





Alliance for Clean Trade:

A Framework Proposal for a New Climate and Trade Alliance Between the U.S., EU, and Allies

PAUL BLEDSOE
AND ED GRESSER

JUNE 2023

 @ppi |  @progressivepolicyinstitute |  /progressive-policy-institute

Alliance for Clean Trade: A Framework Proposal for a New Climate and Trade Alliance Between the U.S., EU, and Allies

PAUL BLEDSOE AND
ED GRESSER

JUNE 2023

ALLIANCE FOR CLEAN TRADE (ACT)

A low-emissions trade deal to help the United States, the European Union, and their allies harmonize approaches to the clean energy transition and incentivize China and other nations to reduce emissions.

EXECUTIVE SUMMARY

After many years of discord and false starts, the United States, the European Union, and most other major developed economies are implementing ambitious domestic greenhouse gas emissions reduction programs. U.S. and EU emissions, respectively the world's second-largest and third-largest flows of carbon dioxide into the atmosphere, are likely to continue to fall sharply as a result.

But their efforts won't be enough. To avert a disastrous rise in global temperatures, the larger, necessary goal is to reduce *global* emissions. For this, however, China — whose emissions are now greater annually than the U.S., EU, and all other developed countries combined — must reduce its emissions, and so must other major middle-income emitting countries. So far, that isn't happening.

Here's a program that can help: An Alliance for Clean Trade (ACT) that minimizes climate and trade policy conflict among low-emissions economies including the U.S. and EU, accelerates the reduction of emissions in some of their major industrial sectors, and creates strong economic incentives for others, including eventually China, to reduce their own emissions.

The core idea is for the U.S. and EU, joined by other G7 countries and eventually OECD nations, to set emissions standards for high-carbon industries, and impose a fee applying to both local production and imported goods with emissions rates above an agreed emissions intensity standard. This would help them meet their emissions goals, avoid counterproductive rivalries and imposition of trade penalties on one another, and give China and large emitting, middle-income countries incentives to do the same.

U.S. AND EU ARE CUTTING CO2 EMISSIONS FAST, BUT IN DIFFERENT WAYS

The passage of President Joe Biden's August 2022 landmark climate legislation provides hundreds of billions of dollars in clean energy incentives — loans, tax breaks, and direct payments — meant to spur trillions more in private low-emissions investment. Biden calls it "one of the most significant laws in our history."¹ Together with other laws passed in 2021 and 2022, the U.S. will provide over \$500 billion in clean technology incentives and direct support, with the goal of cutting U.S. emissions by 50% or more from 2005 levels by 2030.

The European Union has adopted equally ambitious climate and clean energy laws, offering hundreds of billions of euros in incentives, plus an EU-wide "price on carbon," to reduce greenhouse gas emissions by 55% by 2030.²

In essence, the EU has taken a more carbon-taxing approach to climate policy, while the U.S. has taken a more subsidies-based approach.

In addition, the EU last fall adopted the world's first Carbon Border Adjustment Mechanism (CBAM). Set to become operational in 2026,³

this policy requires foreign companies to pay a price of roughly \$90 per ton of carbon emitted in the course of producing six types of carbon intensive products — steel, aluminum, cement, hydrogen, fertilizer, and electricity — imported into EU member countries, mirroring the carbon price required for EU firms. The idea is to equalize costs of domestic producers and importers and "encourage cleaner industrial production in non-EU countries," including especially China as the largest metals exporter, to preserve low-cost access to EU markets.

"Together with other laws passed in 2021 and 2022, the U.S. will provide over \$500 billion in clean technology incentives and direct support."

But since the passage of the EU CBAM, and the U.S. Inflation Reduction Act (IRA), the U.S. and EU have been fighting with one another rather than finding ways to secure comparably ambitious emissions reduction policies elsewhere. The EU has complained about U.S. subsidies, while many in the U.S. has complained about having to pay EU carbon taxes.⁴

TIME FOR A NEW, COORDINATED APPROACH

The time is right, therefore, for a coordinated approach that resolves U.S.-European tensions over policy, and enables them and other high-income economies to work more effectively with China and other large middle-income economies.

Late last year, the Biden administration suggested a sectoral approach to encourage trade in clean steel and aluminum. This proposal envisions an international alliance with the EU and G7 to promote trade among nations

"Both the U.S. and EU are right to view carbon-based trade measures as an important inducement to global emissions reduction."

that produce these metals with fewer carbon emissions, while imposing tariffs on higher-emitting products from other countries. This is also a useful point of departure, as they focus on large industries with high trade volumes and high emissions rates. (Steelmaking is a large industry estimated to produce 8% of global emissions of carbon dioxide.⁵)

However, this proposal seems far less likely than the EU's CBAM approach to be consistent with WTO rules (as it imposes new discriminatory tariffs rather than a regulatory fee applied both to local producers and imports). It also misses a large target — though more than half of steel-sector emissions are from China, neither the U.S. nor the EU imports much Chinese steel, and the proposal appears mainly to target middle-tier producers such as Brazil and India.⁶ But the Biden administration's release of this concept immediately ahead of the EU vote to implement a CBAM policy suggests that the White House prefers some form of sectoral trade agreement involving credit for low-emissions U.S. production to simple acceptance of the EU's CBAM.

Trade measures are obviously not in themselves full solutions to the likely growth of emissions over the next decade. Rather, they should be seen as ways to simultaneously promote cooperation among large economies with low emissions and provide inducements to China

and other middle-income countries to shift course and avoid trade disadvantages by joining a global consensus over time.

But despite the flaws in differing transatlantic climate and trade approaches, both the U.S. and EU are right to view carbon-based trade measures as an important inducement to global emissions reduction. They can be compliant with WTO and Free Trade Agreement rules, assuming they apply any new regulations equally to locally produced and imported goods, and can offset any economic disadvantage incurred by companies working within a country to reduce emissions. And the more countries that comply with them, the higher the incentive for non-participants to do the same.

Acknowledging this potential, G7 leaders in June 2022 committed to establishing a "climate club."⁷ The G7 statement recognized the need to harmonize various carbon pricing and carbon intensity approaches of the U.S. and EU, but without actually doing so. Doing so, by making the U.S., EU, and other G7 nations (and eventually OECD countries) approaches more compatible than they now are, should reduce friction and duplicative subsidies among participating countries. Given the importance of the U.S., the EU, and other developed countries as importers, it will also create some incentive for non-participants like China to improve their own policies so as to avoid penalties. And it will encourage participants to see common interests where they now may spend the next years arguing rather than cooperating.

This paper accordingly proposes a **An Alliance for Clean Trade (ACT) framework** building on recent developments in Transatlantic trade policy and climate policy with sectoral trade agreements based on emissions performance standards – that is, the carbon intensity of each economy and particular sectors within it – rather than specific carbon reduction policy, in an effort to harmonize disparate U.S. and EU and other national policies. Its major goals and features are as follows:

KEY GOALS:

- Ensure that the U.S., EU, and other high-income, low-carbon intensity economies are working together for the maximum level of emissions reduction with the minimum economic disruption.
- Reduce any negative effects of disparate climate policy approaches by the U.S., EU and G7 allies, including under the EU CBAM and U.S. Inflation Reduction Act, by consolidating to the extent practical emissions-reduction policies in industrial sectors among the U.S., EU, and Allies (ACT participants) and avoiding conflict among them.
- Prevent industries in the U.S., the EU, and other participating economies from incurring competitive disadvantages through “carbon leakage” as emissions fall, given the costs emissions regulations may impose on them.
- Incentivize China and other large emitting non-ACT member nations to cut emissions to qualify for full access to ACT import markets and benefits, and over time help to deeply reduce global emissions.

