# Resuscitating WTO for the Energy Transition: Why, How, and Who

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**Abstract**

International trade principles have been a driving force behind global economic expansion since World War II. More recently though, the growing urgency for the economic transformations needed to achieve net-zero emissions is exposing the many shortcomings and limitations of the Bretton Woods-based trade rules, which is leading to simmering tensions even among close allies like the United States and the European Union. While the threats of escalating protectionism or full-blown trade wars present a major challenge, the growing willingness among countries to advance climate goals through trade policies also offers an opportunity for the United States to take the lead in forging a new international trade system. A new trade paradigm that prioritizes climate action should include: clearly defined climate exceptions to existing World Trade Organization (WTO) rules to meet energy security, climate, and local development priorities; a new consensus around the use of green subsidies, carbon border tariffs, and import and export controls; a renewed momentum around lower tariffs on clean energy technologies; developing sectoral climate clubs; and a functioning WTO dispute settlement mechanism.

*Keywords: WTO, Trade, Energy, Climate, Tariffs, Subsidies, IRA, CBAM, ETS, Emissions, Greenhouse Gas*

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## The challenge and the opportunity

International trade has underpinned much of the global prosperity of the last century. In recent years, however, it has become increasingly clear that the current trading architecture and rules are ill-equipped to accommodate policies needed to address the evolving climate crisis. Countries are pursuing domestic climate policies that challenge antiquated trade rules designed to solve the problems of the last century. Take the United States, for example. The 2022 Inflation Reduction Act (IRA), President Joe Biden's landmark climate law, may prompt as much as one trillion dollars in transformative government spending to fight climate change (Saul 2023) and possibly trillions more in private investments. In addition to reducing emissions, the measures are intended to boost domestic clean energy industries. While still early, these measures appear to be succeeding—consider the more than US$120 billion in announced investments in battery supply chains since the IRA's passage (US DoE 2024).

The IRA and, more broadly President Biden's "Buy American" agenda, include measures that give preference to domestic content (Minott and Nguyen 2023) and therefore could be in violation of international trade rules, as has been highlighted by the European Union (EU), Canada, Japan, and the Republic of Korea, among others (Jensen 2022).

In defense of the Biden administration, the current system of international trade rules was designed primarily to address the tit-for-tat tariff conflicts of the twentieth century, with little to no consideration for global commons issues that we face today, such as the climate crisis. Nevertheless, ignoring the trade rules—even if that was not the intent—without proposing an alternative could hinder global economic growth as well as climate progress. Indeed, if US leaders help forge an improved international trade system—as suggested by White House climate envoy John Podesta in a recent speech (Denning 2024)—it could alleviate the concerns of their trading partners regarding the IRA and, at the same time, put the global economy in a better position to weather climate-related trade tensions that are already rising and are likely to worsen with time.

## Building and then weakening the WTO

The United States has shaped international trade rules more than any other country. In the 1940s, the United States proposed rules that were eventually largely adopted as the General Agreement on Trade and Tariffs, or GATT, a series of multinational agreements to reduce trade barriers (Irwin 2017). The most ambitious of the GATT agreements was the US-instigated Uruguay Round of trade negotiations in the 1990s, which created the World Trade Organization (WTO) in 1995.

In addition to its role in crafting trade rules, the United States has been the leader in calling for their enforcement. No other country has been a complainant in more formal disputes, according to the WTO (WTO 2023).

Some WTO rules are vague, but others are crystal clear. For example, the Agreement on Subsidies and Countervailing Measures (ASCM), adopted during the Uruguay Round, prohibits subsidies contingent "upon the use of domestic over imported goods." The United States was one of the strong backers of the ASCM when it was being negotiated as it was looking to rein in the subsidies provided by a number of its trading partners (Hillman and Manak 2023). Alleged violations of this rule are frequent because subsidies

are common in many economic sectors. In 2017, for example, the United States accused China of violating ASCM with subsidies to aluminum producers that favor Chinese over US firms (WTO 2017).

While the United States pushed for the adoption of ASCM and has been a complainant against those who violate it, certain provisions of the IRA can also be seen as discriminating against imports. Among examples are the electric vehicle subsidies that require a minimum of 40 percent of critical minerals—rising to 80 percent by 2027—to come from North America or a country with a free trade agreement with the United States, and a minimum of 50 percent of battery components—rising to 100 percent by 2029—to be manufactured and assembled in North America (Houser et al. 2023). Further, vehicles must be assembled in North America to qualify for the tax credit. Similarly, to get the maximum investment and production tax credits from clean electricity generation, all the iron and steel used must be sourced in the United States and 40 percent of the components—rising to 55 percent by 2026—must be manufactured in the United States.

