# TABLE OF CONTENTS

Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>INTRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>II</td>
<td>THE RISING POPULARITY OF BORDER CARBON ADJUSTMENTS</td>
<td>5</td>
</tr>
<tr>
<td>III</td>
<td>THE EU CARBON BORDER ADJUSTMENT MECHANISM (CBAM)</td>
<td>7</td>
</tr>
<tr>
<td>IV</td>
<td>ADDITIONAL BORDER CARBON ADJUSTMENT CONSULTATIONS</td>
<td>9</td>
</tr>
<tr>
<td>V</td>
<td>GLOBAL ARRANGEMENT FOR SUSTAINABLE STEEL AND ALUMINUM (GASSA)</td>
<td>11</td>
</tr>
<tr>
<td>VI</td>
<td>G7 CLIMATE CLUB</td>
<td>12</td>
</tr>
<tr>
<td>VII</td>
<td>LEGISLATIVE PROPOSALS</td>
<td>14</td>
</tr>
</tbody>
</table>
INTRODUCTION

Section Summary:

- Interest in climate and trade policies is on the rise.
- The EU’s CBAM policy is the furthest developed, although other countries are exploring similar policies.
- Emerging proposals are exploring new design concepts, like inclusion of a much broader set of industries and policies with and without a domestic carbon price.

The past two years have seen rapid development of climate and trade policy, including the announcements of an EU Carbon Border Adjustment Mechanism (CBAM), the Coons-Peters FAIR Act, the Global Arrangement on Sustainable Steel and Aluminum (GASSA), and the G7’s climate club. More approaches are likely to proliferate from this Congress, the administration, and international partners.

A border carbon adjustment (BCA) is typically a fee imposed on imported goods based on their carbon intensity; some proposals also provide a credit upon export of any domestic carbon prices paid or other relevant compliance costs. It is an approach designed to mitigate competitiveness concerns caused by differing climate policies, to provide financial benefit to carbon-efficient and innovative firms, to hold higher-emitting countries and firms accountable, or to build new trade relationships that better align with long-term decarbonization.

The EU’s CBAM process is the quintessential example: after recognizing the limits of the EU Emissions Trading System (ETS) in achieving adequate emissions reductions and protecting incumbent industries, the EU elected to supplement the ETS with a CBAM program specifically designed to elevate domestic and international climate ambition and ensure more protection for domestic energy intensive sectors.

Many proposals under the diverse BCA umbrella no longer hinge on a domestic carbon fee or trading system. Emerging proposals also take different approaches to additional design features, including which industries or products the policy will apply to, how to set the value of the adjustment, how to measure the emissions associated with traded goods, which countries the policies should apply to, and what set of rewards or penalties will bring more partners to the negotiating table.

This document explores why the conversation around BCAs is accelerating now and reviews proposals in various stages of implementation and consideration. It considers the EU CBAM as well as the internal consultations launched by Canada, Japan,
and the United Kingdom on BCA policies. It also considers the U.S.-EU GASSA negotiations. While few details have emerged around potential climate clubs, this document explores what we understand from current proposals. Finally, it highlights relevant legislative proposals from Congress, like the Clean Competition Act and the FAIR Transition and Competition Act.
II. THE RISING POPULARITY OF BORDER CARBON ADJUSTMENTS

Section Summary:

- Research shows an increasing need for climate policy to address trade. Nearly one-fourth of all global greenhouse gas emissions are associated with internationally traded goods.
- Leveraging domestic carbon efficiency ‘advantages’ is sparking interest from a broad set of policymakers.
- Climate and trade policies are seen as a way to enhance cooperation with like-minded countries and hold high-emitting nations accountable.

Border carbon adjustment approaches are becoming an increasingly popular tool for several reasons. First, the global community is reframing its approach to international trade and valuing tariffs as a tool to achieve domestic economic benefits and exact leverage on international partners. President Trump embraced tariffs as part of a populist approach to trade, putting border charges on a diverse basket of goods including aluminum, steel, solar panels, and appliances. The Biden administration has continued with a similar approach, aiming to increase union employment, safeguard domestic manufacturing, strengthen and diversify supply chains, and address climate change.

