

22-14 EU Carbon Border Adjustment Mechanism Faces Many Challenges

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INTRODUCTION

The European Green Deal commits EU countries to reduce greenhouse gas (GHG) emissions this decade by 55 percent compared with 1990 levels, and to achieve carbon neutrality by 2050. To meet this ambitious commitment, the European Union's "Fit for 55" climate policy package proposed major reforms to the European Emissions Trading System (ETS), which will sharply increase the cost that European firms pay for their GHG emissions. Recognizing that increased carbon prices would put European firms at a disadvantage in competing with imports from countries that produce without incurring the same costs, the European Commission tabled plans on July 14, 2021, to introduce a carbon border adjustment mechanism (CBAM) requiring that the most carbon-intensive EU imports either incur comparable carbon charges as EU firms or pay the equivalent of a carbon-based tariff.¹

The CBAM aims to deter "carbon leakage," which occurs if EU firms shift carbon-intensive production out of Europe to facilities in countries that do not

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¹ See European Commission. 2021. Proposal for a Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism. Brussels: European Commission. https://ec.europa.eu/info/sites/default/files/carbon_border_adjustment_mechanism_0.pdf.

tax GHG emissions (or tax at a low rate) and then export the goods to Europe. European production and output would suffer and global climate efforts to reduce GHG emissions would be undercut. But the CBAM also offers a carrot to those countries willing to follow the European example and strengthen their own national decarbonization policies by exempting their goods from CBAM charges.

In June 2022, the European Parliament approved its own plan for a more expansive and expedited implementation of the CBAM linked to export rebates and rapid phase-outs of free allowances provided to EU firms under the ETS. Negotiations between the Commission, Parliament, and the European Council of Ministers hope to fine-tune the details of a new CBAM so it can be introduced in January 2023. All agree that there should be a three-year transition period during which importers would be required to submit detailed information about the carbon content of their goods and any carbon price paid in a country of origin for emissions embedded in imported products. Starting in January 2026, importers would be required to surrender CBAM certificates.²

European officials hope that imposing the CBAM on imports will help sustain political support for stricter climate policies within Europe by firms that face sharply higher carbon costs. The price of ETS certificates spiked faster than expected in 2022, with auction prices fluctuating between €60 and almost €100 per metric ton.³ (Appendix A summarizes the mechanics of CBAM implementation.)

Over the next decade, the EU CBAM is likely to impose an increasingly heavy burden on trading partners as its coverage expands to a broader range of goods and services, and the price of CBAM certificates escalates in response to the combined impact of growing demand, cutbacks in the supply of certificates, and gradual elimination of free allowances of certificates to domestic EU firms. Under the Commission's proposal, the countries most affected by the CBAM would be China, India, Russia, South Korea, Turkey, Ukraine, and the United Kingdom, largely on account of their steel exports to Europe. That list would also include the United States, if CBAM product coverage is expanded as proposed by the European Parliament. Note, however, that following Russia's invasion of Ukraine in February 2022, many Russian exports to the European Union have been banned, possibly limiting the CBAM's additional impact on Russia. Moreover, Ukraine may take years to recover its production capacity in steel and other products subject to the CBAM.

While EU officials have sought to ensure that the CBAM is consistent with obligations under the World Trade Organization (WTO), key aspects of the CBAM could violate WTO rules and are likely to be contested. For example, the CBAM gives credit for market-based carbon prices paid in foreign countries but not for comparable carbon abatement costs imposed via regulatory measures. Such overt discrimination is likely to provoke WTO litigation, which could take years to play out; meanwhile, new carbon-inspired border restrictions will spread, adding to global trade frictions.⁴

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2 The European Union would judge the accuracy of carbon content declarations for imported goods. If not satisfied, the European Union would simply apply its own carbon content coefficients to the imports.

3 Trading Economics. 2022. "EU Carbon Permits." <https://tradingeconomics.com/commodity/carbon>.

4 See Devarajan, Shantayanan, Delfin S. Go, Sherman Robinson, and Karen Thierfelder. 2022. How Carbon Tariffs and Climate Clubs Can Slow Global Warming. *PIIE Working Paper 22-14*. Washington: Peterson Institute for International Economics.

The International Monetary Fund (IMF) has recommended a global carbon price floor as an alternative to unilateral CBAMs. WTO Director-General Ngozi Okonjo-Iweala advanced a similar plan. However, these and similar proposals, while desirable, are not politically realistic in the near term since some countries regulate carbon emissions but refuse to set carbon prices, while others impose carbon taxes at widely differing rates. To avoid counterproductive trade friction over climate policies, US and EU officials and hopefully others need to agree on general guidelines for carbon abatement policies (both tax and regulatory) that would be sheltered from carbon border measures. Such a pact could be developed during the transition period before EU CBAM levies would be imposed—so that a CBAM moratorium would not delay or discourage needed decarbonization efforts.

EU ETS AND CBAM SYSTEMS

For several decades, the European Union has taken the lead in addressing climate change. In 2020, it raised its 2030 goal for GHG emissions reduction from 40 to 55 percent, relative to 1990 levels, and set a goal for carbon neutrality by 2050. To deliver these commitments, the Commission released ambitious policies, with emphasis on the EU ETS.

The EU ETS has been a core feature of EU climate policies since it was introduced in 2005. It is currently in Phase IV (2021–30), with participation by the EU-27 plus Iceland, Liechtenstein, and Norway.⁵ About 40 percent of the European Union’s GHG emissions are covered by the EU ETS.

Although each successive phase has tightened the EU ETS, its impact has been constrained by generous offsets provided to domestic firms, such as free allocation of allowances to major sectors and compensation for higher electricity costs. In response, the Commission has sought to strengthen the ETS and reduce free allowances. Phase IV changes to the ETS raise fresh concerns about carbon leakage because of escalating ETS prices, which could undercut the competitiveness of European firms unless imports were subject to similar requirements and costs via a CBAM.⁶

After careful review of several policy options, the Commission proposed the CBAM, which requires authorized importers to declare and surrender CBAM certificates corresponding to the emissions embedded in imported goods once a year.⁷ Although the proposed CBAM is established separately from the EU ETS, it is closely linked to the ETS to preserve the CBAM’s effectiveness in deterring carbon leakage. The CBAM is an alternative to free allowances, which are designed to preserve the competitiveness of EU firms. Alongside phasing in the CBAM, the Commission proposed phasing out free allowances under the EU ETS, linearly to zero over a 10-year period from 2026 through 2035. Table 1 summarizes the main features of the proposal.

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5 Phase IV covers emissions from commercial aviation within the European Economic Area, electricity and heat generation, oil refineries, steel works, and the production of iron, aluminum, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, bulk organic chemicals, glyoxal, and nitric, adipic, and glyoxylic acids. See European Commission. “EU Emissions Trading System (EU ETS).” https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets_en.

6 The 291-page proposal, including 44 pages of legal text, spells out key features of the CBAM.

7 See [the inception impact assessment](#) by the European Commission released in July 2020.

Table 1
Key features of the EU carbon border adjustment mechanism (CBAM)

Feature	Description	
Entry into force	January 1, 2023 (transition period for 3 years)	
Covered goods	Imported goods in sectors including iron and steel, aluminum, fertilizers, electricity, and cement (based on combined nomenclature ('CN') codes listed in Annex I of the proposal)	
Declaration	Who	Importer authorized by competent authority designated by each member state
	What	<ul style="list-style-type: none"> Total quantity of each type of goods imported during the calendar year preceding the declaration Total embedded emissions expressed in tons of CO₂e emissions per megawatt-hour of electricity or per ton of each type of goods (to be verified by accredited verifier) Total number of CBAM certificates corresponding to the total embedded emissions to be surrendered
	When	By May 31 of each year
Embedded emissions	Direct emissions released during the production of goods (Goods other than electricity determined based on actual emissions in accordance with the methods set out in Annex III. If data is not available, default value to be used; for electricity, default values to be used as a standard approach. Further detailed rules to be determined by the implementing act)	
Certificate	Definition	A certificate in electronic format corresponding to one ton of embedded emissions in goods
	Sales	Competent authority to sell certificates to authorized declarants
	Price	Average closing prices of EU ETS allowances calculated on a weekly basis
	Surrender	Submit to the competent authority the number of certificates that corresponds to the embedded emissions declared
	Reduction	<ul style="list-style-type: none"> Carbon price paid in the country of origin reduces the number of CBAM certificates to be surrendered Also, a reduction for EU ETS allowances allocated free of charge to like domestic product
Penalty	€100 per each certificate not surrendered	
Exclusion	Third countries or territories fully integrated into or linked to the EU ETS through future agreements	
Transitional period (January 2023 to December 2025)	Submit a report each quarter containing information on total quantity of each type of good, actual total embedded emissions (direct and indirect), carbon price for the embedded emissions in the imported goods incurred in country of origin	

Source: Authors' summary of the [Proposal for Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism](#).