“AN ALLIANCE FOR CLEAN TRADE (ACT)” POLICY FRAMEWORK:

- ACT participating countries agree on sectors to cover, based in part on a sector’s high levels of emissions and capacity to reduce overall emissions. The starting point is six sectors the EU has chosen for its Carbon Border Adjustment Mechanism (CBAM) – steel, aluminum, fertilizer, hydrogen, cement, and electricity.
- Each sector establishes a “Sectoral Emissions Intensity Standard” (SEIS) based on acceptable levels of emissions per ton (or other units of output) and determined through negotiations of ACT nations. Sectoral emissions intensity standards must be ambitious enough to achieve sectoral emissions reductions worldwide, to a degree consistent with the sector’s part in overall global emissions reductions. The initial SEISs will be in effect through 2030, after which emissions intensity goals will become more aggressive every five years based on member country negotiations.
- Domestic producers of goods in those sectors, and comparable importing producers, would be charged a carbon fee per unit of output or imports if their carbon sectoral emissions intensity exceeds the standard. The fee would be the same in all participating countries but would be in practice zero or quite low for most companies and sectors for initial ACT nations.⁸

- The EU must replace its proposed CBAM with the ACT accord, but can continue to have a domestic carbon price through its EU Emissions Trading System, just as it does now. In exchange, the U.S. authorizes full participation in tax credits for minerals and automobiles (as Canada and Mexico now receive) produced in ACT-compliant countries, and consider ACT countries gaining additional clean energy subsidies currently only offered for U.S. domestic companies.
- Include other G7 nations (U.K., Japan, Canada) and OECD members in the ACT Alliance in due course. Other nations may join over time if qualifying.
- Consider creating differing “on-ramps” for countries at different stages of development to interact with ACT.
- Revenue from fees paid by higher emitting imports might be used for investments in additional domestic emissions reductions and improvements in climate resiliency and disaster costs, both domestically and globally, but will be determined by nations receiving import fees.

OVERVIEW OF MAJOR ISSUES: U.S. AND EU CLIMATE AND TRADE POLICY

U.S. and Allies are Cutting Emissions Deeply

Over the last two decades, the United States and our closest allies have significantly reduced greenhouse gas emissions on an absolute basis, leading the world in addressing the climate crisis. U.S. GHG emissions have fallen by 20% since 2005, from 6 billion tons per year then to 5 billion now.⁹ Emissions in the EU, U.K., Japan, and other allies have fallen by similar or greater amounts.¹⁰

Nonetheless, global emissions and temperatures keep rising, with steadily intensifying effects on coastal lands, agriculture, wildlife habitat, glacier and ice-cap cover and other areas, and risking much greater impacts in the future. President Biden has set an ambitious goal for the next round of U.S. carbon dioxide emissions reductions, meant to bring them 50% below 2005 levels — that is, from that year's 6 billion tons, and 2022's 5 billion tons, to nearly 3 billion tons — by the end of this decade.¹¹ "The climate crisis is about human security, economic security, environmental security, national security, and the very life of the planet," Biden said at the U.N. climate summit in Egypt in November of 2022. "The United States of America will meet our emissions targets by 2030."¹²

The last Congress passed three major bills to help achieve this goal. Together they represent a fundamentally new approach to U.S. clean energy and climate policy, the most significant such effort in American history, with more than \$500 billion in total clean energy funding and

incentives meant to spur trillions more in private sector investments.¹³

The European Union has likewise created a wide range of aggressive emissions reduction policies, including regulations, an EU-wide price on carbon emissions, and clean energy investment incentives. Other major U.S. allies are undertaking ambitious emissions reductions programs as well. While each has chosen a somewhat different approach, the net result is that America and other developed nations are cutting greenhouse gas emissions on a scale largely consistent with the goals of the 2015 Paris Agreement on climate change, whose hope is to prevent global temperatures from rising more than 2 degrees Celsius above "preindustrial" levels.

Rising Emissions in China and Developing World Threaten Climate Catastrophe

Yet even as the U.S. and our allies are collectively spending trillions of dollars, and in some cases imposed significant adaptation costs on local industry to reduce their greenhouse gas emissions, total global emissions have not dropped but risen. This reflects the tremendous volume of new emissions coming from the developing world in general, and China in particular. China's yearly carbon dioxide emissions are now 31% of all global emissions, compared to about 13% from the U.S., the world's second-largest emitter.^{14,15}

In fact, annual emissions from China now exceed those of the U.S. and every other developed country on Earth combined.¹⁶ And unlike the emissions produced in the U.S., the EU, and other developed countries, emissions in China (discounting pandemic years) are still

rising. As a result, a March 2023 report by the International Energy Agency found that global emissions of carbon dioxide related to energy production grew by 0.9% in 2022, reaching a new all-time high of more than 36.8 billion metric tons.¹⁷ India's emissions now exceed 3 billion tons, while those of Brazil, Indonesia, Iran, and Saudi Arabia are each well above half a billion tons per year.¹⁸

China's economy-wide carbon intensity (carbon released per unit of GDP) is more than double that of the U.S. and Japan, and more than triple that of the EU.¹⁹ It is especially concerning that Chinese emissions are set to grow throughout the rest of this decade, and that China appears on course to fail to reach its own inadequate goal of peaking emissions by 2030.²⁰ These growing emissions are causing increasingly deadly and expensive climate change impacts around the world, with economic costs in the hundreds of billions of dollars every year.²¹ Looking just a few years ahead, leading scientists and economists warn that the current trajectory of rising temperatures toward more than 2 degrees Celsius above preindustrial levels risks massive humanitarian and economic crises, including major degradation of coastal and agricultural lands, loss of species and habitat, along with the displacement of hundreds of millions of people and possible reduction of global GDP by more than 10% below trend by mid-century.²²

Meanwhile, scientists tracking climate effects at the International Panel on Climate Change (IPCC) issued a new report in March 2023, which found that to have even a 50% chance of limiting warming to 1.5 degrees Celsius above preindustrial levels and prevent far more

"These growing emissions are causing increasingly deadly and expensive climate change impacts around the world, with economic costs in the hundreds of billions of dollars every year."

calamitous climate impacts, the world generally must cut greenhouse gas emissions in half by 2030, and then stop adding carbon dioxide to the atmosphere altogether by the early 2050s.²³ But most recent projections suggest that emissions will likely be higher in 2030 than they are today.²⁴

TIME FOR NEW GLOBAL CLIMATE POLICIES

Many outside experts, and even top officials in the U.S. government²⁵ and the European Commission²⁶ have noted that current efforts to prevent catastrophic climate change are failing. While the Paris Agreement climate process creates an important forum for emissions pledges and other key issues, unless China rapidly reduces its emissions (and, secondarily, India and several other large middle-income countries do the same), overall real-world emissions will grow despite U.S. and EU policy.

China has refused for more than seven years to update an insufficient 2015 climate pledge under which its emissions would keep growing until at least 2030, despite evidence they could be reduced far sooner.^{27,28} In manufacturing, China has used a program of \$325 billion in widespread subsidies begun in 2008 to gain a dominant global market share in PV solar and electric vehicles batteries. In power generation, however, Chinese coal use has continued to increase, and now amounts to 54% of all coal burning worldwide. Emissions from this source

have swamped any Chinese domestic reductions from clean energy.²⁹

In fact, last year global coal consumption reached an all-time high, fueled by record coal output in China, India and Indonesia, the three largest producers.³⁰ These increases in coal use drove global greenhouse gas emissions and global temperatures to record highs in 2022, belying any notion that current climate policies are working.³¹ Chinese coal mines also emit massive plumes of methane that account for 20% of total global methane emissions from all fossil fuels and biomass combined, making the climate case for Chinese coal-to-gas switching even more compelling.³² China has pledged to be “carbon neutral” by 2060. But leading climate scientists say waiting to make such longer-range cuts will be too late to prevent climate disasters.³³ Absolute global emissions must fall during this decade and fall more quickly thereafter, and as a practical matter, global emissions cannot begin to fall until Chinese emissions are reduced.

