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Options and Priorities for the EU-U.S. Global Arrangement on Steel and Aluminium (and Implications for the CBAM)

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1 Introduction

Following the announcement of the EU-US Global Arrangement on Steel and Aluminium on 31 October 2021[1] and the recent developments in negotiations this report will look at the agreement and explore a viable path forward for that agreement and the role in that path of the CBAM.

Building on previous work conducted ahead of the adoption of the CBAM Regulation with Phases I (2019-2020), II (2020- 2021) and III (2021-2022) of its project "Border Carbon Adjustments in the EU", the European Roundtable on Climate Change and Sustainable Transition (ERCST) has extended its analysis of the evolving CBAM into a fourth phase, providing decision makers and stakeholders with a better understanding of critical issues as the CBAM proceeds from adoption to implementation.

Phase IV of the ERCST project is intended to provide in-depth analysis of the implementation phase of the CBAM as it progresses to its full operationalization and provide a broader view of related developments in the climate and trade area. The present report is the last in a series of four reports that together form the fourth phase of the "Carbon Border Adjustment in the EU" project.

The initial report covered the role of the CBAM in a portfolio of measures for industrial decarbonization. The second report looked at the draft Implementing Regulation for emissions reporting during the transitional period including methods for calculating emissions. The third report looked at methods to credit foreign carbon pricing under the CBAM. This report, the fourth in Phase IV, looks at the issues faced in the transatlantic negotiations on cooperation in the area of sustainable steel and aluminium.

This report is structured in five sections: first this introduction; then follows a second part providing the background of the GSA; the third part provides an explanation of the different approaches and how it fits into the CBAM; the fourth section looks how to broaden the participation in the GSA globally; and the last section offers conclusions and discusses the way forward.

2 Transatlantic Cooperation on Steel and Aluminium: The GSA

2.1 Market Structure and Trends in Europe and the United States

Both steel and aluminium have long been indispensable materials in modern manufacturing and construction, but the markets for these commodities have undergone significant transformations in recent years. Evolving trade dynamics and shifts in production present a complex interplay of supply and demand factors, technological advancements, and policy interventions. Globally, steel

[1] United States and European Union, "Steel & Aluminum: U.S.-EU Joint Statement", 31 October 2021, https://ustr.gov/sites/default/files/files/Statements/US-EU%20Joint%20Deal%20Statement.pdf.

and aluminium production share key characteristics: production capacities have risen considerably in recent years, exacerbating competitive pressures in markets that have always been highly competitive. Both commodities are also of strategic importance, and while employment and economic output in these sectors have declined relative to the broader economy, the retain an outsized role in national politics, often attracting government intervention to protect domestic producers against foreign competition.

Historically, the modern steel and aluminium industries can be traced back to industrial advancements in Europe and North America. For steel, the discovery of the Bessemer process in England in 1856 revolutionized the manufacturing process by dramatically reducing the cost and time required to produce steel from pig iron. This innovation, alongside others like the open-hearth furnace, catalyzed the expansion of the steel industry across Europe and eventually in the United States. Modern aluminium production can look back at a similar transatlantic legacy: first isolated as an element in Denmark in the early 19th century, aluminium only became economically viable at a larger scale through the electrolytic Hall-Héroult process, which was independently developed by Charles Martin Hall in the United States and Paul Héroult in France in 1886.

By the early 20th century, both industries had become major drivers of European and U.S. economic growth, defining their respective economic histories and the broader narrative of industrial development. In the United States, for instance, the steel industry emerged as a major player after the Civil War, with steel production increasing from approximately 1.25 million tons in 1880 to 24 million tons in 1910, or about 40% of global steel production that year;[2] economic output and job creation from the steel industry was a significant factor in the American economy becoming the largest in the world.[3] While U.S. steel production has declined markedly from its peak, it remains the fourth-largest producer in the world, and still employed 131,400 workers as of 2021.[4] Similarly, the U.S. aluminium industry accounted for about US$ 176.32 billion in economic output and directly employed 164,402 Americans in 2022.[5]

While Europe and North America historically dominated the markets for steel and aluminium, production of these commodities has seen a gradual yet significant shift towards emerging economies, with China emerging as the preeminent global producer. In 2022, China alone accounted for over half of global crude steel production, despite imposing recent limits on domestic output;[6] since 2000, its steel production capacity has grown by 735%, while North American output in the same period has declined by 18% and now only accounts for approximately

[2] John Steele Gordon, "Iron and Steel Industry", in Eric Foner and John A. Garraty (eds.), *The Reader's Companion to American History*, 574-575 (Boston: Houghton Mifflin Co., 1991).
[3] Robert P. Rogers, *An Economic History of the American Steel Industry* (Oxford: Routledge, 2009).
[4] Christopher D. Watson, *Domestic Steel Manufacturing: Overview and Prospects* (Washington, DC: Congressional Research Service, 2022), https://crsreports.congress.gov/product/pdf/R/R47107.
[5] John Dunham & Associates, *2022 Economic Impact of the Aluminum Industry* (Arlington, Va.: The Aluminum Association, 2022), https://www.aluminum.org/sites/default/files/2022-03/Methodology.pdf.
[6] World Steel Association, *2023 World Steel in Figures* (Brussels: World Steel Association, 2023), https://worldsteel.org/wp-content/uploads/World-Steel-in-Figures-2023-4.pdf.