Initial Coverage. Despite the Commission's ultimate objective of broad product coverage, it proposed that the CBAM would initially apply to imported goods in only five sectors that were expected to face significant risks of carbon leakage: cement, electricity (all electrical energy imports), fertilizers, iron and steel, and aluminum, listed in annex I of the proposal.⁸ Natural gas and oil were not included in initial CBAM coverage as they are not covered by ETS, although both are responsible for significant emissions. Their absence probably reflects the fact that European production of fossil fuels is declining and that applying the ETS to growing volumes of energy imports—especially in light of supply shortfalls since the start of Russia's invasion of Ukraine—would amplify energy price shocks.

Aviation and maritime emissions were omitted from the Commission's CBAM plan, despite comprising 2.1 and 1.8 percent of all human-induced CO₂ emissions, respectively.⁹ Their omission is unsurprising, given the CBAM's proposed scope. The CBAM covers two types of emissions: "direct" or "scope 1 emissions" (emissions directly related to the production process of goods over which the producer has direct control) and "indirect" or "scope 2 emissions" (emissions deriving from electricity used during the production of goods). The CBAM does not cover "value chain" or "scope 3 emissions," which are emissions related to the value chain, including emissions from the transportation and distribution of goods. These emissions are very difficult to measure and consequently not included in the Commission's CBAM proposal. Moreover, the inclusion of scope 3 emissions would substantially enlarge trade conflicts with EU trading partners.

Previous attempts to tax aviation emissions in EU airspace have been unsuccessful. The 2008 EU Aviation Directive, which extended the EU ETS to aviation, was met with severe opposition by a "coalition of the unwilling" composed of 23 countries, including Brazil, China, India, Japan, Mexico, Nigeria, Russia, South Korea, and the United States.¹⁰ In a joint statement, those countries listed nine retaliatory actions they might take if the European Union did not withdraw the directive. China and India went so far as to explicitly forbid their carriers from obeying the directive. Faced with such threats, EU officials withdrew the measure for intercontinental flights. Today, only intra-EU flights are covered by the EU ETS. Because the CBAM is meant to prevent carbon leakage, products eligible for CBAM coverage can only be selected among

8 Paragraph 37 on page 22 of the [Commission's proposal](#) reads: "Import of electricity should be included in the scope of this Regulation, as this sector is responsible for 30 per cent of the total GHG emissions in the Union. The enhanced Union climate ambition would increase the gap in carbon costs between electricity production in the Union and abroad. That increase combined with the progress in connecting the Union electricity grid to that of its neighbours would increase the risk of carbon leakage due to increased imports of electricity, a significant part of which is produced by coal-fired power plants." Electricity supplied to EU firms [is subject to the EU ETS](#), as the EU ETS covers CO₂ emissions from all electricity and heat generation within the European Union. Consequently, all electrical energy imports to the European Union are subject to the CBAM, not just sales to households.

9 WRI (World Resources Institute). 2021. "World Greenhouse Gas Emissions: 2018." October 11. <https://www.wri.org/data/world-greenhouse-gas-emissions-2018>.

10 European Parliament. 2020. "Political Assessment of Possible Reactions of EU Main Trading Partners to EU Border Carbon Measures." Briefing (April). Brussels: Policy Department for External Relations, Directorate General for External Policies of the Union. https://www.bruegel.org/sites/default/files/wp-content/uploads/2020/06/EXPO_BRI2020603503_EN.pdf.

sectors currently under the EU ETS. As such, it is reasonable that intercontinental aviation emissions were omitted from the Commission's CBAM proposal. The same logic explains the exclusion of maritime emissions.

Agricultural products and livestock were also excluded from the initial CBAM list, although they too are responsible for large volumes of carbon and methane emissions. Like aviation and maritime emissions, agricultural products and livestock are not covered by the EU ETS and are therefore ineligible for CBAM coverage. However, their exclusion from the EU ETS (and by extension CBAM) largely reflects domestic concerns about potential changes to EU farm policies, as well as reactions from trading partners (such as the United States and Brazil) that export food to Europe and could impose carbon border measures against EU food exports.

When the CBAM takes effect, importers of covered goods must submit a CBAM declaration and surrender CBAM certificates by May 31 of each year to cover emissions embedded in goods imported during the preceding year. The number of CBAM certificates would be reduced to offset both the carbon price paid in the country of origin and free allowances granted to similar products under the ETS. The proposal states that a third country or territory covered by the EU ETS, or its own ETS that is fully linked to the EU ETS by a bilateral agreement, can be exempted from CBAM obligations.¹¹ This provision allows little room for diplomatic negotiation. Alternative carbon emission controls, such as through regulatory measures, are not credited against CBAM obligations.

The European Parliament Weighs In. On June 22, 2022, the European Parliament approved reforms to the EU ETS and Social Climate Fund, as well as a more ambitious CBAM than proposed by the Commission. Negotiations between the Parliament, the Commission, and the Council now are seeking to finalize the details of the CBAM and ETS reforms.

The European Parliament's climate legislation would achieve a higher overall emissions reduction by 2030 than the European Commission's proposal. To accelerate industrial decarbonization under the EU ETS,¹² Parliament called for raising the overall 2030 GHG emissions reduction target from 61 to 63 percent, introducing a bonus-malus-system (designed to reward carbon-efficient installations with additional free allowances and punish carbon-intensive installations by taking away some or even all of their free allowances), and extending the EU ETS to maritime transport. Total emissions from intra-European maritime routes would be covered as of 2024 and 50 percent of emissions from extra-European maritime routes beginning or ending in the European Union would be covered as of 2024 until the end of 2026. As of 2027, 100 percent of emissions from all trips would be covered, with possible exemptions for certain non-EU countries (where coverage could be reduced to 50 percent). In addition, the phase-out of ETS free allowances would occur between 2027 and 2032 (three years earlier than the Commission's proposal) and a separate new

11 The leaked version of the proposal included another condition for exemption: a "country or territory which applies a domestic GHG emission trading system which the Commission has determined to be compatible and equivalent to and as effective as the EU ETS."

12 European Parliament. 2022. "Fit for 55 in 2030: Parliament Wants a More Ambitious Emissions Trading System." Press Release, June 22. <https://www.europarl.europa.eu/news/en/press-room/20220603IPR32158/fit-for-55-in-2030-parliament-wants-a-more-ambitious-emissions-trading-system>.

emissions trading system for commercial road transport and buildings would start on January 1, 2024—one year earlier than the Commission’s proposal. Residential buildings and private transport would be included in the new EU ETS starting in 2029.