Western Actions to Induce China and Others to Cut Emissions Have Been Unsuccessful

The United States, the European Union, and others have tried in numerous ways to compel or incentivize greenhouse gas emissions reductions from China, but these have mostly not worked. Under President Barack Obama in 2013, the U.S. and China jointly announced their intention to undertake emissions pledges in advance of negotiations over what became the Paris climate agreement, with China ultimately pledging to peak emissions by 2030. But a recent spree of permits for new coal-fired power plants, 106 gigawatts of capacity across 82 locations in 2022, is the highest number in seven years and four times higher than in 2021.³⁴

Experts believe if built, such plants will mean China violate even its weak promise of peaking emissions by 2030, in which case Chinese (and therefore, likely global) emissions will continue rising into the next decade.³⁵

The Trump administration withdrew the United States from the Paris agreement and pursued direct tariffs against China rather than attempting to persuade Beijing to reduce emissions. After the Trump administration’s ill-advised holiday from climate policy, the Biden administration has resumed efforts along the lines of the Obama administration’s. These, however, appear to have achieved little in substantive terms. Even as President Biden has attempted repeatedly to engage China on climate, Chinese President Xi suspended U.S.-Chinese bilateral climate negotiations altogether, as a tactical “punishment” for then-House Speaker Nancy Pelosi’s visit to Taiwan in 2022. It took a meeting requested by President Biden in Bali late in 2022 to convince Xi to restart bilateral climate negotiations with the U.S., but no additional climate commitments from Beijing appear imminent.

China has yet to fulfill its own promise to offer a methane reduction plan it pledged at Glasgow in 2021 to deliver within a year, and has refused to sign the Global Methane Pledge adopted by the U.S., EU, and more than 100 other countries.³⁶ And massive, newly detected methane emissions from Chinese coal mines cast further doubt on China’s promise to cut methane emissions.³⁷ As Presidential Climate Envoy John Kerry said in March 2023, “Regrettably...the climate issue has gotten mixed up into all the other tensions that exist between our countries,” and hopes that the Chinese government would be willing to separate climate change from other

issues in U.S.-Chinese relations so far faded. It is also worth noting that China's adoption of a cap and trade emissions trade system and modest carbon price has not at least so far resulted in overall emissions reductions.³⁸

The potential of trade measures to change this situation is limited. U.S. and European Union imports of Chinese goods covered by the EU's six CBAM sectors, for example, account for about only about \$15 billion of China's \$3.4 trillion in worldwide goods exports. Or, looked at from the other perspective, China's steel and aluminum industries (the two largest traded sectors in the CBAM group) produce mainly for the Chinese market, export only about 6% of what they produce, and are likely to respond only moderately to external rules. As such, the program cannot force fundamental change, but can reasonably be viewed as one that can help influence China and other middle-income economies to make the broad-ranging structural changes necessary for world emissions to begin falling.

EU Complaints About Domestic Content Standards in U.S. "Inflation Reduction Act"

As Chinese and other middle-income emissions rise, meanwhile, new climate and energy policy laws adopted on both sides of the Atlantic have narrowed the gap between U.S. and European climate ambition, but widened the disparity between their climate policies – posing the ironic threat that climate policy might become a divisive rather than unifying force among the U.S. and its major allies.

For example, the European Commission, which is responsible for EU international trade matters, has said that measures in the U.S. Inflation Reduction Act (IRA) passed in August 2022 include local content, production, and assembly

"China's steel and aluminum industries (the two largest traded sectors in the CBAM group) produce mainly for the Chinese market, export only about 6% of what they produce, and are likely to respond only moderately to external rules."

requirements that discriminate against non-U.S. companies. In particular, the EU objects to provisions that offer consumers a \$7,500 tax credit for electric vehicles only if (a) the vehicles are assembled in North America, and (b) if 40% of the "critical minerals" used in these vehicles' batteries are extracted and processed in the U.S., or in countries that have a free-trade agreement with the U.S. That means U.S. trade partners including Canada and Mexico are exempt from some of the law's major content restrictions, but other foreign car producers (European- and Japan-based firms in particular) are not.

While defending the measures, President Biden acknowledged to reports in late 2022 that the law has "glitches," and that adjustments could "make it easier for European countries to participate."³⁹ The U.S. Treasury Department in late March 2023 issued tax policy guidance that "newly negotiated critical minerals agreements" – such as one the U.S. reached with Japan in late March and another being discussed with the EU – would be considered equivalent to free trade agreements in terms of eligibility for the subsidy, enabling them to use Japanese and (presumably, assuming conclusion of a critical minerals agreement) EU-processed minerals in battery production.⁴⁰ This action lessened some concern among EU and Japanese automakers

but also angered some in Congress who believe it contravenes the intent of EV provisions and creates an unexpected and controversial definition of “free trade agreement.” Meanwhile, it left in place the more basic rule that auto-buyers wanting to take advantage of the EV credit could not use it for European- or Japanese-made cars.

EU Enacts a Carbon Border Adjustment Despite U.S. Concerns

Meanwhile, a few months earlier, the EU — asserting frustration over by lack of global emissions reductions and worried that foreign firms have who do not pay carbon taxes might gain competitive advantage over European producers — created the world’s first Carbon Border Adjustment Mechanism (CBAM). In this program, which will be introduced in 2023 and become operational in 2026,⁴¹ the EU imposes a fee based on the level of carbon emitted to produce carbon intensive goods entering the EU.⁴² The import fee is the equivalent to the EU-wide price of carbon paid by domestic producers, currently about 100 Euros per ton, under the European Union Emissions Trading System.

The mechanism will initially cover six products: iron and steel, cement, aluminum, fertilizers, electricity, and hydrogen. During a transition period from October 2023 to December 2025, non-EU manufacturers will be required only to report their emissions. After that, a levy will be brought in gradually, beginning in 2026 and reaching the full 100 euro/ton level in 2034, implemented through a program in which EU importers will have to purchase certificates equivalent to the weekly EU carbon price.⁴³

In the wake of the U.S.’ IRA law, the EU decided to adopt some of the IRA’s own innovations, in the form of new subsidies. Announced in January by European Commission President

Ursula von der Leyen, the so-called “Green Industrial Plan” represents “a conscious decision to emulate” the IRA, according to Pierre Tardieu, chief policy officer at lobby group WindEurope. Von der Leyen said the EU plans to “make Europe the home of clean tech and industrial innovation.” “But for now, details... are scant,” SP Global notes.⁴⁴ This suggests that EU nations, long known for complicated industrial policies, will attempt to have both carbon border fees and domestic subsidies. As we shall see, such a competing checkerboard of subsidies, regulations, carbon prices, and border fees between the U.S. and EU obscures the central fact that their economies are both decarbonizing quickly while the principal reason for pessimism on climate change is the continuing emissions growth in China and to a lesser extent other major middle-income nations.

CAN U.S. AND EU APPROACHES BE RECONCILED?

Fundamentally differing U.S. and EU climate programs risk causing as much transatlantic conflict as cooperation. As the EU CBAM phases in, American businesses and their workers fear lost export markets and new regulatory barriers, especially as Commission CBAM designers consider expanding the program to include large U.S. exports such as plastics and chemicals. German automakers and EU national governments are equally alarmed by the Inflation Reduction Act’s buy-local rules, particularly with respect to electrical vehicle credits, viewing them as discriminatory and designed to pull investment out of Europe.