Second, an emerging literature is clarifying the wide disparities in the carbon-intensity of manufacturing across economic sectors and countries. Fundamental differences in energy and raw material sources and industrial processes can produce wide differences in the carbon intensity of manufacturing identical products, even in carbon-intensive industries. Present trade rules cannot value the differences in carbon intensity without an instrument like a BCA. Indeed, data indicates that the current tariff structure favors trade in higher-carbon products over low-carbon products and clean technologies. This diminishes the value of investments made by innovative first-movers and undermines productive competition between firms to improve efficiency and cut emissions. The U.S. has a significant carbon advantage, meaning that U.S. industries tend to be dramatically cleaner than major international competitors. Successfully monetizing the carbon advantage can ensure that the most efficient firms in carbon-intensive, incumbent industries will support industrial decarbonization and the global energy transition.

Third, new studies measuring international
trade in embodied carbon have clarified the role that trade plays in rising global emissions. All economic activity requires some degree of energy use or other activity that may result in carbon emissions. Our globalized economy ensures that there is a significant flow of goods and services—and the emissions related to creating those goods and services—over international borders. This international trade in embodied carbon represents roughly one-fourth of all global emissions. Carbon flows tend to move emissions from major manufacturing and export hubs, largely emerging markets, toward large consumer bases, largely advanced economies. Because emerging markets tend to require more emissions to undertake the same economic activities, this carbon loophole is facilitating the trade of higher-carbon goods into lower-carbon markets. It's increasingly clear that we need new trade-related instruments to meaningfully address global climate change.

Fourth, the political conversation is beginning to digest the consequences of trade with geopolitical rivals, particularly those that dominate key global or regional supply chains. Countries have long used trade sanctions to isolate or punish bad actors on the geopolitical stage. The increasingly harsh sanctions against Russia after its invasion of Ukraine are one example. An emerging slate of sanctions against Chinese superconductor manufacturing is another. Thanks to the emerging literature on the carbon advantage and the carbon loophole, policymakers from across the political spectrum are beginning to recognize that climate-related trade policies may provide appropriate leverage to weaken geopolitical rivals that also happen to be significant contributors to climate change with low domestic climate ambition.

Finally, BCAs can open a new approach to global cooperation with like-minded countries. Climate ambitious countries recognize that the international climate dialogues through the United Nations are, on their own, unable to deliver global emissions reductions at the scale and speed required by the climate challenge. Trade tools can build a new reward system for climate ambition and benefit first-movers, overcoming a long-standing perception that the countries moving most aggressively on climate will weaken their home economies.

Moreover, countries are reprioritizing their approach to international trade. The World Trade Organization is perhaps weaker than it has been in its history, in part because many member states are reevaluating its current composition and rule set. Some member states, including the U.S., are concerned that the WTO makes it more difficult to achieve domestic and international economic goals while benefiting exploitative partners. BCAs and approaches like climate clubs can provide a foundation for growing a new international trade paradigm that allows countries to establish strong trade relationships with preferred partners around valued policy priorities and cooperation in a rules-based market.

Given the wide variety of motivations bringing policymakers to BCAs, there are inevitably going to be competing objectives exposed during the policy design process. Will policies maximize boosting the competitiveness of clean firms, bringing down emissions, exacting pressure on rivals, or instigating the next phase of international trade and climate cooperation? As policymakers explore the wide variety of BCA policy options, tradeoffs between these objectives will become important. Below, we detail the ongoing policy processes and their key motivations to give context to how these tradeoffs may manifest in policy design.
III. THE EU CARBON BORDER ADJUSTMENT MECHANISM (CBAM)

Section Summary:

- The EU CBAM is under development. Importers are scheduled to begin disclosing emissions data in October 2023, with charges going into effect in 2026.
- It’s currently scheduled to include six industries: cement, iron and steel, aluminum, fertilizers, electricity generation, and hydrogen.
- It is being paired with a gradual drawdown of free allowances in the EU ETS for the included sectors.

The EU’s CBAM will be the first BCA put into place on the international market. The CBAM is part of the EU’s Fit for 55 package, which aims to fulfill the Green Deal’s objective of cutting emissions 55% by 2030 and achieving carbon neutrality by mid-century. It will require certain imports to pay carbon prices that mirror the domestic EU Emissions Trading System (EU ETS). The EU ETS is a “cap-and-trade” carbon pricing scheme that currently covers about 40% of the EU’s total GHGs. It is implemented in all 27 EU member states, plus Iceland, Liechtenstein, and Norway.