For the CBAM, Parliament broadened the mechanism’s scope and accelerated its implementation. In addition to the products covered by the Commission’s initial proposal—cement, electricity, fertilizers, iron and steel, and aluminum—it proposed that the CBAM cover organic chemicals, plastics, hydrogen, ammonia, and indirect emissions (emissions deriving from electricity used during the production of goods). However, inclusion of organic chemicals and plastics would depend on a “Commission assessment of their technical specificities.”¹³

Assuming export rebates are compliant with current WTO obligations (a questionable assumption), Parliament also plans to allocate free allowances to the most efficient EU installations for products exported to countries that lack carbon pricing mechanisms. The level of the partial export rebates would be set using the same benchmark as free allowances: the emissions levels of the 10 percent most efficient producers. Any emissions exceeding this “most efficient” benchmark would be paid for at the ETS market price. Just as the domestic EU market will introduce the CBAM while progressively phasing out free allowances, the EU export market would progressively introduce export rebates. Export rebates are a key point of friction between Parliament and the Commission, as they are not accepted by the Commission and were omitted from its proposal due to concerns about WTO compatibility.

Inter-institutional EU Negotiations. The final details of the EU ETS reforms and CBAM coverage and implementation are currently being negotiated by the Commission, the Parliament, and the Council. Deliberations within Europe have exposed several areas where EU executive and parliamentary bodies differ markedly on key aspects of ETS reforms and CBAM construction and implementation.

The European Council’s general approach is similar to the Commission’s proposal, though crucial questions regarding free allowances, own resources, and export rebates remain open. Intra-EU negotiations will try to bridge the gap between the Commission’s and Parliament’s proposals. At this point, it is unclear how the CBAM proposal will be revised, but several aspects of the Parliament’s measures are unlikely to be acceptable to the Commission or Council.

Points of Friction within the EU. There are five main points of friction between Parliament and the Council over CBAM: scope, timing (especially the phasing out of free allowances), export rebates, own resources, the number of CBAM authorities, and the degree of influence Parliament has over CBAM implementation. For scope, the Council supports maintaining the same five sectors outlined in the Commission’s original proposal—cement, electricity,

13 European Parliament. 2022. “CBAM: Parliament Pushes for Higher Ambition in New Carbon Leakage Instrument.” Press Release, June 22. <https://www.europarl.europa.eu/news/en/press-room/20220603IPR32157/cbam-parliament-pushes-for-higher-ambition-in-new-carbon-leakage-instrument>.

fertilizers, iron and steel, and aluminum.¹⁴ Parliament proposes expanding CBAM coverage beyond the Commission's five sectors to include organic chemicals, hydrogen, polymers, and "indirect emissions" deriving from electricity used either in the production of CBAM-covered goods or upstream products.¹⁵ Of these additional sectors, indirect emissions are the most likely to be included in approved CBAM legislation, as the Council has suggested that indirect emissions "could be included" in CBAM coverage "at the end of the transitional phase."¹⁶

Maritime transport is also likely to be a future target, as Parliament recommends 100 percent EU ETS coverage for intra-European maritime transport as of 2024 and 50 percent EU ETS coverage for extra-European maritime transport beginning or ending in the EU as of 2024, with 100 percent coverage by 2027. Commercial aviation may also be targeted as intra-EU aviation is covered by the EU ETS, but aviation coverage has been opposed by trade partners in the past.

Parliament supports accelerating the phasing-out of free allowances, with reductions to 93 percent in 2027, 84 percent in 2028, 69 percent in 2029, 50 percent in 2030, 25 percent in 2031, and 0 percent in 2032. In March 2022, the Council left the pace of the phase-out of free allowances to parallel ETS reform, refusing to take a position on this point.

Many members of Parliament support coupling the removal of free allowances with the introduction of partial export rebates—in other words, partial refunds on CO₂ costs for exports leaving the European Union.¹⁷ The rebates are meant to address both competitiveness concerns and carbon leakage in export-oriented sectors. However, a partial export rebate is likely to be challenged in the WTO as an export subsidy—a measure that is prohibited under Article 3.1(a) of the WTO's Agreement on Subsidies and Countervailing Measures (ASCM).¹⁸ An export rebate could be seen as "a 'financial contribution' by the European Union in the form of 'government revenue that is otherwise due' (e.g. a carbon tax or cost of carbon allowance) which is 'foregone or not collected' contingent on exporting the product."¹⁹ In the June 2022 compromise deal, Parliament supported the allocation of export rebates to the most efficient installations in

14 Council of the European Union. 2022. "Council Agrees on the Carbon Border Adjustment Mechanism (CBAM)." Press Release, March 15. <https://www.consilium.europa.eu/en/press/press-releases/2022/03/15/carbon-border-adjustment-mechanism-cbam-council-agrees-its-negotiating-mandate/>.

15 Hilf, Juliane, Georg Roderburg, and Ulrich Scholz. 2022. "CBAM—European Parliament's Latest Draft Report—Key Issues at a Glance." Briefing. London: Freshfields Bruckhaus Deringer. <https://www.freshfields.com/en-gb/our-thinking/knowledge/briefing/2022/02/cbam-european-parliaments-latest-draft-report--key-issues-at-a-glance/>.

16 Pons, Genevieve, Isabelle Garzon, and Lea Kauffman. 2022. The Council Adopts a General Approach on the EU CBAM: Europe Jacques Delors Overall Assessment. Brussels: Europe Jacques Delors. <https://www.europejacquesdelors.eu/publications/the-council-adopts-a-general-approach-on-the-eu-cbam>.

17 Garicano, Luis. 2021. "A Proposal for the Design of an European Carbon Border Adjustment Mechanism ('CBAM')." Prepared for the Bruegel Event: Carbon Border Adjustment Mechanism: Greening the EU Trade?, February 4. https://luisgaricano.eu/wp-content/uploads/2021/02/CBAM_LG_presentation.pdf.

18 European Parliament. 2020. "Trade Related Aspects of a Carbon Border Adjustment Mechanism. A Legal Assessment." Briefing. Brussels: Policy Department for External Relations Directorate General for External Policies of the Union. [https://www.europarl.europa.eu/cmsdata/210514/EXPO_BRI\(2020\)603502_EN.pdf](https://www.europarl.europa.eu/cmsdata/210514/EXPO_BRI(2020)603502_EN.pdf).

19 Ibid.

the EU ETS for emissions linked to products exported to non-EU countries that lack carbon pricing mechanisms (dependent on a Commission finding that the export rebates are WTO compliant). The Council is silent on export rebates.²⁰

In the original CBAM proposal, the Commission allocated 75 percent of CBAM revenue to the EU's budget as a new own resource and the remaining 25 percent to the Member States. Parliament and the Council each take a different approach. In the June 2022 compromise deal, Parliament proposes allocating all the revenues generated by the sale of CBAM certificates to the EU budget. Parliament also adds that the European Union must provide the equivalent of the yearly revenues generated by the sale of CBAM certificates to support climate investment, specifically least developed country (LDC) efforts to decarbonize their manufacturing sectors. The Council, on the other hand, has not decided on CBAM revenue, allocating it neither to climate investment, nor to LDCs, nor to the EU budget.

Parliament proposes creating a single CBAM authority for all Member States, while the Council proposes that each Member State establish its own CBAM authority. As a possible compromise, the Council also proposes that a central registry of authorized CBAM declarations should be run by the Commission.

Finally, Parliament rejects the Commission's proposal to adopt several technical elements via "implementing acts," which would not need to be approved by Parliament and the Member States before entering into force. Instead, Parliament proposes that most of these elements be authorized by delegated acts, which do need both Parliament's and Member States' approval. The Council does not support this proposal.

CBAM OPPOSITION AND ADOPTION

Affected European industries do not quietly accept the evolving ETS and CBAM systems. In addition, countries likely to be impacted by CBAM import levies have sharply objected to the Commission's proposed CBAM scheme. On the other hand, several countries are adopting their own border adjustment mechanisms. This section summarizes objections within Europe and from major trading countries, as well as adoptions underway.

European Industry. Opposing the phase-out of free allowances, AEGIS Europe, an industrial alliance, warned that the export markets of heavy industries would be "immediately lost" if the EU CBAM is accompanied by the phase-out of free allowances.²¹ The alliance urged the European Union to maintain free allowances alongside the CBAM during a transition period from 2026–30 (to assess the CBAM's effectiveness), as well as introduce export adjustments alongside the phase-out of free allowances. Eurofer, the European Steel

20 Council of the European Union. 2022. "Draft Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism." Brussels: Council of the European Union. <https://data.consilium.europa.eu/doc/document/ST-7226-2022-INIT/en/pdf>.