American reactions to the EU CBAM adoption were decidedly mixed, but often included suggestions that much closer climate trade policy cooperation between the U.S. and EU was both possible and desirable.

This is correct. Large opportunities exist for the United States, the European Union, Japan, the U.K., and other allies to work together to address a wide variety of clean energy policy, global greenhouse gas emissions, and energy security issues that a CBAM does not fully solve, based on the shared low emissions intensity of their economies. As they do so, they can accelerate growth and cooperation in clean technologies, while helping to induce more carbon intensive economies like China's to reduce emissions so as to avoid new costs and trade disadvantages.

Such a trade alliance approach seems also to be what the Biden administration favors, at least in a few sectors.⁴⁵ Its reaction to the CBAM has been to propose a modest form of a trade alliance among the EU and other low-emitting nations focused on only steel and aluminum. This concept has some significant flaws: higher metals costs and the attendant disadvantages these cause to automotive industry, machinery, construction, and other sectors; violations of WTO rules if the main outcome is simply to raise tariffs on countries other than the EU; and the presumably negative reactions a U.S.-EU *fait accompli* will elicit from Japan, the U.K., and others. Nonetheless, the administration's suggestion of this sustainable trade alliance concept suggests that the administration may be willing to negotiate a broader trade pact in response to the EU CBAM.

Congressional Proposals for a U.S. CBAM

Congress also has a base of support for such ideas. As the Biden administration has inched toward possible energy and climate policy trade proposals with the EU and G7, some Members of Congress have introduced American CBAM bills. One, introduced in 2021, came from Senator Chris Coons of Delaware — the “FAIR Transition

and Competition Act” — and Representative Scott Peters of California.^{46,47} This instructed the Treasury Department to determine the “domestic environmental costs incurred” by domestic businesses producing a variety of products including aluminum, cement, iron, steel, oil, and natural gas, or the cost of the environmental regulatory burden in the United States. The bill required Treasury to determine greenhouse gas emissions for the products, and to use this data to determine a border carbon adjustment fee for imports of each product.⁴⁸

Another bill with the same goal, the Clean Competition Act introduced by Senator Sheldon Whitehouse (D-R.I.) in 2022, would have set a carbon tax of \$55 per ton starting in 2024 on industries in the Environmental Protection Agency's Greenhouse Gas Reporting Program.⁴⁹ Covered companies would have to pay for their emissions that exceed their industry's average. Most importers would pay the tax according to how their home country's industry emissions compare to the domestic industry. Domestic companies covered by this law would receive a rebate for the carbon tax for exported products.⁵⁰ Senator Whitehouse said his proposal would “give American companies a step up in the global marketplace while lowering carbon emissions at home and abroad and steering the planet toward climate safety.”⁵¹

These CBAM efforts obviously did not pass in the last Congress. Internationally, they also face a challenge in compliance with WTO rules, at least in versions that impose a penalty on foreign producers while providing subsidies to, rather than imposing a similar cost on, U.S. producers. The measure most likely to be WTO compliant is the proposal by Senator Whitehouse, which assesses carbon fees on domestic as well as

imported goods selected industries for emissions above a set level. But since Congress has several times failed to pass domestic carbon taxes over three decades, and Republicans have nearly uniformly opposed to them, this legislation faces a steep domestic challenge.

The near-term implementation of the EU's CBAM, however, may be changing views; similar legislative ideas seem likely in Congress in 2023, including possible bipartisan bills, as several Republican members such as Senator Bill Cassidy of Louisiana express interest.⁵² But this remains open to question, and the CBAM approach has not yet gained support from congressional leaders or the chairs of the relevant Senate Finance and House Ways and Means Committees.

Harmonizing U.S. and EU Policies Based on Shared Low-Carbon Intensive Economies

Analysts have noted that U.S. and EU policies “reflect starkly different and arguably incompatible visions for the intersection of climate and trade policies. A failure to align approaches risks further stoking trade tensions and would likely have international repercussions. Without multinational coalitions, dirtier, lower-cost competition will undercut emerging low-carbon technologies.”⁵³ This is obviously correct. However, it is also true that both the U.S. and the EU are making major, expensive efforts to reduce their emissions, and this common goal is more important than the divergences in their plans to reach it. And this being the case, we believe there remains a large opportunity for the U.S. and EU together to build agreements based on their crucial, common characteristic — shared low-carbon intensity economies,⁵⁴ which will be reducing emissions far lower in the next few years. Indeed, the U.S.

and EU, along with the U.K. and Japan, are certain to be operating the largest low-emissions economies for many years to come. Together they must use this competitive advantage to induce other nations around the world to reduce their emissions as well.

As noted, the EU CBAM is tied to the EU's Emissions Trading System, which is a “cap and trade” form of carbon pricing. The EU ETS market and rules set the carbon price, and CBAM implicitly insists that other countries adopt a carbon pricing approach to emissions reductions as well, at least in terms of fees paid by importers of the relevant products. This has caused criticism not just from some quarters in the U.S., but from a wide range of nations around the world, including Brazil, India, and South Africa.⁵⁵ EU officials counter that their CBAM requires domestic products and imports to pay the same carbon price, and is, therefore, non-discriminatory and could survive scrutiny under the World Trade Organization rules. This assertion is yet to be proven and will depend on the details of CBAM implementation, but in principle appears sound.

But as a singular basis for an international standard to compel emissions reductions from other nations, both the U.S. and EU emissions reduction policies have serious challenges. In its CBAM, the EU alone sets the carbon price, requiring other countries to pay that carbon price for excess carbon emissions of products as a price of entry to its covered sectors. Many nations, even those with relatively low emissions intensity, may balk at this demand in certain sectors, and respond either by retaliation against EU goods or subsidies to producers paying the fee. All will be suspicious of pressure on the EU to select its own best performers, and to

delay CBAMs in industries where member state emissions may be higher than peer averages. The U.S., lacking national carbon prices, is no exception. As its companies in certain sectors calculate the cost of a carbon border fee based on the EU ETS price, administration officials or Congress may be tempted to retaliate rather than cooperate.

The 2021/22 battery of subsidies to American producers, meanwhile, is even weaker than the EU's approach as a basis for international climate policy. Such subsidies do nothing to reduce emissions from other countries' production of internationally traded products; they may instead encourage similar subsidies by other nations, as the EU Green Deal Industrial Policy plans suggest, fragmentation of clean-energy industries that would grow faster on a cooperative basis, and/or countervailing-duty suits and tariff penalties on U.S. exporters.

"G7 leaders in June 2022 committed to establishing a 'climate club.'"

G7 Nations Pledge to Establish "Climate Club"

With these challenges in mind, G7 leaders in June 2022 committed to establishing a "climate club."⁵⁶ (The G7 members are Canada, France, Germany, Italy, Japan, the U.K., the U.S., and the EU.) Their statement notes the need to "compare the effectiveness as well as the economic impacts of our mitigation policies consistently with our ambition to reduce emissions such as through explicit carbon pricing, other carbon mitigation approaches and carbon intensities." Furthermore, the statement recognizes the need to expand the "club" of nations by inviting "partners, including major emitters, G20 members and other developing and emerging economies, to intensify

"As a singular basis for an international standard to compel emissions reductions from other nations, both the U.S. and EU emissions reduction policies have serious challenges."

discussions and consultations with us on this matter."

In essence, the G7 statement recognizes the need to harmonize carbon pricing and carbon intensity approaches, but does not actually propose specific ideas to do so.