In the 2022 compromise text on the CBAM regulation, the European Union set out a plan for introducing the CBAM alongside reforms to the EU ETS. Under that plan, the CBAM will be phased in as free allowances, presently extended to certain covered industries under the EU ETS, are gradually phased out. Free allowances have been primarily allocated to energy-intensive and trade-exposed (EITE) industries to ease domestic costs due to the perceived risk of carbon leakage or offshoring. However, to meet decarbonization goals, the EU intends to phase out allocation fully by 2034.

With these reforms, covered imports and domestically produced goods will face the same carbon prices when selling into the EU market. Although some countries have expressed concerns with the CBAM’s compliance with WTO rules, the EU claims that the final CBAM will be WTO-compatible.

Initially, the CBAM will cover six “emission intensive” industrial sectors at “high risk of leakage”: cement, iron and steel, aluminum, fertilizers, electricity generation, and hydrogen. The CBAM will cover direct emissions as well as certain precursors and indirect emissions from purchased electricity and energy services consumed during the production of covered goods, although only cement and fertilizers will initially have to account for indirect emissions. Emissions accounting methodologies are not yet developed.

Following the provisional agreement late last
year, the next step for the CBAM is a formal vote by the Council and Parliament before the CBAM regulation can be published and enter into force. Additional technical details and calculation methodologies will be released by the Commission through delegated and implementing acts over the coming months. Should that process move expeditiously, we anticipate the following timeline for CBAM implementation:

**October 1, 2023:** The transitional phase begins. EU importers will begin to collect and disclose emissions data associated with the manufacture of covered goods through the CBAM Registry. EU importers will be required to submit quarterly reports indicating the total amount of imported products, their embedded emissions, and whether a carbon price was paid abroad. During the transitional phase, importers will not face any CBAM charges.

**December 31, 2025:** The transitional period ends. The Commission will have prepared a report for the Council and Parliament reviewing the functioning of the CBAM and considering potential amendments. As part of this review, it will also advise on whether the CBAM should be expanded in scope to cover additional emissions (e.g., indirect emissions beyond cement and fertilizer, or emissions from transportation) and additional goods (early future additions are anticipated to be organic chemicals and polymers).

**January 1, 2026:** CBAM charges will go into effect. Importers will be required to pay a carbon border adjustment by purchasing certificates for imported goods. The certificate cost will be directly linked to the average weekly EU ETS closing price. Importers will also submit an annual CBAM declaration, which will include the total quantity of imported goods, the total of actual embedded emissions (expressed in CO2e), the total CBAM certificates surrendered, the carbon price paid in the country of origin, and proof of verification.

**2034:** All free allowances under the EU ETS will be phased out. At this point, all industries covered by the EU ETS are also expected to be included in the CBAM.

CBAM implementation will directly affect exporters of the covered products from EU trade partner countries. These producers will need to factor in CBAM costs (net of domestic carbon prices paid) to compete in the European market. Higher-carbon manufacturers may see any competitive advantage in the European market eliminated with the introduction of a CBAM charge, opening an opportunity for lower-carbon manufacturers to claim a larger market share.
IV. ADDITIONAL BORDER CARBON ADJUSTMENT CONSULTATIONS

Section Summary:

- Canada launched consultation on a BCA in 2021. The most novel aspect of their discussions—and the biggest difference from the CBAM—would be an export rebate for domestic producers selling to markets without a carbon price.
- Japan released an interim report in 2021 indicating they might consider a BCA, but they would need to supplement or replace existing initiatives.
- The UK confirmed consultations on a BCA in 2022, and in 2023, they confirmed considering a carbon border tax specifically on steel.

Canada

In 2021, the Department of Finance Canada announced that the federal government had launched consultations for a BCA tied to their domestic carbon emission pricing systems. The BCA would support broader decarbonization goals of reducing emissions by 40-45% by 2030 and achieving net zero by 2050. The consultation process will involve targeted discussions with industries, territories, international trading partners, and the public.