21 S&P Global. 2022. "EU Carbon Border Charge Threatens Exports: AEGIS Europe." April 28. <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/042822-eu-carbon-border-charge-threatens-exports-aegis-europe>.

Association, made much the same argument, claiming that an abrupt phase-out of free allowances in favor of an untested CBAM “deliberately risks endangering the viability” of CBAM-affected sectors.²²

In a joint statement issued on February 24, 2022, signatories representing a wide range of EU manufacturing industries (technology and engineering, automobile, home appliances, catering equipment, refrigerators, and HVAC equipment) urged the Commission, Council, and Parliament to assess the CBAM’s impact on the competitiveness of downstream industries in Europe that use CBAM-covered goods in their manufactures, warning that the CBAM could cause “permanent damage to the EU economy and its manufacturing industry.”²³ Russia’s invasion of Ukraine, followed by extensive EU trade sanctions and a sharp rise in energy prices, probably heightens these competitiveness concerns.

China and its BASIC Partners. China strongly opposes the EU CBAM. The way the system has evolved makes it highly unlikely that the Chinese ETS system would be granted safe harbor. In keeping with established practice in answering foreign anti-dumping duties, economic sanctions, and Trump’s tariffs, China would likely retaliate against EU exports. China’s ideological partners, the self-styled BASIC countries (Brazil, South Africa, India, China) are equally opposed but not so likely as China to retaliate. In a statement made at the 30th BASIC Ministerial Meeting on Climate Change held on April 8, 2021, environment ministers from BASIC countries expressed “grave concern regarding the proposal for introducing trade barriers, such as unilateral carbon border adjustment, that are discriminatory and against the principles of Equity and CBDR-RC (Common but Differentiated Responsibilities and Respective Capabilities).”²⁴ More recently, at COP26, the group issued a joint Ministerial Statement, warning that carbon border taxes or any similar measures that result in market distortion “must be avoided.” China and India—both BASIC countries—are among the top 10 countries most affected by the CBAM.

22 Eurofer. 2022. “ENVI Vote Threatens Green Steel Transition and 30,000 Jobs: EP Plenary Needs to Fix It, Warns Eurofer.” Press Release, May 17. <https://www.eurofer.eu/press-releases/envi-vote-threatens-green-steel-transition-and-30000-jobs-ep-plenary-needs-to-fix-it-warns-eurofer/>.

23 ACEA (European Automobile Manufacturers’ Association), APPLiA Europe, CECIMO (European Association of the Machine Tool Industries and related Manufacturing Technologies), CLEPA (European Association of Automotive Suppliers), EFCEM (European Federation of Catering Equipment Manufacturers), EGMF (European Garden Machinery Industry Federation), Eurovent (Industry Association for Indoor Climate, Process Cooling, and Food Cold Chain Technologies), Metal Packaging Europe, Orgalim, SEFA (European Association of Steel Drum Manufacturers), and Wind Europe. 2022. “Joint Statement: ETS And CBAM Proposals Need to Take into Account Downstream Industries.” Brussels: ACEA, APPLiA Europe, CECIMO, CLEPA, EFCEM, EGMF, Eurovent, Metal Packaging Europe, Orgalim, SEFA, and Wind Europe. https://clepa.eu/wp-content/uploads/2022/02/Cbam_Joint_Position.pdf.

24 South African Government. 2021. “Joint Statement issued at the Conclusion of the 30th BASIC Ministerial Meeting on Climate Change Hosted by India on 8th April 2021.” Press Release, April 8. <https://www.gov.za/nr/speeches/joint-statement-issued-conclusion-30th-basic-ministerial-meeting-climate-change-hosted>.

Japan. Japan supports the EU CBAM. This may be due, in part, to estimates that the CBAM's economic impacts on the Japanese economy are minimal. In an interview with *Nikkei Asia* in September 2021, Frans Timmermans, a European Commission executive vice president and the European Commissioner for Climate Action, said that Japan will almost certainly escape the EU CBAM.²⁵

Japan had an emissions trading system—the Voluntary Emissions Trading Scheme (JVETS)—from 2005 to 2012. The system was unsuccessful and was ultimately retired in 2012, as it reduced emissions by only 0.03 percent compared to 1990 levels.²⁶ Following JVETS, Japan introduced a carbon tax—the Tax for Climate Change Mitigation—in October 2012 that remains active today.²⁷ Japan began considering implementing a carbon border tax in February 2021, after Prime Minister Fumio Kishida asked the Ministry of the Environment and the Ministry of Economy, Trade, and Industry (METI) to develop and propose a carbon pricing mechanism that could contribute to economic growth. The Ministry of the Environment resumed discussions at the Subcommittee on Utilization of Carbon Pricing on February 1, 2021, while the METI started a carbon pricing study group in mid-February 2021.²⁸ These discussions are still ongoing.²⁹ On March 25, 2022, METI Minister Hagiuda Koichi met with EU Commissioner Timmermans and “exchanged views on the importance of energy security, initiatives for clean energy transitions, carbon border adjustments, and a climate club.”³⁰ Additionally, on May 2, 2022, Japan proposed a carbon tax on the shipping industry of US\$56 per ton of CO₂ from 2025–30, which would raise more than \$50 billion per year.³¹

While the Japanese government supports the EU CBAM, Japanese industries have approached the policy with caution. In an April 2022 position paper, four Japanese industry associations (including the Japan Iron and Steel Federation and the Japan Business Council in Europe) voiced concerns over the CBAM's compatibility with WTO rules and its consequences for day-to-day business practices.³² Instead of pricing carbon in the CBAM, they recommend a system that measures products' GHG emission intensity, noting that there is not “always a strict correlation between the costs related to a country's climate policy and

25 Bartlett-Imadegawa, Rhyannon. 2021. “EU Climate Head Says Carbon Border Tax Unlikely to Hit Japan.” *Nikkei Asia*, September 23. <https://asia.nikkei.com/Editor-s-Picks/Interview/EU-climate-head-says-carbon-border-tax-unlikely-to-hit-Japan>.

26 Gokhale, Hermangi. 2021. “Japan's Carbon Tax Policy: Limitations and Policy Suggestions.” *Current Research in Environmental Sustainability* 3 (August): 100082. <https://doi.org/10.1016/j.crsust.2021.100082>.

27 World Bank. 2017. “Carbon Pricing Dashboard.” https://carbonpricingdashboard.worldbank.org/map_data.

28 Ibid.

29 Confirmed by First Secretary for Environment Hiroaki Kaneko via email on March 9, 2022.

30 METI (Ministry of Economy, Trade, and Industry). 2022. “Minister Hagiuda Visits France and Belgium.” Press Release, March 25. https://www.meti.go.jp/english/press/2022/0325_002.html.

31 Slodkowski, Antoni, Eri Sugiura, and Harry Dempsey. 2022. “Shipping Heavyweight Japan tables Carbon Tax Proposal for the Industry.” *Financial Times*, May 2. <https://www.ft.com/content/ae5893a1-4a7e-4152-8fb2-65679ebc73c4>.

32 JBCE (Japan Business Council in Europe), JCIA (Japan Chemical Industry Association), JEITA (Japan Electronics and Information Technology Industries Association), and JISF (Japan Iron and Steel Federation). 2022. *Joint Industry Recommendation on the Proposal of Carbon Border Adjustment Mechanism (CBAM)*. Brussels: JBCE; Tokyo: JCIA, JEITA, and JISF. https://www.jbce.org/images/positions/Trade_Policy/Joint_Industry_Recommendation_on_CBAM.pdf.

the GHG emission intensity of the products produced in that country.”³³ The industries further warn that the CBAM needs a thorough impact assessment, including on downstream sectors, before discussing scope expansion to include chemicals and polymers.