U.S. Floats Sustainable Steel and Aluminum Pact

Late last year, the Biden administration began to float a narrowly crafted sectoral proposal for cleaner trade, dubbed in news media coverage as a "green steel club."⁵⁷ A concept paper drafted by the Office of the United States Trade Representative proposed the creation of an international consortium or alliance that would promote trade in steel and aluminum produced with fewer carbon emissions (presumably by eliminating the Trump administration's "232" tariffs, though this is not explicit), while imposing higher tariffs on those products from China and elsewhere, according to reporting by *The New York Times*.

The proposed group known as the "Global Arrangement on Sustainable Steel and Aluminum" would use American and European low-emissions production and markets to bolster domestic industries in a way that also mitigates climate change. The U.S., EU, and other member countries would jointly impose fees on metals produced with higher greenhouse gas

intensity, aimed at China and other countries that would not be members of the initial group. Steel-making accounts for up to 8% of global emissions of carbon dioxide (depending on one's source of estimates), with more than half of those emissions from China, making the sector an obvious first choice for a trade alliance.⁵⁸ It is notable that the Biden administration floated this proposal publicly for the first time immediately ahead of the EU vote to implement a CBAM policy. It seems clear that the Biden administration would prefer some form of sectoral trade agreement based on emissions intensity to simply acceding to the EU CBAM.

U.S. Treasury Secretary Janet Yellen and other officials have also recently suggested they may promulgate new rules to ease EU and other allies' concerns over provisions in the IRA legislation. Most notable among these are the \$50 billion in tax credits the law designed to entice Americans to buy electric vehicles assembled in North America. For electric vehicles to be eligible for the full tax credit, the "critical" minerals used to make the batteries that power them (graphite, cobalt, lithium, and some other products) must come from nations that have free trade agreements with the United States. This group was traditionally thought to comprise the 20 countries which between 1985 and 2011 negotiated WTO-compatible 'free trade agreements' with the U.S., currently including Canada and Mexico along with Korea and Australia, but not the EU, the U.K., Japan, and some other allies.⁵⁹

Over the last few months, both the U.S. and the EU have offered a few small "tweaks" designed to appease particularly heated objections from the other side, most notably by the Treasury Department's announcement in

March 2023 that it would consider agreements on critical mineral discussions equivalent to FTAs for the purposes of IRA EV credits. Yet neither has grappled with the need for a more comprehensive and larger clean energy trade alliance to harmonize differing clean energy policies. Only such a program will provide full benefits to U.S. and EU firms who have already made low carbon investments in production, avoid counterproductive retaliations and countervailing-duty penalties, and help induce China and other more carbon-intensive economies to reduce their emissions to avoid new challenges in exporting to the \$5 trillion American and European import markets.

Using an Emissions Performance Standard Metric for U.S. and EU Harmonization

The basis for such a program is so clear that it can be hard to see: though the U.S. and EU have created very different greenhouse gas emissions mitigation policies, both are dramatically reducing their greenhouse gas emissions, and both have roughly comparable levels of carbon intensity in the industrial sectors likely to be initially covered by any agreement, although the EU as a whole has lower economy-wide emissions intensity than the total U.S. economy due to higher U.S. driving rates, among other factors.^{60,61} This suggests an agreement should be possible based on emissions performance standards — that is, the carbon intensity of each economy or a particular sector within it — not any specific carbon reduction policy.

Such an emissions performance standard is recommended as the most desirable metric of climate action in a recent report by experts at the Bipartisan Policy Center, who suggest that it should be the method used to measure emissions reductions if the U.S. were to pass

legislation adopting its own CBAM.⁶² The BPC authors find that an emission performance standard “only weighs the amount of embodied carbon in an imported product when determining” any the border tariff or import fee but “does not give any subjective consideration to a country’s policies or climate ambition, as the embodied emissions in an import represent the totality of the exporter’s emission-reducing policies.” This could be applied only to imports if based on the average of emissions in a U.S. sector (though this would almost certainly violate U.S. WTO obligations) or applied both to domestic and imported goods (an approach that is more likely to meet WTO rules but could be more politically challenging).

Most importantly, “by placing a fee on emission performance, the design incentivizes cleaner and more efficient production methods,” but without dictating a specific methodology like carbon pricing as an underlying policy, such a metric could provide more flexibility to accommodate differing policy approaches to emissions abatement, especially by sector, than one based on carbon pricing.

Proposed Framework for a U.S.-EU Alliance for Clean Trade (ACT):

- ACT participating countries agree on sectors to cover, based in part on a sector’s high levels of emissions and capacity to reduce overall emissions. The starting point is six sectors the EU has chosen for its Carbon Border Adjustment Mechanism (CBAM): steel, aluminum, fertilizer, hydrogen, cement, and electricity.
- Each sector establishes a “Sectoral Emissions Intensity Standard” (SEIS) based on acceptable levels of emissions per ton (or other unit of output) and determined

This suggests an agreement should be possible based on emissions performance standards — that is, the carbon intensity of each economy or a particular sector within it — not any specific carbon reduction policy.

through negotiations of ACT nations. Sectoral emissions intensity standards must be ambitious enough to achieve sectoral emissions reductions worldwide, to a degree consistent with the sector’s part in overall global emissions reductions. The initial SEISs will be in effect through 2030, after which emissions intensity goals will become more aggressive every five years based on member country negotiations.

- Domestic producers of goods in those sectors, and comparable imported products, would be charged a carbon fee per unit of output or imports if their carbon sectoral emissions intensity exceeds the standard. The fee would be the same in all participating countries but would be in practice zero or quite low for most companies and sectors for initial ACT nations.⁶³
- The EU must replace its proposed CBAM with the ACT accord, but can continue to have a domestic carbon price through its EU Emissions Trading System, just as it does now. In exchange, the U.S. authorizes full participation in tax credits for minerals and automobiles (as Canada and Mexico now receive) produced in ACT-compliant countries, and consider ACT countries gaining additional clean energy subsidies currently only offered for U.S. domestic companies.

- Include other G7 nations (U.K., Japan, Canada) and OECD members in Alliance in due course. Other nations may join over time if qualifying.
- Consider creating differing “on-ramps” for countries at different stages of development to interact with ACT.
- Revenue from fees paid by higher emitting imports might be used for investments in additional domestic emissions reductions and improvements in climate resiliency and disaster costs, both domestically and globally.

BENEFITS:

- Prevents U.S. and EU industry from being at a competitive disadvantage through “carbon leakage” since domestic companies face carbon regulations and costs that many other global competitors do not;
- Incentivizes China and other large emitting non-ACT member nations to cut emissions to qualify for access to Alliance trade markets and benefits;
- Reduces negative effects on international trade of disparate climate policy approaches by the U.S., EU, and G7 allies, including from the EU CBAM and U.S. IRA laws;

ADVANTAGES OVER CBAM ALONE:

- Would very likely meet WTO compliance standard;
- Does not require Congressional approval of widespread carbon prices or U.S. CBAM (which may not be WTO compliant without domestic carbon price);

- More easily allows different treatment for different sectors.

DISCUSSION

We believe the time has come for the Biden administration to negotiate with the EU and other allies to reach a common position. This will make their own policies more effective in reducing emissions, reduce conflict among them, and strengthen their hand as they seek to induce, pressure, and persuade the large middle-income countries responsible for all current emissions growth — China first among them — to join.

Since the EU’s adoption of its CBAM policies and U.S. passage of the Inflation Reduction Act (IRA), the U.S. and EU have been fighting with one another rather than finding ways to secure comparably ambitious emissions reduction policies elsewhere. Increasingly, U.S. and EU policies and rhetoric are becoming dominated by arguments over the different approaches they have taken, rather than by the consensus on the need for significant global reduction of carbon emissions and the fact that the U.S. and EU cannot reduce global emissions without help.