To date, Canada has addressed concerns over competitiveness and carbon leakage by reducing prices for energy-intensive and trade-exposed industries (EITE). However, the domestic carbon price will continue to increase to achieve meaningful emissions reductions; like in the EU, this is increasing pressure to implement a trade-based instrument to ensure a level playing field between Canada and its trade partners.

In an online statement, the government laid out a generic outline of a BCA, including an import charge and export rebate. The import charge will likely mirror the standardized federal benchmarks for the carbon intensity of industrial sectors. The export rebates will be given to domestic producers who sell goods in foreign markets that do not have a carbon price. The export rebates are an interesting addition; while often considered in carbon pricing proposals, this would be a novel pursuit and is a key anticipated difference between the Canadian approach and the currently proposed EU CBAM.
Japan

Japan has also expressed interest in establishing a national ETS and BCA. The Ministry of Economy, Trade, and Industry (METI) released remarks from Minister Nishimura stating, “We want to promote advanced investment and design a system that will provide incentives for early investment.”

METI set up working groups to outline a carbon pricing plan. In 2021, the working groups released an interim report indicating their intention to move forward with expanding carbon markets and a possible BCA.

Limited information has been released on the policy changes that Japan is considering. The policies under development would need to supplement or replace existing initiatives. Japan has two regional ETS programs: the Tokyo Cap and Trade program and the Saitama Target Setting Emissions Trading System. The programs are linked and cover CO2 emissions from buildings and industrial sectors. Japan also operates a nationwide carbon tax on fossil fuels.

United Kingdom

The UK has also expressed interest in creating a BCA. The House of Commons Environmental Audit Committee released “Greening imports: a UK approach to a carbon border approach” in March 2022. The committee suggested the implementation of a BCA that complements the UK ETS, a Cap and Trade scheme that mirrors the EU ETS.

In May 2022, the UK confirmed consultations have begun on a BCA alongside domestic product standards to push down emissions and reduce carbon leakage. The government is now undertaking discussions with key stakeholders. In late January 2023, the UK indicated a carbon border tax on imported steel is being considered to support the domestic steel industry, perhaps as part of a broader BCA or on its own.
V. A GLOBAL ARRANGEMENT FOR SUSTAINABLE STEEL AND ALUMINUM (GASSA)

Section Summary:

- The Biden administration is working with EU partners to negotiate a tariff system to reduce the carbon intensity of steel and aluminum and address global overcapacity.
- The U.S. and EU have until October 2023 to map out a new framework.
- With the UK, Canada, and others already expressing interest in the GASSA, we could eventually see the formation of a carbon club dedicated to steel and aluminum.

On October 31, 2021, the White House released a joint U.S.-EU statement announcing their intention to create the world’s first carbon-based sectoral arrangement on steel and aluminum by 2024. As a part of this transatlantic partnership, the U.S. and EU plan to negotiate a global strategy to reduce steel and aluminum carbon intensity and global overcapacity. Such measures would in theory limit trade in the most carbon-intensive forms of steel and aluminum as well as discourage state investments that have exacerbated overcapacity in these sectors. China, which produces nearly 60% of global steel, does so at more than twice the carbon intensity of the United States.

Under the initial terms of this arrangement, the Biden administration agreed to ease the Section 232 tariffs that President Trump imposed on European metals. The U.S. replaced its 25% tariff on European steel and 10% tariff on European aluminum with a tariff-rate quota that permits Europe to ship steel and aluminum at historical volumes to the U.S. duty-free. In return, the EU dropped its retaliatory tariffs on American products like bourbon and motorcycles. The U.S. has also moved Japanese and British imports to tariff-rate quotas, signaling further international cooperation is on deck.

Negotiations between the EU and the U.S. are ongoing. In late 2022, the Biden administration sent the EU a concept paper that outlined a design proposal for the GASSA. Under the arrangement, member states would impose like tariffs according to a tiered tariff system that would rise with the carbon-intensity of imported steel or aluminum products. The lowest tariffs would apply to imports of the most carbon-efficient steel and aluminum; the higher-carbon the underlying product, the higher the tariff at import. Additional tariffs would be levied for non-participating countries and for countries that contribute to global overcapacity. It appears the U.S. proposal is focused exclusively on environmental performance and not on domestic carbon prices paid or other climate-related compliance costs. The U.S. and EU have until the end of October 2023 to map out the new framework.