South Korea. South Korea opposes the EU CBAM. As the fifth largest iron and steel exporter to the European Union in 2020 (the most affected of the five sectors covered by the CBAM), South Korea will be among the top 10 countries hit hardest by CBAM. Like BASIC countries, South Korea opposed the CBAM before the Commission even released its proposal. On July 6, 2021, eight days before the Commission’s proposal, the head of South Korea’s Office of International Trade and Legal Affairs of the Ministry of Trade, Industry, and Energy, Kim Jung-il, warned that the CBAM must comply with WTO rules without hindering international trade, that countries with emission trading systems or similar policies should not be subject to the CBAM, and that a sufficient international agreement should be reached over CBAM before the bill is implemented.

On July 15, 2021, the day after the Commission’s proposal, the South Korean government hosted emergency talks with the country’s steelmakers, vowing to support CBAM-affected industries “through tax measures, financial help, and research and development efforts that would lead to carbon neutrality,” as well as to “try to get equal treatment with EU countries.”³⁴ During those talks, the Vice Minister of Trade, Industry, and Energy, Park Jin-kyu, warned that the CBAM “shouldn’t be a trade barrier in disguise,” and noted that the South Korean government had “demanded that each country’s effort in carbon neutrality and climate regulation should be sufficiently reflected” in the CBAM.³⁵ The Federation of Korean Industries (FKI), a business lobby group, released a statement that same day, calling the CBAM “a way to increase tariffs” and pressuring the South Korean government to convince the European Union to exclude South Korea from the CBAM, based on the country’s own carbon reduction policies.³⁶

Between July 5, 2021 and November 18, 2021, the Commission received feedback on the CBAM from the Hyundai Motor Group, POSCO, the Korean Ministry of Trade, Industry, and Energy (MOTIE), and the Korea Iron and Steel Association, among other stakeholders. Hyundai called for a complete exemption of Korean products under the CBAM.³⁷ If such an exemption was not possible, Hyundai demanded mutual recognition/equivalence between the Korea ETS and the EU ETS regarding emissions calculations and verification and reporting requirements, and the use of the “emissions intensity” of imports (i.e., the actual emissions embedded in imported goods), not the carbon price paid in Korea, to adjust CBAM certificates. POSCO warned that the CBAM should not constitute

33 Ibid.

34 Okutsu, Akane, and Kim Jaewon. 2021. “South Korea Fears EU Green Plan as China Starts Carbon Trading.” *Nikkei Asia*, July 15. <https://asia.nikkei.com/Spotlight/Environment/Climate-Change/South-Korea-fears-EU-green-plan-as-China-starts-carbon-trading>.

35 Ho-Jeong, Lee. 2021. “EU CBAM Slammed as a Tariff in Disguise.” *Korea JoongAng Daily*, July 15. <https://koreajoongangdaily.joins.com/2021/07/15/business/economy/EU-carbon-CBAM-Korean-steel/20210715175000435.html>.

36 Ibid.

37 European Commission. 2021. “Feedback from: The Hyundai Motor Group (Represented by VVGB Advocaten).” November 17. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-EU-Green-Deal-carbon-border-adjustment-mechanism-/F2751887_en.

“an unnecessary and disguised trade barrier,” must not infringe on key WTO principles, should “sufficiently reflect climate policies and efforts of governments and companies in trading partners including investment in low-carbon technologies,” and should respect the rules stipulated in the United Nations Framework Convention on Climate Change (UNFCCC).³⁸ MOTIE encouraged the European Union to seek multilateral solutions to carbon leakage,³⁹ and the Korea Iron and Steel Association slammed the CBAM as a “mere protectionist and unilateral action which will cause uncertainty in Korea-EU trade and industry and confusion in bilateral trade activities, causing negative impact on the global economy.”⁴⁰

Canada. Canada supports the EU CBAM. In both its 2020 Fall Economic Statement and its 2021 budget, the government indicated that it would “work with like-minded countries to consider how this approach [border carbon adjustments] could fit into a broader strategy to meet climate targets.”⁴¹ Canada has had an emissions trading system since January 1, 2019 and is currently considering its own border carbon adjustments (BCAs).⁴² The first phase of BCA consultations was launched on August 5, 2021, and concluded on February 1, 2022, with the Canadian Department of Finance holding discussions with different provinces and territories, industry associations, and environmental organizations.⁴³ Though BCAs were not included in Canada’s 2022 federal budget (as they were in 2021), the government is likely still considering measures.⁴⁴

Mexico. Mexico has neither officially supported nor opposed the EU CBAM. Mexico has participated in California’s carbon border adjustment mechanism for imports of electricity since the program’s implementation in 2011.⁴⁵ The California CBAM was introduced without opposition from Mexico, likely because the trade volumes targeted by the CBAM are very small: together with Canada, Mexico accounted for less than 0.5 percent of total Californian electricity consumption

38 European Commission. 2021. “Feedback from: POSCO.” November 17. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-EU-Green-Deal-carbon-border-adjustment-mechanism-/F2751876_en.

39 European Commission. 2021. “Feedback from: Ministry of Trade, Industry and Energy.” November 17. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-EU-Green-Deal-carbon-border-adjustment-mechanism-/F2751873_en.

40 European Commission. 2021. “Feedback from: Korea Iron and Steel Association.” November 17. https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12228-EU-Green-Deal-carbon-border-adjustment-mechanism-/F2751872_en.

41 Government of Canada. 2021. “Exploring Border Carbon Adjustments for Canada.” August 5. <https://www.canada.ca/en/department-finance/programs/consultations/2021/border-carbon-adjustments/exploring-border-carbon-adjustments-canada.html>. See also Government of Canada. 2020. *Supporting Canadians and Fighting COVID-19: Fall Economic Statement 2020*. Ottawa: Government of Canada. <https://www.budget.gc.ca/fes-eea/2020/report-rapport/toc-tdm-en.html>; Department of Finance Canada. 2021. *Budget 2021: A Recovery Plan for Jobs, Growth, and Resilience*. Ottawa: Government of Canada. <https://www.budget.gc.ca/2021/home-accueil-en.html>.

42 World Bank. 2017. “Carbon Pricing Dashboard.”

43 Government of Canada. 2021. “Exploring Border Carbon Adjustments for Canada.”

44 Department of Finance Canada. 2022. “Consultation on Border Carbon Adjustments.” February 1. <https://www.canada.ca/en/department-finance/programs/consultations/2021/border-carbon-adjustments.html>. See also Department of Finance Canada. 2022. *Budget 2022: A Plan to Grow Our Economy and Make Life More Affordable*. Ottawa: Government of Canada. <https://budget.gc.ca/2022/home-accueil-en.html>.

45 European Parliament. 2020. “Political Assessment of Possible Reactions of EU Main Trading Partners to EU Border Carbon Measures.”

in 2016. Like Japan, Mexico is unlikely to be heavily targeted by the EU CBAM. Mexico has had a carbon tax since 2014 and launched a pilot emissions trading system on January 1, 2020, covering power, oil, gas, and industrial sectors (which account for roughly 40 percent of Mexico's greenhouse gas emissions).⁴⁶ The three-year Mexican ETS "test program" consists of a two-year pilot phase and an additional transition year.