Although the IRA may appear to conflict with the ASCM, complying or not with the WTO was hardly a factor in formulating the law's domestic content provisions. Instead, the choice facing policy makers was between accepting the IRA, including some of its protectionist elements, or missing the brief window to pass federal climate legislation.

To be sure, some lawmakers expressly pursued the IRA as a vehicle for reshoring domestic manufacturing. Senator Joe Manchin (D-West Virginia) was reportedly not willing to provide the fiftieth vote needed to pass the law if it did not include the domestic sourcing requirements for electric vehicles (Laing 2022).[1] More broadly, any meaningful climate legislation that does not support the local economies of rural states may be extremely difficult to move forward in the US Senate, where so much power rests in the hands of lawmakers representing these regions. This is one of the reasons the United States has failed to pass more WTO-friendly climate policies, including a cap-and-trade program (C2ES 2009) that narrowly passed in the House in 2009 but was never brought to the Senate floor for a vote because of a threatened Republican filibuster.

Without the Inflation Reduction Act, the United States had almost no chance of meeting its climate commitments (Bistline et al. 2023), which would have dampened climate policy momentum around the world. Instead of defending the legality of the IRA, US leaders pivoted to arguing that the subsidies would benefit other countries by accelerating the deployment of clean energy technologies (Deese, Podesta, and Sullivan 2023) and lowering costs (Larsen et al. 2023). To be sure, there is strong evidence that the diffusion of clean energy spurred by the IRA will drive technology cost curves down via economies of scale and learning-by-doing, similar to what has been quite well-established for solar photovoltaic modules, wind turbines, and batteries (Glenk, Meier, and Reichelstein 2021). Nevertheless, this argument does not suffice for a country that has failed to fulfill its obligations to take federal action on climate change for decades despite being responsible for the most carbon emissions historically (Evans 2021) and has now passed a law that appears to overstep trade rules it has held others accountable to for so long (WTO 2023).

Further, while the shared benefits of technological progress for other countries will unfold over many years, the adverse trade effects will be felt immediately. The IRA will mobilize billions and likely trillions in new clean energy investments, but it will also compel multinationals to redirect massive amounts of

[1] Senator Manchin had even threatened to take the administration to court on its flexible interpretation of the tax credits (Cama and Northey 2023), which accommodate a wider set of countries, although so far he has not followed up on the threat.

investment away from other countries' energy transition toward the US market (Saha and Sengupta 2023). The pain felt by emerging markets will be particularly acute given the ongoing concerns over debt distress and the high costs of capital. India's power minister accused the West of hypocrisy, saying the Inflation Reduction Act's protectionism will inhibit energy transitions in developing economies (Parkin 2023). Making matters worse, the long-term benefits of technology diffusion to emerging countries may be less than forecasted if current escalating trade tensions continue to worsen rather than subside (Kaufman et al. 2023).

## Rising protectionism in clean energy policies globally

The IRA's promise to reduce global greenhouse gas emissions relies on the rapid diffusion of technologies, knowledge, and finance across borders. Yet, its domestic subsidies may accelerate the adoption of trade barriers that inhibit these same cross-border flows, thus slowing progress on climate change. Indeed, the scaling up of supply is lagging the increase in demand resulting from the IRA due to the supply chain bottlenecks created by the domestic sourcing requirements along with levies and controls on imported equipment, much of it from China (Carroll 2023).

The real concern might not be some of the controversial features of the IRA, but the growing protectionism that ensues. Following the passage of the IRA, the European Commission proposed the Net Zero Industry Act (EC 2023a), which includes incentives that effectively mirror those in the IRA (Liu 2023). Moreover, project bids are disadvantaged if a non-EU country supplies more than 65 percent of the equipment (Tagliapietra, Veugelers, and Zettelmeyer 2023).

The protectionist elements of the IRA and the Net Zero Industry Act are in some ways just a continuation —perhaps an escalation—of the increasing use of subsidies and trade measures to support domestic clean energy industries. Other major economies—including China, the United Kingdom, and Canada—have all outlined "green industrial policy" strategies of their own (Kennedy 2015; UK Government 2020; Government of Canada 2021).

Many lower-income countries lack the leverage or fiscal space to enact subsidy policies similar to the IRA and have already turned to alternative strategies to protect their domestic industries. Indonesia, for example, is restricting exports of nickel to enable its increased use in domestic manufacturing (WTO 2022). The WTO has already ruled against Indonesia's action to no material effect (Uren 2022). Indonesia appealed the finding against it, but the WTO's appellate body is effectively nonfunctioning currently, leaving the dispute in limbo. Meanwhile, the export ban has proved highly effective for Indonesia in attracting investment in mineral refining and processing. Nevertheless, the competition to attract domestic investments without respecting trade rules as guardrails could tip the scales toward slower emission reductions and weaker economic growth around the world.