President Biden and other U.S. leaders also need to present the American people with a realistic path forward on climate policy that incentivizes action globally, and does not simply reflect emissions reductions by the U.S., EU, and other high-income democracies alone.

The framework for an Alliance for Clean Trade (ACT) presents a more realistic opportunity for long-term success at global climate protection. Congress does not have time to debate the issue for a decade or more. The imperative of climate change risk demands more rapid action. So

do increasingly disparate U.S. and EU climate and energy trade and economic policies that are exacerbating transatlantic relations. Such discord over key climate, energy, economic and trade issues is especially dangerous at the current moment during which Europe and the United States must be unified against Russia's war in Ukraine, and threats from other adversaries, including China.

Our recommendations for such a negotiation between the U.S. and EU are deliberately limited and open-ended, as the key to a successful negotiation will be to establish a straightforward but narrow trade-off of policy interests, beginning with those pertaining to economic sectors where agreement is easiest. The Biden administration's proposal of a "Global Arrangement on Sustainable Steel and Aluminum" is a step in this direction, and consistent with this report's recommendations.

In its essence, the PPI proposal envisions the U.S. allowing EU firms access to IRA benefits in exchange for the use of an emissions performance standard metric rather than the EU ETS carbon price. Of course, a larger agreement, involving the other G7 countries and ultimately the 38-member OECD, would require other compromises. But an Alliance for Clean Trade (ACT) can be structured to accommodate small revisions to EU and U.S. systems by sector more easily if it is focused on an emissions performance standard, rather than carbon prices.

On-Ramps for Additional Nations to Join ACT

The long-term goal of the ACT Alliance is to incentivize, and over time create rising pressure, other major nations to meet the ACT emissions and carbon intensity standards in the service of lowering global greenhouse gas

emissions rapidly to prevent mutually assured climate catastrophe. As such, it is crucial that negotiators create a series of strong incentives for major emitting nations like China to lower their emissions and eventually join the ACT Alliance, at least in certain sectors.

This may require several grades or types of membership. For example, small island states and least developed countries might be exempted altogether, and low-emissions countries at middle-income levels might only need to meet a lesser standard of the emission intensity to gain payment-free access to covered sectors of ACT markets. More broadly, the carbon intensity requirement in each sector must be set at a level where some developing countries might qualify with significant effort, but major industrial producers with high carbon intensities like China will require greater reductions to qualify. It may be possible to design a carbon intensity on-ramp that is slightly less stringent than that achieved by original member developed countries, if credible plans for emissions reductions are demonstrated. Finally, all developing nations will need assistance from the World Bank and related international financial institutions and UN agencies.

Russia's War on Ukraine and the New Geopolitics of Energy

Needless to say, Russia's war on Ukraine has further complicated an already complex global energy geopolitical landscape. Russia, a major carbon-emitting economy at 2.5 billion tons per year, is not a viable ACT member while it continues to pursue its illegal war against Ukraine.⁶⁴ And nothing in this proposal should be interpreted as in any way undermining U.S.,

EU and other nations embargoes and other sanctions against key sectors of the Russian economy, including energy.

But the status of other nations who are aiding Russia with money and arms like Iran should likewise be compromised regarding ACT membership and compliance. The question of what to do about nations who are purchasing Russian oil and gas is significantly more complicated. But this represents yet another area where a ACT Alliance could help induce actions in accord with long-term climate protection as well as energy and national security.

CONCLUSION

The United States and our closest allies need to create a more comprehensive and compelling international climate, clean technology trade, and energy security framework to address climate change and maximize consumer benefits. Yet such an alliance should not start as economy-wide, as that will prove too difficult. Instead, it will focus on energy intensive sectors and the clean energy sector first.

America's embrace of the IRA clean energy law, with significant subsidies for clean energy investments across a huge range of technologies, is a breakthrough for domestic and global climate policy. Yet provisions in the law that require domestic content, production, and processing pose a significant problem for our European allies since the EU does not enjoy a wide-ranging trade agreement with the United States, unlike our allies in Mexico and Canada. EU officials and private sector companies are eager to find a way to resolve this issue.

Trade measures are obviously not in themselves full solutions to the likely growth of emissions over the next decade. Expecting them to compel China to decarbonize industrial sectors highly reliant on coal-generated energy and on heavy industrial production (much less an entire economy) is unrealistic; rather, they should be seen as ways to simultaneously promote cooperation among large economies with low emissions, and inducements to China and other middle-income countries to shift course and avoid trade disadvantages by joining a global consensus over time. The EU and U.S. alone, for example, account for nearly 29% of all world goods imports; the larger G7 including Canada, the U.K., and Japan for 36%; and the 38-member OECD about 45%.⁶⁵

Equally, the European Union's CBAM presents a challenge for the U.S. in particular as the EU contemplates expanding it to chemicals and plastics. The goal of negotiations should be to exploit the opportunity of shared low carbon intensity economies while accommodating to the extent possible the different characteristics of U.S. and EU climate policies. No matter the content of any U.S. and EU agreement, encouraging a global shift to cleaner production methods will require extensive international cooperation, including trade measures that penalize high-emissions production. But U.S. and EU producers stand to benefit, as will others who have made investments in low emissions production. This will allow the United States, the European Union, and other countries who have acted on climate change to reap benefits from their investments and emissions reductions, while incentivizing other nations to do the same.

Without question, such negotiations will be difficult. But the near- and long-term benefits could be large in terms of emissions reduced, costs avoided, and dangers reduced. An Alliance for Clean Trade (ACT) would provide greater incentives to bend down the rising global emissions curve, and help prevent the destabilization of the global climate. Only the leadership of the United States, the European Union, and our allies *together* can make this happen.

ABOUT THE AUTHORS

Paul Bledsoe is strategic adviser for PPI, working on intersection of U.S. and global energy, climate, and economic policy. He is also a professorial lecturer at American University's Center for Environmental Policy. Paul served as communications director of the White House Climate Change Task Force under President Clinton, as special assistant to U.S. Interior Secretary Bruce Babbitt, and communications director of the U.S. Senate Committee on Finance under former Chairman Daniel Patrick Moynihan. He was formerly senior policy advisor to the Presidential Commission on the BP Oil Spill, director of strategy for the National Commission on Energy Policy, and a teaching fellow at Oxford University's School of Geography and the Environment. Paul has been a leading figure in shaping two major climate agreements – the Paris Climate Agreement of 2015 and the Kigali Agreement to phase out HFCs of 2016. He writes often on climate, energy, policy and politics in the New York Times, Washington Post, Financial Times, Politico, USA Today, LA Times, The Hill, Real Clear Politics and other leading publications. Paul received a B.A. with honors and a M.A from Ohio State University.

Edward Gresser is Vice President and Director for Trade and Global Markets of the Progressive Policy Institute, headquartered in Washington, D.C. Before joining PPI in October 2021, he served as Assistant U.S. Trade Representative for Trade Policy and Economics, and concurrently as Chair of the U.S. government's interagency Trade Policy Staff Committee.