Turkey. Turkey has neither officially supported nor opposed the EU CBAM. Rather than implement a carbon border tax, Turkey has begun strengthening its climate measures to avoid or mitigate the large costs it will face under the EU CBAM. A study by the European Bank for Reconstruction and Development estimates that Turkish businesses could face additional costs of up to €777 million per year under the CBAM, or €399 million per year if only direct emissions are considered.⁴⁷ In a November 2021 interview with *Politico*, Mehmet Emin Birpinar, Turkey's climate envoy, said that the threat of the EU CBAM helped push the country to ratify the Paris climate accord.⁴⁸ In October 2021, Turkey announced that it would aim to be climate neutral by 2053, and in November 2021, Turkey began working on introducing a carbon price compatible with the EU CBAM.⁴⁹

United States. The CBAM could exacerbate existing trade frictions with the United States already triggered by the EU ETS. On December 7, 2020, the US Commerce Department ruled "to treat certain free allowances under the EU's Emission Trading System as a countervailable subsidy" in the final determinations in Forged Steel Fluid End Blocks from Germany.⁵⁰ Under the EU ETS, most heavily polluting installations (such as petrochemical facilities and steel mills) receive free allocations equating to 44.2 percent of the most efficient installation's emissions. However, some installations in sectors vulnerable to carbon leakage receive free allocations amounting to 100 percent of the most efficient installation's emissions. The countervailable subsidy, the Commerce Department determined, is the difference between the 44.2 percent and 100 percent free allowances: when the European Union permits a higher rate of free allowances to selected enterprises, it is foregoing revenue that is "otherwise due."⁵¹ In other words, the 44.2 percent free allowances allocated to all installations subject to the EU ETS are not subsidies—an arbitrary threshold—but the 100 percent free allowances allocated to the smaller group of polluters vulnerable to carbon

46 World Bank. 2017. "Carbon Pricing Dashboard."

47 Bennett, Vanora. 2021. "Turkish Exporters Could Face Steep Extra Costs under New EU Carbon Rules." European Bank for Reconstruction and Development, July 29. <https://www.ebrd.com/news/2021/turkish-exporters-could-face-steep-extra-costs-under-new-eu-carbon-rules.html>.

48 Weise, Zia. 2021. "EU's Looming Carbon Tax Nudged Turkey toward Paris Climate Accord, Envoy Says." *Politico*, November 6. <https://www.politico.eu/article/eu-carbon-border-adjustment-mechanism-turkey-paris-accord-climate-change/>.

49 Arvell, Akiko. 2021. "The EU's Carbon Border Adjustment Mechanism." *Mitsui & Co. Global Strategic Studies Institute Monthly Report*, December. https://www.mitsui.com/mgssi/en/report/detail/_icsFiles/afieldfile/2022/02/04/2112e_darvell_e.pdf.

50 See US Department of Commerce. 2020. "Issues and Decision Memorandum for the Final Affirmative Determination of the Countervailing Duty Investigation of Forged Steel Fluid End Blocks from the Federal Republic of Germany." C-428-848 Investigation. Washington: US Department of Commerce.

51 Kreier, Jesse. 2020. "Countervailing the EU's Emissions Trading Scheme, Part 2." *International Economic Law and Policy Blog*, December 17. <https://ielp.worldtradelaw.net/2020/12/countervailing-the-eus-emissions-trading-scheme-part-2-.html>.

leakage are. The Commerce Department ruling might help the Commission in its endeavor to accelerate the phase-out of exceptionally generous free allowances and pursue more rapid implementation of the CBAM.

Despite expressing concern over the prospect of an EU CBAM proposal at both the WTO Market Access Committee and the Committee on Trade and Environment in 2020, the United States has neither formally supported nor opposed the EU CBAM since the Commission released its proposal in July 2021.⁵² This is likely because current estimates of the CBAM's economic impact on the United States are very small: US exports impacted by the initial list of CBAM products amount to around \$1 billion, or roughly 0.4 percent of the \$260 billion total US exports to the European Union.⁵³ In June 2022, the United States joined other Group of Seven (G7) countries in supporting work on a climate club that could mitigate concerns about carbon leakage among club participants.

In July 2021, US Senator Chris Coons (D-DE) and Representative Scott Peters (D-CA) introduced legislation to establish a border adjustment measure on US carbon-intensive imports. Like the EU CBAM, the Coons-Peters bill seeks to mitigate concerns about carbon leakage, but it differs from the CBAM in critical aspects. The EU CBAM is closely linked to the EU ETS; the US bill attempts to create a level playing field for US companies that incur regulatory costs in complying with GHG emission limits by levying equivalent fees on imports in trade-exposed sectors.⁵⁴ A revised version of the bill was originally considered by the US House of Representatives as part of the \$3.5 trillion Build Back Better (BBB) budget reconciliation bill, but was later omitted from the scaled-down \$1.75 trillion BBB agenda, and the further scaled down Inflation Reduction Act.⁵⁵ However, the Inflation Reduction Act did restore the power of the Environmental Protection Agency to limit CO₂ emissions and other GHGs as pollutants.⁵⁶

52 WTO (World Trade Organization). 2020. "Minutes of the Committee on Market Access: 8 June 2020." Geneva: Committee on Market Access, WTO. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/MA/M72.pdf&Open=True>. See also WTO. 2021. "Report of the Meeting Held on 16 and 20 November 2020." Geneva: Committee on Trade and Environment, WTO. <https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/CTE/M70.pdf&Open=True>.

53 Bown, Chad P. 2021. "156. Tackling Climate Change with a Carbon Border Adjustment Mechanism," *Trade Talks* (podcast), Peterson Institute for International Economics, July 25. <https://tradetalkspodcast.com/podcast/156-tackling-climate-change-with-a-carbon-border-adjustment-mechanism/>.

54 The covered sectors are industrial facilities that produce products such as iron, steel, cement, aluminum, and any product for which more than half its composition consists of other covered products.

55 See Congress.gov. 2021. "S.2378—117th Congress (2021-2022): The Fair, Affordable, Innovative, and Resilient Transition and Competition Act," July 19. <http://www.congress.gov/>. See also Akin Gump Strauss Hauer & Feld. 2021. "House Democrats Forge ahead with \$550 Billion for Climate in Build Back Better Act: Summary of Climate, Energy and Environment Provisions in the House Budget Reconciliation Package." November 4. <https://www.akingump.com/en/news-insights/house-democrats-forge-ahead-with-dollar550-billion-for-climate-in-build-back-better-act-summary-of-climate-energy-and-environment-provisions-in-the-house-budget-reconciliation-package.html>. And see the Congressional Budget Office score on the Inflation Reduction Act (Committee for a Responsible Federal Budget. 2022. "What's in the Inflation Reduction Act?" *Committee for a Responsible Federal Budget Blog*, September 7. <https://www.crfb.org/blogs/whats-inflation-reduction-act>).

56 In 2022, the US Supreme Court ruled that prior legislation did not confer on the EPA the power to regulate CO₂ or other GHGs (*West Virginia v. Environmental Protection Agency*, No. 20-1530).

According to Reuters, the Coons-Peters bill failed to garner support from the White House because it would increase costs for Americans.⁵⁷ The bill has also raised questions about possible conflicts with WTO rules.⁵⁸

On June 9, 2022, four Democratic senators—Sheldon Whitehouse (RI), Brian Schatz (HI), Martin Heinrich (NM), and Coons—introduced another proposal for a border adjustment mechanism as part of draft legislation called the Clean Competition Act (CCA).⁵⁹ Unlike the Coons-Peters bill, the CCA pairs a border adjustment mechanism with a domestic carbon tax on certain high-emissions goods. Covered industries include fossil fuels, petroleum products, fertilizer, cement, ethanol, iron and steel, pulp and paper, petrochemicals, and aluminum and glass, among others.⁶⁰ In 2026, the scope of covered imports would expand to include finished goods “containing at least 500 pounds of covered energy intensive primary goods,” and in 2028 that threshold would lower to 100 pounds.⁶¹

Starting in 2024, US manufacturers would be taxed for emissions that exceed sector-specific baselines initially set at the industry’s average emissions intensity. Those baselines would decline by 2.5 percentage points annually for a four-year period beginning in 2025 and then by 5 percentage points annually starting in 2029. Importers’ emissions would be determined either by the carbon intensity of the relevant industry in the country of origin or on the carbon intensity of the country’s general economy, depending on data availability. Those determinations, in turn, would be made by the Treasury secretary in coordination with the administrator of the Environmental Protection Agency, the Energy and Commerce secretaries, the US Trade Representative, and the chair and vice chair of the US International Trade Commission. US importers of products from countries with reliable data would have the option to petition the Treasury to assess a charge based on the manufacturer’s emissions levels. Exporters, on the other hand, would receive rebates for taxes paid for covered primary goods that are exported from the United States. The carbon price would start at \$55 per ton in 2024 and increase annually by 5 percent above inflation. Experts have expressed skepticism over such fees in the absence of country-wide emissions charges, such as a carbon tax or ETS. But the inclusion of a domestic carbon tax paired with new carbon border measures sharply reduced the political appeal of the draft bill in the current Congress.