The Biden administration is attempting to assuage the concerns about the IRA by forging a few bilateral agreements that make more foreign producers eligible for the subsidies (Bond et al. 2023). For example, the United States and Japan signed a critical minerals agreement in March 2023 that should make Japanese producers eligible for certain IRA subsidies (USTR 2023b). However, bespoke agreements with a handful of wealthier countries are unlikely to effectively substitute for a new international trade agenda that limits risks stemming from green industrial policies, fosters virtuous competition in the global export market, and promotes lower trade barriers for climate solutions (Deese 2022).

## Additional trade tensions from carbon tariffs

Green subsidies are not the only looming concern at the nexus of climate and trade. Novel tariffs on the embedded carbon in imported products—such as the European Union's Carbon Border Adjustment Mechanism (CBAM)—are another emerging source of climate-related trade tensions (Kaufman et al. 2023).

The CBAM is a policy measure that is tied to the European Union's flagship climate policy, the cap-and-trade Emission Trading System (ETS) (EC 2023b). The ETS requires large greenhouse gas emitters in Europe to purchase allowances for each ton of carbon dioxide they release above a mandated threshold or cap that is lowered over time. Put simply, the ETS determines Europe's domestic carbon price. However, if only European industries pay this carbon price, then foreign producers without domestic carbon pricing have a competitive advantage in selling goods in Europe, unfairly displacing European producers. This phenomenon, referred to as "carbon leakage," can result in even dirtier industrial production, with the emissions shifting to the country exporting the product to the EU. To address this problem, the CBAM is due to phase in tariffs gradually from 2026 through 2034 on the carbon emission intensity in imports from countries without comparable carbon pricing policies. Data gathering on the emissions intensity of imports began in October 2023.

The EU designed the CBAM to comply with international trade rules while encouraging a level playing field among foreign and domestic producers regarding the carbon prices they face. However, the EU is still encountering pushback from trading partners that CBAM is simply green-veiled protectionism (Luke 2023). Given the domestic resistance to carbon pricing in countries, it is perhaps unsurprising that the pushback is greater when they are applied by a foreign jurisdiction.

First, the EU is perceived to be making decisions on behalf of other countries about the form and structure of climate policies, the design of which is often as much an art as a science—for example, on carbon accounting rules, on the appropriate carbon price level, and on the products that are covered. Second, while the EU has always provided compensation for the costs imposed by the carbon price—the revenue from the auctioning of the emissions allowances is largely returned to the member states—they are offering no such compensation to foreign countries, including developing countries, many of which may see large impacts from CBAM, especially relative to the sizes of their economies. For example, CBAM is forecasted to lower Africa's GDP annually by 0.9 percent or $25 billion based on 2021 GDP levels (Africa Climate Foundation 2023). Making matters worse from the perspective of low-income countries, the EU and other developed countries have failed to fulfill pledges related to international climate finance in developing countries (OECD 2022). The criticisms of EU's CBAM are thus likely to persist, and possibly increase, as it moves from the transitional phase starting in October 2023 to full implementation in January 2026. In its defense, when the CBAM was proposed, it was assumed the EU's major trading partners would impose their own carbon pricing methodologies on high-emitting goods, which would neutralize the effects of the EU's carbon tariffs. However, implementing carbon pricing policies has been politically challenging in many countries, although some nations, such as Brazil and India, have embarked on this journey (Ministry of Power, Government of India 2023; ICAP 2023).

In part as a counter to CBAM, the Biden administration has proposed carbon-based tariffs at the center of a Global Arrangement on Sustainable Steel and Aluminum (GASSA). Unlike the EU, GASSA does not contemplate a carbon price imposed on domestic producers. It would thus provide a competitive advantage to US producers and surely draw the ire of many in the international community. Still, the

GASSA-style of carbon tariffs has generated bipartisan interest in the US Senate, signaling they may be more politically viable than more WTO-compliant climate policies (Cassidy 2023).

The GASSA negotiations between the United States and the EU have reportedly been paused (Reuters 2023b) partly due to EU concerns over compliance with international trade rules (Lawder and Blenkinsop 2023)—which is not entirely surprising given the all-important elections this year on both sides of the Atlantic (Jain et al. 2024). A failure to achieve transatlantic alignment on carbon border measures risks tit-for-tat tariffs between the United States and EU that could spiral and entangle a wider set of countries, an outcome made more likely by overlapping tensions over the IRA and similar policies around the world. Without multinational coalitions to address heavily traded carbon-intensive products, dirtier lower-cost competition will undercut emerging low-carbon technologies and undermine climate actions around the world.

## An opportunity to modernize international trade

Global trade rules have not been updated in a generation, since well before the global climate crisis became a dominant geopolitical concern for all countries. Even then, only minimal consideration was given to environmental grounds for trade restriction, mainly based on local pollutants and damages. That these rules are sorely in need of reform has become abundantly clear following the passage of the IRA and CBAM.