4% of global steel output. Similarly, China accounts for almost 60% of global primary aluminium production, with output growing by 1440% since 2000,[7] while the European aluminium industry has lost more than 30% of its primary production capacity in that period.[8]

Other emerging economies in South and Southeast Asia as well as the Middle East have likewise seen a dramatic expansion of their steel and aluminium industries, and even less developed regions such as Africa have recently experienced growth in production capacities, often as a result of outward capacity investments by Chinese companies. Shifting production patterns reflect broader economic trends, including the relocation of manufacturing bases to sites with lower production costs and more favorable business conditions. In many cases, however, the unrelenting expansion of production capacities is driven by non-market forces such as government intervention and support, contributing to significant excess production capacities in both commodities. As of 2022, for instance, the Organisation of Economic Co-operation and Development estimated excess steel production capacity globally to be approximately 627.7 million metric tons globally.[9] While global demand for steel and aluminium has continued to rise, the even faster growth in production capacities is increasingly resulting in reduced capacity utilization rates and contributing to competitive pressures and unsustainable market conditions.

Most of the steel and aluminium produced in the developing world is destined for domestic consumption, enabling the rapid expansion of infrastructure, construction and manufacturing in these regions. Nevertheless, a relevant share remains aimed at international markets. Coupled with other recent developments, such as surging energy costs and increasing pressure to decarbonize in Europe, the growth in global steel and aluminium output from lower-cost countries has increased the competitive pressure on producers in the EU and the U.S., which are the two largest net importers by a significant margin.[10] Along with rising imports, Europe and North America have seen a gradual decline in domestic production. Since 2021 alone, the aluminium industry in the EU has witnessed curtailment of around half of its remaining production capacities.[11]

Such pronounced decreases in domestic output have not only prompted about the social and economic impacts or national security implications, but also have an environmental dimension. Steel and aluminium share another feature: the persistently high emissions intensity of production,

[7] International Aluminium Institute, "Primary Aluminium Production", 2023, https://international-aluminium.org/statistics/primary-aluminium-production.
[8] European Aluminium, "Draft Council Regulation on an emergency intervention to address high energy prices", 2002, https://european-aluminium.eu/wp-content/uploads/2022/10/2022-09-27-european-aluminium-proposals-on-draft-council-regulation-on-high.pdf.
[9] Masanobu Nakamizu, *Latest Developments in Steelmaking Capacity 2023* (Paris: OECD, 2023), https://www.oecd.org/industry/ind/latest-developments-in-steelmaking-capacity-2023.pdf.
[10] In 2022, for instance, the EU imported 48.1 million metric tons of steel, for a net import of 22 million metric tons; likewise, the U.S. imported 28.9 million metric tons of steel, for a net import of 20.6 million metric tons, see World Steel Association, *supra*, n. 6.
[11] European Aluminium, *supra*, n. 8.

which makes both sectors a priority challenge for any industrial decarbonization strategy.[12] Iron and steel production contributes about 7% of global greenhouse gas (GHG) emissions,[13] while aluminium contributes around 2%.[14] Importantly, however, emission intensities of production vary widely between countries, with North American and European production typically generating emissions well below the global average due to greater process efficiency, higher shares of recycling, and the lower emissions intensity of electricity. Consequently, all else being equal, declining output and loss of market share by U.S. and EU steel and aluminium producers will be accompanied by an increase in global emissions as more emissions intensive production meets the growing demand.

Nuanced differences also characterize the structure and composition of steel and aluminium production in the EU and the U.S. Most steel originating in Europe is produced in a two-stage process where iron ore is first smelted into molten iron in a blast furnace (BF), and the molten iron is then transferred to a basic oxygen furnace (BOF) for conversion into steel to reduce carbon content by blowing oxygen through it. Approximately 57% of European crude steel is produced using this highly emissions intensive BF-BOF process.[15] By contrast, over two thirds of the steel produced in the U.S. is obtained through electrolytic smelting of scrap steel in electric arc furnaces (EAF).[16] Because of the higher share of primary steel production in Europe, the average emissions intensity of European steel is higher than that of U.S. steel.[17]

While the United States and Europe enjoy the largest bilateral trade and investment relationship in the world,[18] steel and aluminium flows across the Atlantic are comparatively small relative to other

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[12] Between 2007 and 2022, for instance, the global average emissions intensity of production of 1 tonne of crude steel has increased from 1.8 tCO_2e to 1.91 tCO_2e, see World Steel Association, *Sustainability Performance of the Steel Industry 2004-2022* (Brussels: World Steel Association, 2023), https://worldsteel.org/wp-content/uploads/Sustainability-indicators-report-2023.pdf; similarly, the cradle-to-gate emissions for production of 1 tonne of primary aluminium have only declined from 16.9 tCO_2e to 16.6 tCO_2e, see International Aluminium Institute, " Greenhouse Gas Emissions Intensity: Primary Aluminium", 2023, https://international-aluminium.org/statistics/primary-aluminium-production.

[13] Ali Hasanbeigi, Steel Climate Impact: An International Benchmarking of Energy and CO_2 Intensities (St. Petersburg, Fla.: Global Efficiency Intelligence, 2022), https://www.globalefficiencyintel.com/steel-climate-impact-international-benchmarking-energy-co2-intensities.