The UK, Canada, and others have already expressed interest in joining the agreement, which could lead to the formation of a sectoral carbon club.
VI. G7 CLIMATE CLUB

Section Summary:

- Germany used its 2022 G7 presidency to advance the idea of a climate club, a formal alliance between like-minded countries to harmonize carbon emissions reductions.
- The G7 announced its intent to launch a climate club in June 2022 but did not mention a BCA. Japan now holds the presidency and is expected to release details about their proposed next steps in March 2023.
- The discussion around climate clubs is another example of the emerging global effort to harness trade relationships and geopolitical alliances toward faster decarbonization.

On May 20, 2022, the Group of Seven (G7) finance ministers and central bank governors stated their intent to explore a new format of international climate cooperation—a “climate club”—to coordinate carbon emissions reductions and promote sustainable development. This new forum for international cooperation echoes calls to accelerate climate action by focusing on collaboration between a smaller and more nimble “club” of like-minded countries that avoids the cumbersome procedures and divisive politics of multilateral cooperation under the United Nations climate regime. As such, it would center on the countries with the most leverage for climate mitigation.

Germany used its 2022 G7 presidency to advance a climate club among G7 members and other willing countries as part of a joint strategy to address climate change. Its envisioned climate club would “turn climate action from a cost factor into a competitive advantage—by agreeing on joint minimum standards,” per German Chancellor Olaf Scholz at the World Economic Forum in January 2022. According to an earlier concept paper, the primary goal of the club proposed by Germany was to accelerate the implementation of the Paris Agreement in the following ways:13

- Agree on uniform standards for the pricing of CO2;
- Agree on common measures for supporting countries that implement ambitious climate protection measures;
- Promote the transfer of knowledge and technology to non-G7 club members;
- Support climate policy reform in non-G7 club member countries;
- Accelerate the just, global transition toward sustainable and climate-neutral societies;
- Enhance research on tackling climate change; and
- Align climate aspects with the Global Sustainable Development Goals and with security policy as it relates to climate change as a risk multiplier.
At the end of June, the G7 officially announced its intentions to establish the climate club.\textsuperscript{14} Unlike the earlier German concept paper, the statement adopted by the G7 is light on details and fails to explicitly mention BCAs, signaling that negotiations were still at an early stage. By December the G7 issued terms of reference for the climate club calling for a strategic dialogue on industrial carbon leakage mitigation and asked the OECD and IEA to host an interim secretariat for the climate club.\textsuperscript{15}

The terms of reference also announced the formation of a Climate Club Task Force that would support further development of the climate club “towards a full launch in 2023, ideally by COP28,” the annual climate summit scheduled to take place in Dubai in December. As the G7 presidency shifts to Japan in 2023, however, the shape of this effort is likely to change. The Japanese have not made any reference to the club in their own comments on the importance of international climate cooperation.\textsuperscript{16} To our understanding, Japan intends to develop a formal position on how to use its presidency to advance the club concept by March of 2023.
VII. LEGISLATIVE PROPOSALS

Section Summary:

- The Clean Competition Act, FAIR Transition and Competition Act, and other floated proposals would implement a BCA without an explicit domestic carbon price.
- More legislative activity is expected in the 118th Congress.
- These types of policies are gaining bipartisan interest because they can reduce carbon emissions, leverage the U.S. carbon advantage, hold high-emitting nations accountable, increase cooperation with allies, and limit the geopolitical power of rivals.

For the last 15 years, most legislative proposals advancing a domestic carbon price have included a BCA. We are now seeing a proliferation of interest in legislative proposals that include BCAs without an associated traditional carbon price, generated by a carbon fee or cap-and-trade program. Two proposals were introduced in the 117th Congress; we anticipate additional legislative activity in the 118th.

The Clean Competition Act

Introduced by Senator Sheldon Whitehouse (D-RI) in June 2022, the Clean Competition Act calls for a BCA on carbon-intensive imports. The bill is cosponsored by Senators Chris Coons (D-DE), Brian Schatz (D-HI), and Martin Heinrich (D-NM).