In a July 2021 interview with *Time* magazine, John Kerry, special presidential envoy on climate, emphasized the importance of multilateral efforts to tackle climate change. Kerry noted that “it’s premature to be discussing whether or not

57 Renshaw, Jarrett. 2021. “White House Withholds Support of Democratic Carbon Border Tax.” Reuters, August 20. <https://www.reuters.com/business/sustainable-business/white-house-withholds-support-democratic-carbon-border-tax-2021-08-20/>.

58 Inside U.S. Trade. 2021. “Grassley Criticizes Carbon Border Tax Proposal.” World Trade Online, July 20. <https://insidetrade.com/trade/grassley-criticizes-carbon-border-tax-proposal>.

59 Inside U.S. Trade. 2022. “Democratic Lawmakers Propose Border-Adjusted Carbon Tax on Key Sectors.” World Trade Online, June 9. <https://insidetrade.com/daily-news/democratic-lawmakers-propose-border-adjusted-carbon-tax-key-sectors>.

60 Congress.gov. 2022. “S.4355—117th Congress (2021-2022): Clean Competition Act.” June 7. <http://www.congress.gov/>.

61 Inside U.S. Trade. 2022. “Democratic Lawmakers Propose Border-Adjusted Carbon Tax on Key Sectors.”

you ought to unilaterally go off and do a CBAM.”⁶² The Biden administration has not publicly commented on the Coons-Peters bill, nor has it embraced carbon border adjustments generally. CBAMs and carbon pricing were conspicuously absent from both the president’s proposed fiscal 2023 budget and the Office of the US Trade Representative’s 2022 Trade Policy Agenda and 2021 Annual Report to Congress.⁶³

LOOKING FORWARD

WTO and UN Issues. Whether the CBAM conforms to WTO rules will be debated without resolution while the CBAM is phased in. The Commission claims that the CBAM was designed to comply with the WTO and other international obligations, but many observers are doubtful. Disputes over the CBAM seem inevitable, invoking core WTO provisions, namely Article I (most-favored-nation treatment), Article II (tariff schedules), and Article III (national treatment) of the General Agreement on Tariffs and Trade (GATT).⁶⁴ The CBAM may also conflict with the call under the UNFCCC for “common but differentiated responsibilities and respective capabilities (CBDR-RC).”⁶⁵ A full explanation of CBAM incompatibilities can be found in our November 2021 Policy Brief, “[Can EU Carbon Border Adjustment Measures Propel WTO Climate Talks?](#)”⁶⁶

Major countries immediately affected by the CBAM—China, India, Russia, South Korea, Turkey, Ukraine, and the United Kingdom—will likely contest the policy in the WTO. They may also retaliate against EU exports while litigation drags on. The 10 major countries that are likely to be most affected by the CBAM are also among the largest destinations for EU exports, accounting for almost 60 percent of extra-EU-27 exports of goods. If these countries decide to retaliate, EU exporters of a wide range of goods could face penalty tariffs. This will be true even if the Ukraine war drags on, as Russia will want to blunt WTO acceptance of EU CBAM restrictions that target Russian exports. Though Russia and Ukraine no longer attend meetings when the other is present, they both remain active in the WTO.

62 Warland, Justin. 2021. “John Kerry on Border Carbon Tax: The US Doesn’t Want to Push Others Away.” *Time*, July 26. <https://time.com/6084078/john-kerry-border-carbon-mechanism-cbam/>.

63 Office of Management and Budget. 2022. *Budget of the U.S. Government: Fiscal Year 2023*. Washington: US Government Publishing Office. https://www.whitehouse.gov/wp-content/uploads/2022/03/budget_fy2023.pdf. See also Office of the US Trade Representative. 2022. “USTR Releases 2022 President’s Trade Policy Agenda and 2021 Annual Report.” Press Release, March 1. <https://ustr.gov/about-us/policy-offices/press-office/press-releases/2022/march/ustr-releases-2022-presidents-trade-policy-agenda-and-2021-annual-report>.

64 An extensive body of literature reviews and analyzes the intersection between the CBAM and WTO rules; see, for example, Hufbauer, Gary Clyde, Steve Charnovitz, and Jisun Kim. 2009. *Global Warming and the World Trading System*. Washington: Peterson Institute for International Economics; Bacchus, James. 2021. “Legal Issues with the European Carbon Border Adjustment Mechanism.” Cato Briefing Paper 125. Washington: Cato Institute. <https://www.cato.org/sites/cato.org/files/2021-08/briefing-paper-125.pdf>.

65 United Nations. 1992. *United Nations Framework Convention on Climate Change*. New York: United Nations. https://unfccc.int/files/essential_background/convention/background/application/pdf/convention_text_with_annexes_english_for_posting.pdf.

66 Hufbauer, Gary Clyde, Jisun Kim, and Jeffrey J. Schott. 2021. *Can EU Carbon Border Adjustment Measures Propel WTO Climate Talks?* PIIE Policy Brief 21-23. Washington: Peterson Institute for International Economics. <https://www.piie.com/sites/default/files/documents/pb21-23.pdf>.

Alternatives to CBAM. Two alternative proposals to CBAMs have been offered to address carbon leakage. In a 2021 episode of the Peterson Institute for International Economics' [Trade Winds virtual event series](#), Kristalina Georgieva, managing director of the IMF, suggested a global carbon price floor with graduated pricing to accommodate different levels of development as an alternative to the CBAM.⁶⁷ The IMF proposal seems unlikely to attract support, as setting a carbon price floor would confront major political opposition in the United States and elsewhere while still not resolving the problem of price equivalence of emission allowances and regulatory mandates.

Another idea is the “climate club” suggested by Nobel Laureate William Nordhaus. Under this proposal, a club of countries with similar climate policies would undertake harmonized emissions reductions and set an international carbon price. Nonparticipants would be penalized with uniform percentage tariffs when their products enter club countries.⁶⁸ This proposal requires setting an international carbon price and minimum carbon abatement standards, thus running into similar problems as the IMF proposal. It would be difficult to obtain buy-in by major emitters—notably, Brazil, China, and India—for either approach if the European Union or the United States imposes CBAMs on their exports.

Still, Nordhaus's “climate club” idea (significantly watered down) has recently grown in popularity amongst the G7. At the 2022 World Economic Forum Annual Meeting on May 26, 2022, Federal Chancellor of Germany Olaf Scholz announced that the G7—Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States—intends to make itself “the core of an international climate club which will implement the Paris climate goals at an accelerated pace.”⁶⁹ On June 28, 2022, the group released a two-page “[G7 Statement on Climate Club](#)” outlining the program, saying “We endorse the goals of an open and cooperative international climate club, and will work with partners towards establishing it by the end of 2022.” According to the statement, the club will be “built” on three pillars: “advancing ambitious and transparent climate mitigation policies” to reduce GHG emissions within member states, “transforming industries jointly to accelerate decarbonization,” and promoting a “just energy transition.”⁷⁰

Under the first pillar, club members would “share best practices and work towards a common understanding of assessing ways to compare the effectiveness as well as the economic impacts” of emissions mitigation policies, such as carbon pricing.⁷¹ The United States is the only G7 member without a

67 In June 2021, the IMF released a paper that proposes an international carbon price floor. It would be negotiated by a small number of large emitting countries, with negotiations focusing on the minimum carbon price that each must put on its CO₂ emissions (Parry, Ian, Simon Black, and James Roaf. 2021. “Proposal for an International Carbon Price Floor among Large Emitters.” Staff Climate Note 2021/001. Washington: International Monetary Fund).

68 See Nordhaus, William. 2015. “Climate Clubs: Overcoming Free-Riding in International Climate Policy.” *American Economic Review* 105 (4): 1339-70. <https://www.aeaweb.org/articles?id=10.1257/aer.15000001>.