[14] Ali Hasanbeigi, Cecilia Springer, and Dinah Shi, *Aluminum Climate Impact: An International Benchmarking of Energy and CO_2 Intensities* (St. Petersburg, Fla.: Global Efficiency Intelligence, 2021), https://www.globalefficiencyintel.com/aluminum-climate-impact-international-benchmarking-energy-co2-intensities.

[15] Eurofer, *European Steel in Figures 2023* (Brussels: European Steel Association, 2023), https://www.eurofer.eu/assets/publications/brochures-booklets-and-factsheets/european-steel-in-figures-2023/FINAL_EUROFER_Steel-in-Figures_2023.pdf.

[16] Ali Hasanbeigi and Cecilia Springer, *How Clean is the U.S. Steel Industry? An International Benchmarking of Energy and CO_2 Intensities* (St. Petersburg, Fl.: Global Efficiency Intelligence, 2019), https://www.globalefficiencyintel.com/us-steel-industry-benchmarking-energy-co2-intensities.

[17] Hasanbeigi, *supra*, n. 13.

[18] Shayerah I. Akhtar, *U.S.-EU Trade and Investment Ties: Magnitude and Scope* (Washington, DC: Congressional Research Service, 2021), https://crsreports.congress.gov/product/pdf/IF/IF10930.

goods and services exchanged between the two trade partners. According to the latest data available from the European Statistical Office (Eurostat), the value of transatlantic trade in iron, steel and aluminium products amounted to just over 1% of the overall trade in goods between the EU and the U.S. in 2022, with neither being among the 10 most important trade partners in these commodities.[19] Even without accounting for services, the transatlantic trade in these two commodities is dwarfed by trade in manufactured goods, machinery, vehicles, and energy.

Also, in recent years, transatlantic trade in both commodities has been increasingly shaped by trade policies such as tariffs and quotas. Increased tariffs of 25% and 10% on certain imports of steel and aluminium, respectively, imposed by U.S. President Donald J. Trump in March 2018 under Section 232 of the Trade Expansion Act,[20] have had a discernible impact on import patterns, prompting both trade diversification and negotiations for tariff rate quotas with key trading partners.[21] In response, "rebalancing measures" taken by the EU in June 2018, along with legal proceedings initiated against the U.S. before the World Trade Organization (WTO), illustrate the degree to which the transatlantic partnership in general – and specifically as regards trade in steel and aluminium – has become frayed, reflecting increasingly different political visions and policy priorities. That is also the backdrop against which the GSA described in the next subsection (see below, Section 2.2) was announced and continues to be negotiated.

2.2 History and Evolution of the GSA

Announced on 31 October 2021, the GSA represents a concerted effort by the EU and the U.S. to end the trade conflict triggered by imposition of the Section 232 tariffs with an agreement that would both restore historical trade flows in steel and aluminium across the Atlantic and

[19] In 2022, the EU imported iron and steel products (Harmonized Commodity Description and Coding Systems (HS) Code 72) worth € 980,498,338, and aluminium products (HS Code 76) worth € 831,589,665 from the U.S.; in the same year, it exported iron and steel products worth € 6,184,426,203, and aluminium products worth € 2,913,614,924 to the U.S.; the overall value of all goods imported from the U.S. to the EU was € 359,742,112,636, and of all goods exported from the EU to the U.S. was € 509,027,107,900, see Eurostat, "EU trade since 1988 by HS2-4-6 and CN8", as of 15 November 2023, https://ec.europa.eu/eurostat/databrowser/view/ds-045409_custom_8521728. These figures align with the data for trade in both commodities collected for the same year by the United Nations Commodity Trade Statistics Database (UN COMTRADE) database, according to which the EU imported iron and steel products (HS Code 72) worth $1,032,535,861 as well as aluminium products (HS Code 76) worth $875,804,044 from the U.S. in 2022, and exported iron and steel products worth $6,534,000,872 as well as aluminium products worth $3,068,523,726 to the U.S. in the same year, see UN COMTRADE, "Trade Data", as of 15 November 2023, https://comtradeplus.un.org/TradeFlow.

[20] Trade Expansion Act of 1962, 11 October 1962, Public Law 87–794, 19 U.S.C. Chapter 7, §1862, https://www.govinfo.gov/content/pkg/STATUTE-76/pdf/STATUTE-76-Pg872.pdf, as amended. Section 232 authorizes the U.S. President to impose tariffs based on a recommendation by the U.S. Secretary of Commerce if "an article is being imported into the United States in such quantities or under such circumstances as to threaten or impair the national security."

[21] Rachel F. Fefer, *Section 232 of the Trade Expansion Act of 1962* (Washington, DC: Congressional Research Service, 2022), https://crsreports.congress.gov/product/pdf/IF/IF10667.

concurrently mitigate trade distortions and emissions within these sectors.[22] As a first step, the GSA suspended the existing tariffs on steel and aluminium products under Section 232 and replaced them with a tariff-rate quota arrangement based on historical import figures. European exports of steel and aluminium to the U.S., which had declined by 53% between 2018 and 2020 as a result of the tariffs,[23] have since reached levels that closely reflect these negotiated tariff rate quotas.[24] At the same time, the EU and the U.S. agreed to suspend the WTO disputes they had previously initiated regarding the Section 232 tariffs and the additional duties imposed in response by the EU.[25]