The proposal would place a fee on imports of energy intensive goods: fossil fuels, refined petroleum products, petrochemicals, fertilizer, hydrogen, adipic acid, cement, iron and steel, aluminum, glass, pulp and paper, and ethanol. In 2026, this would be expanded to include imported finished goods containing at least 500 pounds of covered primary goods. In 2028, the threshold for coverage would be lowered to 100 pounds.

The import levy would be calculated based on the ratio of the country of origin’s economy-wide carbon intensity to the U.S. economy-wide carbon intensity. For imports manufactured in transparent economies with reliable, verifiable data, the levy could be calculated based on the country of origin’s relevant industry-specific average carbon intensity or based on individual manufacturers’ specific carbon intensities with appropriate data disclosure. Covered imports from least developed countries would be exempt from any charges.

Importers and domestic manufacturers would pay a levy on the portion of emissions that exceeds an industry-specific U.S. carbon intensity baseline. The baseline would be established by Treasury based on domestic data disclosure; covered domestic manufacturers would be required to report their emissions under the EPA’s Greenhouse Gas Reporting Program, as well as their annual electricity consumption and production of covered primary goods by weight.
From 2025 to 2028, the carbon intensity baselines would be reduced by 2.5 percentage points each year. Starting in 2029, the baselines would decrease by 5 percentage points per year. Emissions above the baseline from both domestic manufacturers and importers would be assessed via a rising carbon fee. The domestic and import fee would begin at $55/ton and increase at 5% above inflation per year. Refunds will be issued for covered goods that are exported.

Three-fourths of revenues raised each year would fund a competitive grant program to invest in the new technologies necessary to reduce the carbon footprints of covered industries. The remainder of revenues raised would be deposited in a fund administered by the State Department to help developing countries decarbonize.

**The FAIR Transition and Competition Act**

Introduced by Senator Chris Coons (D-DE) and Representative Scott Peters (D-CA-50) in July 2021, the FAIR Transition and Competition Act calls for a standalone BCA on carbon-intensive imports.

Starting in 2024, the proposal would place a fee on imports of petroleum, natural gas, coal, and other products with carbon-intensive production processes, such as aluminum, steel, iron, and cement. The list of goods covered by the fee would expand as the U.S. improves processes for determining the carbon intensity of different types of goods. Imports from countries that do not impose a similar border charge on the U.S. and that enforce climate laws and regulations “at least as ambitious” as the U.S. would be exempt from any charges, as would imports from least developed countries.

The import fee under the FAIR Act would be linked to the “domestic environmental cost incurred” in complying with federal, state, or local laws and regulations for producers in each of the covered sectors (e.g., the Clean Air Act, the California ETS). The government would also recalculate the costs for any relevant laws or regulations implemented in the future. This gives an approximation of the compliance costs that foreign manufacturers would face had they manufactured their product in the U.S. The border tax is calculated by multiplying the carbon emissions associated with the imported product by the calculated domestic environmental cost in the U.S. sector for that product.

The bill would require disclosure of the emissions associated with manufacturing a covered product. Where reliable data is not available, an emissions benchmark will be used based on the emissions data of the highest emitting facilities in a like sector in the United States. Importers will be allowed to petition the U.S. government to revise the carbon emissions determined to be incurred in the production of their goods.

Revenue collected from the proposed tax will be used to fund the administration of the program. Half of the remaining revenue will be provided as grants to states to support climate adaptation policies, transition assistance, and communities facing the most severe impacts of climate change. The balance would support research and development investments.
**Additional Proposals Under Development**

The Clean Competition and FAIR Act are concrete proposals for border adjustments that differ from the conventional approach of pairing a BCA with traditional carbon pricing proposals. U.S. lawmakers are considering alternative proposals that would implement a BCA without an explicit domestic carbon price.

There are many motivations among early supporters. Some are seeking to monetize the U.S. carbon advantage, others to hold high-emitting companies and countries accountable for their emissions. Other priorities include closer trade relationships with target partners (e.g., the EU), limiting the geopolitical power of high-emitting China and Russia, advancing new international partnerships on climate, or, simply, identifying potential areas of bipartisan compromise on the next phase of climate policymaking.
This report is a work product of the Climate Leadership Council and does not necessarily reflect the views of its organizational partners.