References

- 1 Maegan Vazquez and Donald Judd, "Biden Signs Inflation Reduction Act into Law," CNN, August 16, 2022, <https://www.cnn.com/2022/08/16/politics/biden-inflation-reduction-act-signing/index.html>.
- 2 Kalina Oroschakoff, "5 Things to Know about EU's Fit for 55 Climate Package," *POLITICO*, July 14, 2021, <https://www.politico.eu/article/fit-for-55-eu-5-things-to-know/>.
- 3 Michael Birnbaum, "E.U. Seeks to Pressure China on Climate by Taxing Steel and Cement," *The Washington Post*, December 13, 2022, <https://www.washingtonpost.com/climate-solutions/2022/12/13/carbon-tax-europe-china-climate/>.
- 4 Kevin Cramer, "The EU Goes Rogue on Climate Policy with CBAM," *The Wall Street Journal*, December 14, 2022, <https://www.wsj.com/articles/the-eu-goes-rogue-on-climate-policy-clean-energy-greenhouse-gas-carbon-tax-policy-emissions-environmental-standards-11671054303>.
- 5 "What Is Green Steel and How Can It Help Us Reach Net Zero?," World Economic Forum, July 11, 2022, <https://www.weforum.org/agenda/2022/07/green-steel-emissions-net-zero/>.
- 6 Ali Hasanbeigi, "Steel Climate Impact: An International Benchmarking of Energy and CO2 Intensities," Global Efficiency Intelligence, April 2022, <https://www.globalefficiencyintel.com/steel-climate-impact-international-benchmarking-energy-co2-intensities>.
- 7 "G7 Statement on Climate Club," G7 Germany, June 28, 2022, <https://www.g7germany.de/resource/blob/974430/2057926/2a7cd9f10213a481924492942dd660a1/2022-06-28-g7-climate-club-data.pdf?download=1>.
- 8 With possible exceptions for World Bank low-income nations, UN least-developed nations, and small island states and countries facing national crisis (e.g., Sudan, Ukraine).
- 9 "Climate Change Indicators: Greenhouse Gases," Environmental Protection Agency, last modified August 1, 2022, <https://www.epa.gov/climate-indicators/greenhouse-gases>.
- 10 "Total Greenhouse Gas Emission Trends and Projections in Europe (8th EAP)," European Environment Agency, October 26, 2022, <https://www.eea.europa.eu/ims/total-greenhouse-gas-emission-trends>.
- 11 "Fact Sheet: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies," The White House, April 22, 2021, <https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/>.
- 12 Nandita Bose and William James, "COP27: Biden Says the Climate Crisis Is about 'Very Life of the Planet,'" Reuters, November 11, 2022, <https://www.reuters.com/business/environment/cop27-biden-says-climate-crisis-is-about-human-security-economic-security-2022-11-11/>.
- 13 "US Inflation Reduction Act: A Catalyst for Climate Action," Credit Suisse, November 30, 2022, <https://www.credit-suisse.com/about-us/news/en/articles/news-and-expertise/us-inflation-reduction-act-a-catalyst-for-climate-action-202211.html>.
- 14 Hannah Ritchie, Max Roser, and Pablo Rosado, "China: CO2 Country Profile," Our World in Data, May 11, 2020, <https://ourworldindata.org/co2/country/china>.
- 15 Ian Tiseo, "Global Largest CO Emitters 2021," Statista, February 6, 2023, <https://www.statista.com/statistics/271748/the-largest-emitters-of-co2-in-the-world/>.
- 16 Emma Newburgher, "China's Emissions Exceed Those of U.S. and Developed Countries Combined, Report Says," NBC News, May 6, 2021, <https://www.nbcnews.com/science/environment/chinas-emissions-exceed-us-developed-countries-combined-report-says-rcna852>.
- 17 Steven Mufson, "Global Carbon Dioxide Emissions Hit New Highs Last Year, Says IEA Report," *The Washington Post*, March 2, 2023, <https://www.washingtonpost.com/climate-environment/2023/03/02/emissions-hit-carbon-dioxide> <https://www.washingtonpost.com/climate-environment/2023/03/02/emissions-hit-carbon-dioxide>.

- 18 "Countries," Climate Action Tracker, last modified May 2023, <https://climateactiontracker.org/countries/>.
- 19 "CO2 Emissions Intensity of GDP, 1990-2021," International Energy Agency, last modified October 26, 2022, <https://www.iea.org/data-and-statistics/charts/co2-emissions-intensity-of-gdp-1990-2021>.
- 20 Michael Standaert, "Despite Pledges to Cut Emissions, China Goes on a Coal Spree," Yale Environment360, March 24, 2021, <https://e360.yale.edu/features/despite-pledges-to-cut-emissions-china-goes-on-a-coal-spre>.
- 21 "Climate Change: A Threat to Human Wellbeing and Health of the Planet. Taking Action Now Can Secure Our Future," Intergovernmental Panel on Climate Change, February 28, 2022, <https://www.ipcc.ch/2022/02/28/pr-wgii-ar6/>.
- 22 Moses Ojisekhoba, "The Economics of Climate Change," Swiss Re Institute, April 22, 2021, <https://www.swissre.com/institute/research/topics-and-risk-dialogues/climate-and-natural-catastrophe-risk/expertise-publication-economics-of-climate-change.html>.
- 23 Brad Plumer, "Climate Change Is Speeding toward Catastrophe. the Next Decade Is Crucial, U.N. Panel Says.," *The New York Times*, March 20, 2023, <https://www.nytimes.com/2023/03/20/climate/global-warming-ipcc-earth.html>.
- 24 "2022 NDC Synthesis Report," United Nations Climate Change, October 2022, <https://unfccc.int/ndc-synthesis-report-2022#Projected-GHG-Emission-levels>.
- 25 Seth Borenstein, "Kerry: Climate Talks Should Have Done More on Pollution Cuts," *Associated Press*, December 7, 2022, <https://apnews.com/article/science-egypt-john-kerry-china-government-united-states-5a1b160e7de9bcfcbf9657c55c784a54>.
- 26 Paul Messad, "EU Climate Chief Calls for Higher Ambition at COP28 after IPCC Report," Euractiv, last modified March 22, 2023, <https://www.euractiv.com/section/energy/news/eu-climate-chief-calls-for-higher-ambition-at-cop28-after-ipcc-report>.
- 27 "China," Climate Action Tracker, accessed May 2023, <https://climateactiontracker.org/countries/china/>.
- 28 Zen Soo, "China Sticks to Goal of Having Carbon Emissions Peak by 2030," *Associated Press*, August 3, 2021, <https://apnews.com/article/europe-business-china-environment-and-nature-climate-change-7e29d68ea8a77ee8ebbe1460f0f09ffd>.
- 29 M. Garside, "Coal Consumption in China from 1998 to 2021," Statista, March 2, 2023, <https://www.statista.com/statistics/265491/chinese-coal-consumption-in-oil-equivalent/>.
- 30 M. Garside, "Coal Consumption in China."
- 31 Shannon Osaka, "Scientists Thought Carbon Emissions Had Peaked. They've Never Been Higher.," *The Washington Post*, December 5, 2022, <https://www.washingtonpost.com/climate-environment/2022/12/05/carbon-emissions-peak-record-2022/>.
- 32 Aaron Clark, "China's Energy Sector Methane Emissions Dwarf U.S. and Russia," *Bloomberg*, March 3, 2022, <https://www.bloomberg.com/news/articles/2022-03-03/china-s-energy-sector-methane-emissions-dwarf-u-s-and-russia#xj4y7vzkg>.
- 33 Mark Fischetti, "There's Still Time to Fix Climate – About 11 Years," *Scientific American*, October 27, 2021, <https://www.scientificamerican.com/article/theres-still-time-to-fix-climate-about-11-years/>.
- 34 Christian Shepherd, "China's Coal Plant Approvals Highest in Seven Years, Research Finds," *The Washington Post*, February 26, 2023, <https://www.washingtonpost.com/world/2023/02/26/china-coal-plant-fossil-fuel-pollution/>.
- 35 Standaert, "Despite Pledges to Cut Emissions."
- 36 "U.S.-China Joint Glasgow Declaration on Enhancing Climate Action in the 2020s," U.S. Department of State, November 10, 2021, <https://www.state.gov/u-s-china-joint-glasgow-declaration-on-enhancing-climate-action-in-the-2020s/>.
- 37 Christian Shepherd, "As China Mines More Coal, Levels of a More Potent Greenhouse Gas Soar," *The Washington Post*, May 27, 2022, <https://www.washingtonpost.com/world/2022/05/27/china-methane-coal-climate-change/>.
- 38 Jane Nakano and Scott Kennedy, "China's New National Carbon Trading Market: Between Promise and Pessimism," Center for Stratgic & International Studies, July 23, 2021, <https://www.csis.org/analysis/chinas-new-national-carbon-trading-market-between-promise-and-pessimism>.