As part of the agreement, the EU and the U.S. also resolved to negotiate, within a period of two years, "global steel and aluminium arrangements" to simultaneously address a shared concern about excess steel and aluminium output from countries that do not meet conditions of market orientation – so-called non-market excess capacity – as well as the industrial emissions from each sector. As justification for such arrangements, their joint statement argues that "excess capacity generates unnecessary greenhouse gas emissions, deflates prices of high emissions products and hinders the development and scaling up of competitive solutions for lower emissions production."[26] To meet the global ambition of these arrangements, the statement further clarifies that the "United States and the EU will invite like-minded economies to participate" in the pursuit of market-oriented conditions and reduced carbon intensities of steel and aluminium, and intend to consult about "bringing these matters into relevant international fora for discussion, as appropriate."[27]

Substantively, the participants in such arrangements would commit to a set of actions that amount to restricting market access for non-participants that do not meet conditions of market orientation and contribute to non-market excess capacities, or that do not meet standards for low-carbon intensity; ensuring that domestic policies support the objectives of the arrangements; refraining from non-market practices; consulting on government investment in decarbonization; and screening inward investments from non-market-oriented actors. To facilitate these negotiations,

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[22] United States and European Union, "Steel & Aluminum: U.S.-EU Joint Statement", 31 October 2021, https://ustr.gov/sites/default/files/files/Statements/US-EU%20Joint%20Deal%20Statement.pdf.

[23] Uri Dadush, "What to make of the EU-US deal on steel and aluminium?", Bruegel Blog, 4 November 2021, https://www.bruegel.org/blog-post/what-make-eu-us-deal-steel-and-aluminium.

[24] Currently, the tariff rate quotas for steel imports from the EU are set at 3.3 million metric tons, and for aluminium imports at 384 thousand metric tons; in 2022, the EU exported 3,431,265 metric tons of iron and steel products (HS Code 72) and 399,404 metric tons of aluminium products (HS Code 76) to the U.S., see Eurostat, *supra*, n. 19.

[25] See World Trade Organization (WTO), *United States – Certain Measures on Steel and Aluminium Products: Recourse to Article 25 of the DSU*, WTO Doc. WT/DS548/19, 21 January 2022, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/548-19.pdf&Open=True; *European Union – Additional Duties on Certain Products from the United States: Recourse to Article 25 of the DSU*, WTO Doc. WT/DS559/7, 21 January 2022, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/WT/DS/559-7.pdf&Open=True.

[26] United States and European Union, supra, n. 22.

[27] Ibid.

the EU and the U.S. announced the establishment of a technical working group that "will, among other things, confer on methodologies for calculating steel and aluminum carbon-intensity and share relevant data."[28]

Achieving progress on the negotiations of such global arrangements has not been without challenges, however. A set of concept notes by the U.S. Trade Representative (USTR) and the European Commission Directorate General for External Trade (DG TRADE) outlining the positions of each side circulated more than a year after negotiations were launched highlighted fundamental differences on issues such as the conditions of participation, the choice of measures to address excess capacities, and, importantly, the instruments to achieve a reduction in the carbon intensity of steel and aluminium imports, including the role of public procurement and subsidies.[29] Still, in a joint statement released in March 2023, both sides reaffirmed their commitment "to achieving an ambitious outcome in the Global Arrangement on Sustainable Steel and Aluminum negotiations by October 2023."[30]

Despite continued negotiations, however, the EU and the U.S. failed to reach an agreement on these issues by that deadline. Although both sides used the U.S.-EU Summit between U.S. President Joseph R. Biden and European Commission President Ursula von der Leyen in late October to claim "substantial progress to identify the sources of non-market excess capacity" and "a better understanding of the tools to address the emissions intensity of the steel and aluminum industries",[31] they had already previously decided to extend the negotiation deadline by two months.[32] To do so, EU Member States had to first renew the authorization to negotiate a non-binding instrument (NBI).[33]

Even if the parties have been reluctant to concede so openly, the attempt to simultaneously pursue several economic and environmental policy objectives with a negotiated agreement has been fraught by markedly different priorities and resulted in a stalemate.[34] In the most recent development, the parties are said to be considering an extension of the negotiating deadline by two

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[28] Ibid.

[29] Michele Rimini, Jonny Peters, Domien Vangenechten, and Johanna Lehne, *The EU–US global arrangement on sustainable steel and aluminium: Resetting negotiations for a carbon-based sectoral agreement* (London: E3G, 2023), https://www.e3g.org/wp-content/uploads/EU-US-global-arrangement-on-sustainable-steel-and-aluminium-briefing.pdf.

[30] The White House, "Joint Statement by President Biden and President von der Leyen", 10 March 2023, https://www.whitehouse.gov/briefing-room/statements-releases/2023/03/10/joint-statement-by-president-biden-and-president-von-der-leyen-2.

[31] United States and European Union, "U.S.-EU Summit Joint Statement", 20 October 2023, https://www.consilium.europa.eu/media/67448/us-eu-statement-final.pdf.

[32] Camille Gijs and Sarah Anne Aarup, "E.U., U.S. push back deadline for green steel deal, diplomats say", 9 October 2023,

[33] Council of the European Union, "Joint Statement with the United States of America on the Global Arrangement on Sustainable Steel and Aluminium: Authorisation to negotiate an NBI", 13617/23 POLCOM, 6 October 2023, https://data.consilium.europa.eu/doc/document/ST-13759-2023-INIT/en/pdf.

