid in a third country" (Article 9.1)
2. If that country provides "rebates or other form of compensation", that would have resulted in a deduction of that carbon price "importers cannot deduct the rebate amount.

Addressing these requirements in order, would the VEF represent a "carbon price" that has been "effectively paid" in the U.S.? While the VEF is not a traditional carbon price, it will indeed have been "effectively paid" in the U.S. Second, would the VEF be a rebate, the VEF copies the CBAM's policy, which in turn treats the EU ETS, which is a traditional carbon price. Therefore, the VEF effectively operates as a carbon price, and EU policymakers can credibly argue as much in negotiations with EU regulators.

The second point—prohibiting "any rebate or other form of compensation"—could prove another hurdle for the VEF. This provision aims to close a loophole in which exporters to the EU could simply "rebate" the carbon price they faced in the EU, or a carbon tax in the U.S. Such a rebate would be equivalent to a carbon tax, but Country A, law returns a portion of the tax through a rebate or export subsidy. This provision in EU CBAM regulation would, in theory, prevent firms from using a rebate to avoid the carbon tax (cash), accounting for the rebate it received.

Would the VEF's clean manufacturing fund count as such a rebate? EU regulators will demand an answer to this question, as the fund would be a "compensation" for the carbon price. Our interpretation is that this is not the only question U.S. policymakers will face. For example, EU Regulation 2023/956 prohibits discounts for policies that "go beyond what is necessary to ensure the EU CBAM is effective." This phrasing—"would go beyond"—is complicated. Technically, one could argue that U.S. shipments to the EU "would have been VEF-exempt if the U.S. had not implemented a carbon tax." Yet, it would also be the exporter had already deducted participation. Even if a foreign "rebate" is paid, is one inherently implied by the VEF's design?

Questions like these will hopefully be resolved by the forthcoming implementing act. Nevertheless, it underscores the challenge in negotiations with EU regulators. During these negotiations, the U.S. will have to justify and defend the policy—arguing, for example, that the fund is not a rebate, but a tax credit for U.S. firms to offset the collection of loan guarantees and grant competitiveness that, in the EU CBAM, preserve the incentive for U.S. producers to decarbonize. Ultimately, the success of the VEF will depend on the technical interpretation of the CBAM's rules around deductions. Promisingly, as part of the July 2025 EU-U.S. trade agreement, the EU indicated, "To provide the U.S. publication Manufacturing Tax Credit implementation—flexibilities that could potentially come in the form of VEF Annexations."

Legality in the US

As mentioned earlier, the VEF would be optional for exporters—a voluntary fee that would be levied on U.S. manufacturers exporting U.S. tax-exempt export fees. According to Article I, Section 9, Clause 5 of the U.S. Constitution (the "Export Clause"), "No Tax or Duty shall be laid on Articles exported from any State." Although the Supreme Court prohibition on Congress tax authority has traditionally interpreted quite strictly by the courts—the Export Clause makes most export taxes and fees unconstitutional—it almost impossible to implement in the U.S.

Despite this absolute prohibition on export taxes, there are reasons for optimism. First, because the VEF is optional, it may avoid the Export Clause altogether. Since the fee would be voluntary and the program is voluntary, the VEF does not impose a mandatory tax on any exporter, potentially limiting who would have standing to challenge it in court. Beyond the optional nature of the program, it may be charged who would have any incentive to challenge the policy, as the VEF would generally reduce tax payments to the U.S. and the EU.

Take, for example, the Trump administration's recent deal in rare artificial intelligence chip sales to China in case export fee. The policy has nonetheless stood so far because chip makers—the parties who would have standing to sue—benefit from the deal. Similarly, the voluntary nature of the charge implies that U.S. companies would not have standing to challenge the VEF, because they would have to pay the fee voluntarily, and the VEF would not have the incentive to sue and prefers that choose not to pay the fee would likely have no standing.

If the VEF's legal challenges proves insurmountable, one alternative may be to restructure the policy as a user fee. Historically permitted under the Export Clause, user fees are charged for government to exchange for public services. For example, exporters might pay a fee for customs inspection, or for the government to provide a critical port infrastructure. While restructuring would seem to put the VEF at rather legal risk(e), it would also come with downsides. Specifically, it would require the U.S. to provide a tangible government services in benefits received" would complicate compliance with EU's prohibition against rebates and other compensation. Ultimately, the VEF's legality, as well as its effect on price, predicting "revenue to benefit" U.S. companies but not a "rebate or other form of compensation."

Compliance with international trade rules

As with the EU's CBAM, the VEF could also conflict under international trade agreements. The WTO prohibits export restrictions under Article XI, of the General Agreement on Tariffs and Trade (GATT), but it explicitly allows "taxes, levies or other charges" for the "purpose of obtaining revenue, or other domestic purposes, without distinguishing it from those of trade restrictions that have historically triggered disputes.

A more challenging issue arises with respect to the use of revenue. If VEF proceeds are channeled into a domestic clean manufacturing fund, questions may emerge under the WTO's Agreement on Subsidies and Countervailing Measures (ASCM), which prohibits subsidies contingent on export performance. Since firms participation in the fund would be contingent on participation and, exporters would not receive direct reimbursements, distinguishing the policy from a traditional export subsidy.

For any related objections—for example, that the VEF is "export contingent" under the ASCM or that it is an "actionable" subsidy—an argument could be made that it qualifies for the GATT exceptional provisions. Specifically, Article XX of the GATT permits measures inside WTO rules but are "necessary to protect human, animal, or plant life or health, ... or relating to the conservation of exhaustible natural resources." Given the VEF's intended use to support the proposed Temporary Decarbonisation Fund, providing a useful legal case for the VEF given the similarities between these policies.

Political feasibility

Even if the policy complies with U.S. EU, and broader international requirements, an important question remains: Can it secure congressional approval? Given the country's long history of congressional gridlock on climate initiatives, despite bipartisan support, the VEF faces many hurdles. Several reasons, to be optimistic about the VEF's political viability.

First, the VEF is narrower in scope than a national carbon price. Whereas a carbon price would impose compliance costs across the U.S. economy, the VEF is an opt-in policy whose real costs target the EU and long trade revenue to the U.S.

Second, the VEF would be combined with a foreign pollution tariff. Proposals for a foreign pollution tariff have already emerged in Congress, even and broader resistance to carbon pricing. (For more on the proposals, see our forthcoming piece on the U.S. foreign pollution tax.)

Lastly, the VEF offers potential benefits for both major parties. For Democrats, the clean manufacturing fund aligns with the party's platform, which emphasizes investments in climate change mitigation and clean energy innovation. For Republicans, the VEF provides a way to recover revenue that would otherwise accrue to a foreign government, reinforcing a broader "America-first" trade strategy. This bipartisan appeal not only improves the VEF's chances of passage but also enhances the policy's durability across future political cycles.

Conclusion

With the EU's CBAM recently entering full implementation and several other countries moving forward with similar proposals, the time is now for U.S. policymakers to consider the optimal response. While a domestic carbon price would address U.S. losses under the CBAM, political constraints make such a measure unlikely in the near term.

A bipartisan, voluntary carbon fee on CBAM-covered exports could retain revenue that would otherwise accrue to the EU while supporting clean manufacturing initiatives at home. Climate policy and industrial policy need not be at odds. Though questions remain regarding EU acceptance, the United States can use this window to advance its economic and trade priorities while also shaping its role within emerging international carbon policy frameworks.

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