- 39 Bryce Baschuk, "Why Europe Is Fuming over America's Green Subsidies," *The Washington Post*, January 19, 2023, https://www.washingtonpost.com/business/energy/why-europe-is-fuming-over-americas-green-subsidies/2023/01/18/40f0dde2-9750-11ed-a173-61e055ec24ef_story.html.
- 40 Amanda Chu et al., "Biden Offers Olive Branch to Allies in Electric Vehicle Subsidy Dispute," *Financial Times*, March 31, 2023, <https://www.ft.com/content/6b7fdca1-d2ab-41b4-aad1-73b87e2d4bbd>.
- 41 Birnbaum, "E.U. Seeks to Pressure China."
- 42 "Carbon Border Adjustment Mechanism," Taxation and Customs Union, accessed May 2023, https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism_en.
- 43 "Carbon Border Adjustment Mechanism."
- 44 Alex Blackburne, "EU Green Plan Aims to Rival US Climate Law, Repel Deindustrialization Fears," S&P Global Commodity Insights, January 26, 2023, <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/012623-eu-green-plan-aims-to-rival-us-climate-law-repel-deindustrialization-fears>.
- 45 "Fact Sheet: U.S. – EU Arrangements on Global Steel and Aluminum Excess Capacity and Carbon Intensity," United States Trade Representative, October 2021, <https://ustr.gov/about-us/policy-offices/press-office/fact-sheets/2021/october/fact-sheet-us-eu-arrangements-global-steel-and-aluminum-excess-capacity-and-carbon-intensity>.
- 46 U.S. Congress, Senate, *Fair, Affordable, Innovative, and Resilient Transition and Competition Act*, S.2378, 117th Cong., introduced in Senate July 19, 2021, <https://www.congress.gov/bill/117th-congress/senate-bill/2378>.
- 47 "Sen. Coons, Rep. Peters Introduce Legislation to Support U.S. Workers and International Climate Cooperation," Senator Chris Coons, July 19, 2021, <https://www.coons.senate.gov/news/press-releases/sen-coons-rep-peters-introduce-legislation-to-support-us-workers-and-international-climate-cooperation>.
- 48 "Legislation to Impose 'Border Carbon Adjustment' Fee on Imported Steel and Other 'Carbon-Intensive' Goods Introduced in US Congress," White & Case LLP, July 26, 2021, <https://www.whitecase.com/insight-alert/legislation-impose-border-carbon-adjustment-fee-imported-steel-and-other-carbon>.
- 49 U.S. Congress, Senate, *Clean Competition Act*, S. 4355, 117th Cong., introduced in Senate June 7, 2022, <https://www.congress.gov/bill/117th-congress/senate-bill/4355>.
- 50 Shuting Pomerleau, "What's in the Carbon Border Adjustment Bill Introduced by Senator Whitehouse?," Niskanen Center, June 8, 2022, <https://www.niskanencenter.org/whats-in-the-carbon-border-adjustment-bill-introduced-by-senator-whitehouse/>.
- 51 "Whitehouse and Colleagues Introduce Clean Competition Act to Boost Domestic Manufacturers and Tackle Climate Change: U.S. Senator Sheldon Whitehouse of Rhode Island," Senator Sheldon Whitehouse, June 8, 2022, <https://www.whitehouse.senate.gov/news/release/whitehouse-and-colleagues-introduce-clean-competition-act-to-boost-domestic-manufacturers-and-tackle-climate-change>.
- 52 Nick Sobczyk, "Scoop: Cassidy Plans Carbon-Tariff Bill," *Axios*, February 14, 2023, <https://www.axios.com/pro/energy-policy/2023/02/14/scoop-cassidy-plans-carbon-tariff-bill>.
- 53 Noah Kaufman et al., "Joe Biden Has a Big European Climate Change Problem: His Plan to Cut Carbon Emissions is So Different it Might Be Incompatible," *Fortune*, January 24, 2023, <https://fortune.com/2023/01/24/climate-change-us-eu-tensions-carbon-tariff-inflation-reduction-act-green-steel-club/>.
- 54 "Fact Sheet: U.S. – EU Arrangements."
- 55 Vishwa Mohan, "BRICS Nations Join India in Opposing EU Carbon Tax," *The Times of India*, August 28, 2021, <https://timesofindia.indiatimes.com/india/brics-nations-join-india-in-opposing-eu-carbon-tax/articleshow/85704371.cms>.
- 56 "G7 Statement on Climate Club."
- 57 Ana Swanson, "U.S. Proposes Green Steel Club That Would Levy Tariffs on Outliers," *The New York Times*, December 7, 2022, <https://www.nytimes.com/2022/12/07/business/economy/steel-tariffs-climate-change.html>.

- 58 "What Is Green Steel."
- 59 Alan Rappeport, "U.S. Eyes Trade Deals with Allies to Ease Clash over Electric Car Subsidies," *The New York Times*, February 24, 2023, <https://www.nytimes.com/2023/02/24/business/us-europe-electric-car-subsidies-g20.html>.
- 60 "CO2 Emissions Intensity of GDP."
- 61 Hasanbeigi, "Steel Climate Impact."
- 62 Xan Fishman, George David Banks, and John Jacobs, "Understanding Border Carbon Adjustments," Bipartisan Policy Center, November 29, 2022, <https://bipartisanpolicy.org/report/understanding-border-carbon-adjustment/>.
- 63 With possible exceptions for World Bank low-income nations, U.N. least-developed nations, and small island states and countries facing national crisis (i.e., Sudan, Ukraine).
- 64 "Russian Federation," Climate Action Tracker, accessed May 2023, <https://climateactiontracker.org/countries/russian-federation/>.
- 65 "World Trade Statistical Review," World Trade Organization, accessed May 2023, https://www.wto.org/english/res_e/publications_e/wtsr_2022_e.htm.



The Progressive Policy Institute is a catalyst for policy innovation and political reform based in Washington, D.C. Its mission is to create radically pragmatic ideas for moving America beyond ideological and partisan deadlock.

Founded in 1989, PPI started as the intellectual home of the New Democrats and earned a reputation as President Bill Clinton’s “idea mill.” Many of its mold-breaking ideas have been translated into public policy and law and have influenced international efforts to modernize progressive politics.

Today, PPI is developing fresh proposals for stimulating U.S. economic innovation and growth; equipping all Americans with the skills and assets that social mobility in the knowledge economy requires; modernizing an overly bureaucratic and centralized public sector; and defending liberal democracy in a dangerous world.

© 2023
PROGRESSIVE POLICY INSTITUTE
ALL RIGHTS RESERVED.

PROGRESSIVE POLICY INSTITUTE
1156 15th Street NW
Ste 400
Washington, D.C. 20005

Tel 202.525.3926
Fax 202.525.3941

info@ppionline.org
progressivepolicy.org