[34] David Kleimann, *Section 232 reloaded: the false promise of the transatlantic 'climate club' for steel and aluminium* (Brussels: Bruegel, 2023), https://www.bruegel.org/sites/default/files/2023-07/WP%2011.pdf.

years, until after the 2024 elections on both sides of the Atlantic, while maintaining the current status quo.[35] Even on that option, however, views apparently differ between the U.S. and the EU, with the latter said to oppose what it considers an imbalance in the current arrangement, tariff rate quotas that – because of how they are calculated on the basis of historical trade flows – expose around 20% of European steel to tariffs. At this point, it remains challenging to predict the trajectory and outcome of this contested process. The next subsection surveys the roots of this ongoing political gridlock.

2.3 Assessing the Failure of GSA and its Causes

As shown in the previous section, negotiations between the U.S. and the EU have reached a crucial juncture, with persistent differences on key aspects of the GSA preventing a successful conclusion of negotiations by the initial deadline. As such, these negotiations have illustrated the complex interplay between environmental, trade, and industrial policy objectives that both sides are seeking to simultaneously advance with the GSA. Diverging priorities on both sides of the Atlantic, each shaped by its own unique political economy and influential constituencies, have erected significant barriers to consensus on the means to achieving these concurrent objectives, and the tradeoffs that will invariably have to be navigated. A better understanding of the underlying causes of disagreement can help identify pathways towards reconciling differences and resuming progress on the GSA and its original vision of a roadmap for industrial decarbonization in the hard-to-abate sectors such as steel and aluminium production.

A core point of contention in the GSA negotiations has been the choice of mechanisms to advance the decarbonization of steel and aluminium production.[36] Whereas Europe has favored using the EU Carbon Border Adjustment Mechanism (CBAM), which it recently enacted after a lengthy period of domestic negotiations,[37] the U.S. has indicated its preference for a system of common external tariffs, tiered on the basis of emission benchmarks reflecting the emissions intensity of production in the most carbon intensive member of the global arrangement.[38] Importantly, the U.S. has also proposed that such a system of tiered tariffs supersede the EU CBAM or at least allow for

[35] Alberto Nardelli, Eric Martin, and Jorge Valero, "US, EU Seek to Extend Steel Truce Amid Stalemate on Longer Fix", *Bloomberg* (16 November 2023), http://www.bloomberg.com/news/articles/2023-11-16/us-eu-seek-to-extend-steel-truce-amid-stalemate-on-longer-fix.

[36] Rimini et al., *supra*, n. 29.

[37] European Union, Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism, PE/7/2023/REV/1, *Official Journal* L 130 (2023), 52-104, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0956.

[38] Ana Swanson, "U.S. Proposes Green Steel Club That Would Levy Tariffs On Outliers", *New York Times*, 7 December 2022, https://www.nytimes.com/2022/12/07/business/economy/steel-tariffs-climate-change.html. For a conceptual proposal along these lines that is said to have informed U.S. views on the desired outcome, see Todd N. Tucker and TImothy Meyer, *A Green Steel Deal: Toward Pro-Jobs, Pro-Climate Transatlantic Cooperation on Carbon Border Measures* (Washington, DC: Roosevelt Institute, 2021), https://rooseveltinstitute.org/publications/a-green-steel-deal-towards-pro-jobs-pro-climate-trans-atlantic-cooperation-on-carbon-border-measure.

bilateral exemptions. Both sides appear to agree on the importance of public procurement and the need for an ambition ratcheting mechanism, but again disagree on details, with the EU calling for a legally binding commitment to full decarbonization of both sectors by 2050.

Unsurprisingly, the expressed U.S. preference for a tiered tariff system that would potentially replace the recently adopted CBAM sharply contrasts with longstanding climate policy choices of the EU and the delicate political compromises that underlie these choices. After nearly two decades of arduous and incremental elaboration of an industrial decarbonization strategy that is inherently premised on carbon pricing through the EU Emissions Trading System (EU ETS), the EU is understandably reluctant to abandon or significantly modify a mechanism – the CBAM – that is widely considered an essential companion to the EU ETS as its climate policy ambition and the carbon price it reveals dramatically increase. Technical, legal, and administrative path dependencies run deep, matched only by the tenacity of entrenched stakeholder positions: the EU has, at this point, made too great a political investment in its current policy approach to risk unravelling the embedded compromises for the sake of securing a sectoral deal across the Atlantic.

Underpinning these policy disagreements are also important differences in the technological makeup of the steel industries in the U.S. and the EU. As mentioned in Section 2.1, primary steel production with blast furnace technology predominates in the EU, while U.S. steel production relies more heavily on scrap steel recycling in electric arc furnaces. Because the latter generally emits significantly less carbon, especially when powered by renewable energy, basing the GSA on uniform emissions intensity benchmarks would shield emission intensive producers in the U.S. and result in an uneven playing field across the Atlantic, disadvantaging European producers, who would prefer emission intensity benchmarks that distinguish by production technology or are even based on individual facility emissions. Accordingly, critics of the U.S. position have described it as "'green-washed' protectionist policy" that merely seeks to retain the competitive benefits of the Section 232 tariff increases for domestic producers without introducing any meaningful benefits for the environment.[39]

What is more, the divergence in views not only reflects differences in climate policy preferences, but also varying perceptions of the role of international trade cooperation and the international rules-based order. Overall, the EU sees itself as a beneficiary of that framework, and is thus more committed to upholding obligations of non-discrimination as well as the dispute settlement process established under the World Trade Organization (WTO). The U.S., by contrast, has been vocal in its criticism of the WTO and the rulings issued in past disputes, and has actively contributed to the current dysfunction of the dispute settlement process by blocking the appointment of new members to the WTO Appellate Body. Although its views on international trade cooperation and its economic relations with important trade partners such as China have also evolved in recent years, the EU remains more hesitant to adopt measures that overtly violate obligations it has entered under the WTO.