69 World Economic Forum. 2022. “Special Address at Davos 2022 by Olaf Scholz, Federal Chancellor of Germany, in Full.” May 27. <https://www.weforum.org/agenda/2022/05/olaf-scholz-speech-to-davos-2022-in-full/>.

70 G7 Germany. 2022. “G7 Statement on Climate Club.” June 28. <https://www.g7germany.de/resource/blob/974430/2057926/2a7cd9f10213a481924492942dd660a1/2022-06-28-g7-climate-club-data.pdf>.

71 Ibid.

carbon pricing scheme, though as noted earlier, several carbon pricing bills have been proposed in Congress.⁷² Carbon border adjustment mechanisms enjoy more bipartisan support than carbon pricing,⁷³ though not enough to pass the Senate.⁷⁴ Under the second pillar, club members would “transform” industries by “expanding markets for green industrial products” and by “taking into account the Industrial Decarbonization Agenda” and the “Hydrogen Action Pact.”⁷⁵

Under the final pillar, club members would boost “international ambition through partnerships and cooperation to encourage and facilitate climate action and unlock socio-economic benefits of climate cooperation.”⁷⁶ While the specific requirements and conditions of the club remain uncertain, in essence, the G7’s proposed climate club is a best endeavors club. It is a much softer version of the climate club Nordhaus envisioned, lacking both minimum commitments and border adjustments and failing to set an international carbon price.

Although the IMF and Nordhaus climate club plans are too rigid to bridge the yawning gaps in climate policies, both ideas imply a constructive path for international negotiations. They essentially advocate a mutual recognition agreement (MRA) that sets minimum standards for decarbonization. In so doing, however, they cross a political red line by requiring a common carbon price across countries, which both rich and poor countries find objectionable, for different reasons.

A Better Way. A common carbon price is not needed to advance the outcomes committed in the Paris Agreement. After all, some two-thirds of GHGs result from essentially nontraded activities, such as road transport, electricity generation, and home and office heating. Countries can decisively advance their climate commitments by curbing emissions in these activities, while developing guidelines for carbon abatement policies deemed equivalent for traded sectors that incur compliance costs, whether tax or regulatory. Deemed equivalent policies would be exempted from carbon border measures. Such a pact would require detailed examination of the policies, laws, and regulations that each major emitter is implementing to meet its climate commitments, which would be subject to international monitoring and enforcement. The Organization for Economic Cooperation and Development (OECD) might perform these tasks.

Negotiators would agree that a set of policies in each country, if faithfully implemented and enforced, would be equivalent. Doing so would obviate the need for import restrictions that discriminate against countries that subscribe to the agreement. Exports from smaller developing countries would be spared carbon duties, giving them a modicum of special and differential treatment in setting the pace of their carbon abatement reforms.

Two-thirds of greenhouse gas emissions result from nontraded activities, such as road transport, electricity generation, and home and office heating. Countries can curb emissions in these activities, while developing guidelines for carbon abatement in traded sectors.

72 Citizens’ Climate Lobby. 2021. “Carbon Pricing Bills in Congress.” <https://citizensclimatelobby.org/carbon-pricing-congress/>.

73 Inside U.S. Trade. 2022. “Door Open for Senate Agreement on Carbon Border Policy, Cramer Says.” World Trade Online, May 26. <https://insidetrade.com/trade/door-open-senate-agreement-carbon-border-policy-cramer-says>.

74 Inside U.S. Trade. 2022. “Coons: CBAM Gaining GOP Support—but Not Yet Enough to Pass Senate.” World Trade Online, June 23. <https://insidetrade.com/daily-news/coons-cbam-gaining-gop-support-not-yet-enough-pass-senate>.

75 G7 Germany. 2022. “G7 Statement on Climate Club.”

76 Ibid.

Meanwhile, with new funding, the OECD (in close cooperation with the International Standards Organization) should establish an expert unit to measure, report, and verify (MRV) carbon emissions by industrial sector or individual plants. The MRV unit would operate by invitation of OECD members or their production facilities. Select heavy polluting outsiders, namely China, should also be invited to participate. Participating OECD members and invitees should agree that MRV determinations by the expert unit would be accepted for purposes of mutual recognition agreements and eventually border adjustment measures, both import fees and export rebates. The OECD MRV unit would, to a considerable extent, avoid contradictory and protectionist national MRV measures.

The OECD already has extensive data on emissions, covering GHGs from over 30 sectors in more than 50 countries (including China) since 1990. Most GHG emissions data come from official government reports, such as National Inventory Submissions to the UNFCCC. This is good for potential OECD MRV determinations, as surveyed countries will be unlikely to disagree with OECD data that they themselves reported. However, OECD emissions data is not reported by individual plants or facilities within sectors. To allow OECD emissions data to be used objectively by different governments to implement a CBAM, more detailed data on main production facilities' emissions would need to be collected.

Negotiating an MRA on carbon abatement policies, and creating an MRV unit, would likely take several years, even if limited to the top 10 carbon-emitting countries. The EU CBAM, as currently constructed, would not impose border levies until 2026; current US CBAM proposals envisage charges starting in 2024. Suspending implementation of the CBAMs would allow time for MRA negotiations and for establishing an MRV unit within the OECD. The option would still be open for unilateral border measures if good faith efforts to negotiate a carbon abatement pact fail. The UNFCCC process was too big to accommodate detailed, country-specific implementation plans for every nation. However, a plurilateral pact led by the main stakeholders responsible for the global commons—the United States, the European Union, and China—might succeed.

Meanwhile, it seems certain that more countries will pursue forms of carbon pricing to transition to a low-carbon economy—and that they will be accompanied by fears of carbon leakage. The moment is at hand for major carbon-emitting countries to act cooperatively instead of unilaterally, and to launch new plurilateral trade negotiations to both advance the fight against climate change and update the rules-based global trading system.

Major carbon-emitting countries [need] to act cooperatively instead of unilaterally...to both advance the fight against climate change and update the rules-based global trading system.

APPENDIX A

EXAMPLE FOR CALCULATING CBAM CERTIFICATES, AS PROPOSED BY THE EUROPEAN COMMISSION

EU company A plans to import galvanized sheets, which are covered by the CBAM, from South Korea. Korea has had an Emissions Trading Scheme (Korea ETS) in place since 2015 and it covers the steel sector. Company A needs to follow these steps:

- Prior to importing goods, company A must apply to the EU competent authority for permission to import those goods and be granted authorization (become an “authorized declarant”).
- Company A will be assigned a unique CBAM account number and be given access to its account in the national registry—a standardized electronic database containing information such as name and contact details, CBAM account number, details of the purchase, and specifics on the surrender of CBAM certificates.
- Company A can buy CBAM certificates from time to time through the national registry. The certificate price will be based on the weekly average price of allowances under the EU ETS. Company A must keep certificates equal to at least 80 percent of the embedded emissions on its account in the national registry at the end of each quarter.
- By May 31 of each year, company A must submit a declaration for the preceding calendar year to the competent authority through its account in the national registry. The declaration should contain information such as the total quantity of each type of goods imported, total embedded emissions expressed in tons of CO₂ equivalent per ton of each good, total number of CBAM certificates corresponding to total embedded emissions, minus a reduction corresponding to the carbon price paid in Korea and free allowances under the EU ETS. The requisite CBAM certificates will be surrendered through company A’s account in the national registry.

Methodologies for calculating reductions and other detailed procedures will be determined by later implementing acts. In the meantime, the total cost for the CBAM certificates on imports from Korea which company A is responsible to pay may be roughly calculated by the following formula:

Total cost for the CBAM certificates to be surrendered = (embedded emissions per ton of imported Korean steel sheet) minus (free allowances given per ton of domestic produced sheet under the EU ETS) times (total quantity of imported Korean steel sheets) times (price of EU ETS allowance) minus (carbon price paid for imported Korean sheets under the Korea ETS).



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