For all its drawbacks, the growth in international trade since World War II has led to immense economic progress in much of the world, including the United States (USTR 2023a). The WTO and its predecessors have been instrumental in reducing harmful tariffs and providing a consistent set of trade rules to which countries are supposed to adhere.

Because of the nature of national sovereignty, the usefulness of the WTO is contingent on most parties agreeing that its rules are worth following—it is an agreement to cooperate and follow a set of rules, not a binding set of restrictions. Without a new working consensus and backing from the largest powers with effective vetoes, the organization will become irrelevant.

The first step to fixing the situation is to stop adding unnecessary hurdles, such as the United States' ill-advised blocking of appointments to the WTO's dispute settlement Appellate Body since 2017 to protest what it sees as an overreach by the body (Lester 2022).

More proactively, the United States can reestablish its commitment to trade rules by instigating a process to develop equitable reforms in cooperation with like-minded allies such as the EU. That could begin with a global summit to discuss the changes necessary to reflect new realities, much as the Bridgetown Initiative and the summit in June 2023 hosted by President Macron aimed to transform the multilateral development banks to rewrite their post–world-war mandates (Focus 2030 2023; Reuters 2023a). High-level leadership from the United States would add considerable heft to the ongoing efforts to reform global trade rules (Remaking Global Trade for a Sustainable Future 2023).

Any fundamental reconception and rewriting of WTO rules will be a long and painstaking process. In parallel with that longer process, it may be sufficient to add a few clauses to existing agreements— such as GATT Articles 20 and 21, which deal with exceptions to the trade rules (GATT 1947a, 1947b)—that clearly and transparently recognize that governments will need to nurture emerging domestic industries

to cut emissions quickly, ensure energy security, and support vulnerable regional economies. These exceptions supporting nascent clean technologies may be necessary given the urgency of the climate crisis and the need to accommodate energy security concerns that are partly fueling the recent wave of protectionism.

New rules could limit and define the appropriate use of green subsidies, carbon border tariffs, export and import controls, and supply chain coordination (Sengupta and Saha 2023). For example, the United States and other developed countries could agree to limit subsidies' domestic sourcing requirements to only emerging clean technologies that usually require public support to reach a commercial stage and to products needed to maintain stable and secure supply chains for energy and other critical public needs, borrowing from the spirit of both Articles 20 and 21. Building on this, all countries could work toward an explicit list of clean energy, transport, and industrial technologies that can be traded with reduced or minimal tariffs. This could be part of a broader effort to complete the negotiations of an Environmental Goods Agreement under the WTO, which began under the still-incomplete Doha round of WTO negotiations (WTO 2021).

Of course, these trade tools would have to be managed carefully to avoid proliferating and exacerbating tensions. US leaders may have to accept that other countries' leaders can act similarly—a new Kantian Golden Rule for trade (Kant 1785, 2012)—and realize that it may be better to define proper guardrails around such actions to limit further damage to global trade.

Moreover, the Group of Seven (G7) or Group of Twenty (G20) should develop climate clubs, as has been proposed by the G7 during the German presidency (Hermwille et al. 2022; Saha et al. 2023). Sector-specific or product-specific climate clubs can provide the platform for countries to collaborate on establishing carbon accounting methodologies and driving down emissions with the combination of standards, penalties (such as tariffs), and subsidies for strategic clean technologies, goods and materials (such as hot briquetted iron, steel, clinker, hydrogen, ammonia, low greenhouse gas methane and methanol, olefins, and so on) (Bataille 2020, p. 202; Bataille, Nilsson, and Jotzo 2021; Bataille et al. 2023).

Sectoral climate clubs can start with steel and aluminum, like the GASSA proposal, and expand their coverage over time. To be successful, the clubs need to credibly drive down global emissions. For a critical mass of countries to join, the club needs to be compatible with the United States' climate-focused industrial policy, the EU's CBAM, and the development goals of low-income and lower-middle-income countries like India that will account for most future emissions. It will not be easy to satisfy all these conditions with one agreement. Its architects will need to think carefully about the criteria for membership into the club, the framework for imposing tariffs on nonmember countries, and how best to support low-income countries in their efforts to reduce emission intensity. The most viable path forward may be for the EU to open the door for CBAM specifications to work in concert with a redesigned GASSA or a refined version of the climate club proposed by the G-7.

To conclude, it may turn out that the United States going against outdated trade rules may have been a step in the right direction. That will depend on whether US leaders help to envision and create a new international trade paradigm. That process will be arduous, but the first step is to reframe the discussion around the country's recent legislation as moving toward a modernized and cooperative international trade regime that better aligns with the world's climate goals.

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