[39] Kleimann, *supra*, n. 34, at 3.

Consequently, the EU favors retaining the approach it has already embarked on, with a domestic carbon pricing system and a CBAM that it considers fully aligned with international trade rules as a permissible adjustment of an internal regulation at the border. By contrast, the U.S. preference for a tiered system of tariffs selectively applied against non-participants, with no matching domestic constraint on industrial emissions, reveals a far greater threshold of tolerance for potential trade law violations.[40] Because it would rely on average emissions intensity benchmarks, moreover, it would also pose a greater risk of discriminating against individual foreign producers that have successfully reduced their emissions, setting it apart from the EU CBAM, which applies to the individually reported and verified emissions in imported goods.[41] A difference in the perceived importance of international trade rules is also evident in the extensive inclusion of legal risky local content and sourcing requirements in the U.S. Inflation Reduction Act (IRA), which have added another layer of complexity and transatlantic tensions to the GSA negotiations. U.S. commentators have countered that outdated WTO rules should not restrict the soverign policy space of countries endeavouring to address an existential challenge such as climate change.[42]

Finally, the upcoming elections in both jurisdictions further complicate all the dynamics described above, as climate action becomes entangled with other politically charged priorities.[43] While industrial policy and accelerating decarbonization mandates will likely play a role in elections on both sides of the Atlantic, the outsized importance of the steel industry in decisive swing states such as Pennsylvania and Ohio will give these sectors considerable political influence ahead of the U.S. election. That also helps further explain the U.S. proposal to postpone the deadline by another two years, well past the presidential election in 2024 year. For the EU, meanwhile, investing political credibility and diplomatic effort in negotiations that could be abandoned the moment a new U.S. administration takes office is also likely to appear unappealing. All this suggests that advancing several interlinked agendas all at once in the GSA negotiations will prove nearly impossible until after the elections, and even then will remain a formidable challenge that may require a thorough rethinking of both the objectives of the GSA and the approaches to achieve them.

[40] Inu Manak and Helena Kopans-Johnson, "In Green Steel Discussions, the United States Is Playing Dirty", Council on Foreign Relations, 8 November 2023, https://www.cfr.org/blog/green-steel-discussions-united-states-playing-dirty.
[41] Kleimann, *supra*, n. 34, at 10.
[42] Lee Harris, "U.S. and EU Struggle to Form Green Steel Club", *The American Prospect*, 11 October 2023, https://prospect.org/economy/2023-10-11-us-eu-trade-green-steel-club.
[43] Emilie Kerstens and Johanna Lehne, "Re-Greening the Global Steel Arrangement: Short Term Ambitions for Long Term Success", E3G, 27 October 2023, https://www.e3g.org/news/re-greening-the-global-steel-arrangement-short-term-ambitions-for-long-term-success.

3 Revitalizing the GSA and its Green Promise

3.1 Strategic Accommodation: How to Deal with Different Approaches

The previous section identified one of the key obstacles to progress in the GASSA negotiations up to this point, at least with respect to the environmental element of the talks: the different approaches employed by the U.S. and EU to foster decarbonization in the steel and aluminium sectors. While the EU relies primarily on the carbon price transmitted by the EU ETS, the U.S. relies primarily on the kinds of support for decarbonization found in the Inflation Reduction Act. The negotiating positions and objectives of the two in the GSA process have been informed by those approaches, with the result that little progress has been possible.

Here the GSA can serve as a microcosm of the broader challenge. Every country's or jurisdiction's climate policies are fundamentally rooted in the unique circumstances of the location – the history, politics, economic realities, regional divisions, natural resource endowments, administrative capacity, and other shaping factors. In each country there is a web of regulations and laws that address various facets of climate policy, from carbon pricing to product efficiency standards to air quality laws to green industrial policy. And each national configuration of policies is the result of difficult politics – often of hard-fought battles that struggle to balance the interests of incumbent producers, new market entrants, consumers, civil society organizations, labour, indigenous peoples and others. The end result is that each country's or jurisdiction's approach is different, sometimes in fundamental ways, and that none will be easily revised to accommodate the interests of international cooperation, however urgent the need.

In the GSA context, this reality leads to statements from the U.S. side such as:

> "To think that Europe can coerce the US to adopt carbon pricing or get rid of its marquee climate policy as the price for a bilateral deal on steel is, to be polite, unrealistic and thus not a productive proposal. The US approach was hard-fought, and even attempting to unravel it would risk the US having no climate policy at all."[44]

And it leads to strikingly similar statements from the EU side:

> "A transatlantic carbon customs union … would require integration at the level of the deficient US policy toolkit. As a result, the EU would have to shelve its CBAM regulation, unlink its CBA policies from its mature and tested ETS … . It appears out of

[44] Tucker, T. N., & Meyer, T. (2023). *Responding to Critics of the Global Arrangement on Sustainable Steel and Aluminum*. Roosevelt Institute. https://rooseveltinstitute.org/2023/07/18/responding-to-critics-of-the-global-arrangement-on-sustainable-steel-and-aluminum/

the question that the Union's institutions would accept demands with such far reaching implications for existing and very recently adopted domestic legislation."[45]

There is a clear need for platforms or architectures of international collaboration that can countenance different approaches to climate policy. In the specific context of the GSA, one possible candidate is agreement on product carbon requirements (PCRs) – maximum GHG intensity standards in steel and aluminium as a condition of sale on domestic markets.[46]

PCRs would restrict the production or import of aluminium or steel produced above an agreed level of GHG-intensity. The level could be set to increase in stringency according to an agreed schedule. This platform for cooperation could co-exist with both the EU and U.S. policies, adding a minimum standard to – rather than supplanting – the EU CBAM and backstopping the U.S. industrial policy support with a floor level of decarbonization. And it would arguably fulfil the negotiating mandate of the GSA, according to which the participants have agreed to "restrict market access for non-participants that do not meet standards for low-carbon intensity."

Such a platform could also accommodate the sort of different starting points described in the previous section for steel production in the U.S. and the EU: the U.S. has a lower average GHG-intensity of production for steel than does the EU, in part based on wider use of electric arc furnace steelmaking as a production route. This difference has been the source of transatlantic disagreement on what common standard to use in assessing the carbon content of steel products and production. A technology-agnostic standard, based just on GHG-intensity of production, would favour relatively clean electric arc furnace producers, who are in the majority in the U.S., while a standard that assigned different benchmarks to the two different production routes would grant more lenient treatment to the more GHG-intensive blast furnace and basic oxygen furnace producers, who are in the majority in the EU.

There are viable solutions to this disagreement. They involve single methodologies that aim to provide decarbonization incentives to both primary and secondary steel producers. That could involve, for example, a sliding scale that demanded lower GHG intensity the more scrap steel was used in production.[47] The standard could be made dynamic, such that the expectations of secondary producers strengthened more quickly over time, and at an agreed future point there was convergence on a technology-agnostic standard (on a timeline that allowed for transformative investments).

The necessary characteristic of solutions to the ubiquitous challenges of different approaches and different starting points is *strategic accommodation*: the ability to accommodate such entrenched

[45] Kleimann, D. (2023a). *Section 232 Reloaded: The False Promise of the Transatlantic "Climate Club" for Steel and Aluminium* (Bruegel Working Paper 11/2023). https://www.bruegel.org/sites/default/files/2023-07/WP%2011.pdf

[46] Shawkat, A. & Cosbey, A. (forthcoming). *A Vision for International Trade in CO_2-Intensive Materials.* Agora Industry.

[47] Arcelor Mittal is advocating for such a standard. See https://corporate-cm-prod.arcelormittal.com/climate-action/low-carbon-emissions-steel-standard.

differences—with the agreed understanding that they will diminish over time—in the interest of building international cooperative efforts. Such solutions are politically difficult because, for the higher-standard participant, they involve applying a less stringent standard to foreign production than is applied domestically. For this to work the differences cannot be too great, there must be expectation of convergence, and the political difficulty must be outweighed by the desire to bring other participants into the arrangement.

3.2 Identifying Viable Areas and Instruments of Cooperation

The GSA could ultimately comprise many different elements of international cooperation. The most obvious are on the explicit undertakings spelled out in the negotiating mandate, such as addressing non-market excess capacity, addressing high carbon intensity, screening inward investment. Given the scope and objectives of the arrangement, the list could also include cooperation on GHG intensity standards, on carbon pricing, on the use of industrial subsidies.

Each candidate subject for cooperation would need to be assessed on its merits, starting with an assessment of how amenable it might be to agreement.

Cooperation on GHG-intensity standards stands out as an obvious candidate on that criterion, and is perhaps the most crucial for success in the objectives of the arrangement; standards are the building blocks of the arrangement's environmental goals. There has been no shortage of initiative in the area of standards for steel in particular; in fact the challenge is trying to reconcile the many ongoing efforts. A non-exhaustive IEA list of emissions measurement methodologies in the steel sector counted ten methodologies spearheaded by eight organizations.[48]

Those numbers may overstate the challenge. A standard useful for the purposes of government procurement or PCRs, such as ISO 14404, would necessarily look different from a consumer-facing standard such as Responsible Steel's International Standard, or WorldSteel's CO_2 standard which is intended to deliver industry-wide average figures. And many of the standards are derivative, sharing common features. The IEA's Net Zero Principles[49] provide a good basis on which to work toward agreement in this space.

Carbon pricing may be at the other end of the spectrum in terms of promise and value as a subject for international cooperation. The U.S. political economy and its chosen approach to climate policy essentially rule out adopting a carbon price to harmonize its approach to that of the EU. Also challenging would be agreement on the use of industrial subsidies to support decarbonization in sectors like steel and aluminium, including on the propriety of subsidies conditioned on local

[48] IEA. (2023). *Emissions Measurement and Data Collection for a Net Zero Steel Industry*. https://iea.blob.core.windows.net/assets/8f6568aa-1dd8-4578-bc61-24ceba4a07dd/EmissionsMeasurementandDataCollectionforaNetZeroSteelIndustry.pdf
[49] *Ibid*.

content requirements, given the vast differences between Brussels and Washington in terms of fiscal space, tax policies and spending authority.

The forum for cooperation is also important. There has been solid negotiating progress within the GSA on cooperation in the area of addressing non-market excess capacity; the GSA provides a useful platform for those discussions. Cooperation on GHG intensity standards, on the other hand, would probably be best advanced in other fora, given that efforts at coordination are already ongoing elsewhere, and given that a bilateral discussion may not be conducive to a standard that could help advance needed broader international coordination.

3.3 What Role for the CBAM in a GSA Outcome?

It was argued above that any pragmatic way forward in the GSA talks would have to hinge on finding platforms for strategic accommodation, for allowing fruitful cooperation within the framework of the existing and entrenched policy approaches in both the US and the EU.

The CBAM is a centrepiece of the EU Green Deal's Fit for 55 climate package. It is the enabling mechanism that allows for the critically important reform of the ETS that will see free allocation phased out and a full carbon price imposed on EU producers of covered goods. Its entry into law capped a hard-fought political process, and its successful passage through the trialogue process of negotiation among the Council, the Commission, and the member states as represented by the EU Parliament, was never assured. If the GSA is to find a way forward, it will have to be one that does not threaten the integrity of the CBAM.

As noted above, this is not an impossible challenge. An arrangement that focused on PCRs as a platform for cooperation could exist alongside the CBAM in a complementary role.

Alternatively, the CBAM would have irreconcilable conflicts with a GSA that incorporated a common external tariff on non-members with high GHG intensity, and that exempted participants from CBAM obligations. Imposing tariffs on imports of steel and aluminium as well as a CBAM charge would amount to double charging imports for their carbon content. Charges in excess of what EU producers pay under the ETS would certainly be challenged as a breach of WTO obligations, and would further aggravate the political backlash from trading partners engendered by the CBAM alone. While mechanisms could be considered that credit any tariffs paid towards the CBAM payment obligation, these still would not solve another key element of the tiered tariff approach favored by the U.S.: exempting the GSA participants from CBAM obligations would likely be found to be in breach of the GATT's Most-Favoured nation principle, and not justifiable under the GATT's General Exceptions.[50]

[50] Reference to EU-Seals AB decision on Article XX chapeau.

4 Realizing the "G" in "GSA": How to Broaden Participation

4.1 Why the GSA Needs to Expand beyond the EU and US

As discussed in Section 2.1, the locus of steel and aluminium production has increasingly shifted to emerging economies, with China alone contributing more than half of global output of each commodity. Not only that, but future demand and supply growth will remain concentrated in the developing world, where emissions intensities of production – which currently are, on average, substantially higher – will decline more slowly than in Europe and North America given the timeline of decarbonization commitments already entered under the Paris Agreement and domestic policies.

Any arrangement that merely tackles the carbon intensity of EU and U.S. steel will thus fail to meaningfully address the decarbonization challenge in these hard-to-abate, emissions- and capital-intensive sectors. Over the medium to longer term, it is therefore imperative that the GSA remain inclusive and broaden participation to countries outside Europe and North America, including middle and low-income countries. Put differently, global emissions from steel and aluminium cannot be reduced in line with committed decarbonization targets without involving rapidly growing emerging economies such as China.

This imperative is not just a matter of expedience to achieve the agreed objectives of the GSA, but also a political necessity to both promote decarbonization in rapidly growing emerging economies and developing countries around the world, and to foster cooperative ties in a period that has recently been characterized by mistrust and acrimony, in which developed countries are seen as falling short on climate finance and other support commitments entered over a decade ago, and instead have turned to deployment of controversial unilateral actions – including trade measures such as the CBAM, but also public procurement conditions, product standards and supply chain due diligence requirements – that extend climate policy preferences and levels of policy ambition beyond their territory and intentionally or unintentionally influence policy decisions in the developing world.

Unsurprisingly, a widely held view in developing countries considers such measures a violation of the nationally determined architecture of the Paris Agreement and the principle of common but differentiated responsibilities and respective capabilities that forms a foundational component of the carefully calibrated compromises underlying the international climate regime. Exacerbating such existing frustrations with a closed GSA, especially if it also seems to pursue discriminatory or protectionist goals, risks further alienating countries whose participation in international climate cooperation will be absolutely essential to solve the global decarbonization challenge.

4.2 Aligning Conditions and Incentives for Participation

What mixture of conditions and incentives could hit the sweet spot, making participation in a GSA inviting to the world's major producing countries, but not diluting the conditions of membership unduly in order to do so?

If the U.S. and the EU were to choose an agreed timetable for convergence on PCRs as a condition of sale on their domestic markets, the same strategic accommodation that allowed the EU to participate could be used to accommodate others with different starting points. The key question is whether participants in the GSA would receive treatment more favourable than non-participants. They might, for example, be allowed some flexibility on the threshold for GHG-intensity of production, as long as they had agreed to a timeline for convergence.

Such an arrangement might be a powerful incentive for participation, but it would carry some drawbacks. First, as with any such "club" arrangement, it would likely contravene the GATT's Most-Favoured Nation principle. Second, it might temporarily (until convergence) disadvantage producers from within the arrangement that had invested in costly low-carbon technology to meet requirements from which others were being exempted – a problem that would be more significant the wider the gap between high-standard jurisdictions and low-standard jurisdictions, and the slower the timeline to convergence.

An essential piece of the instrument mix would have to be assistance for accelerating the low-carbon transition in jurisdictions with lower initial standards. This would be more effective as pooled resources from the entire membership, and might be directed at such things as de-risking finance for industrial low-carbon transition, export credit for technology transfer, technical assistance/capacity building and so on.

Participants would have to weigh the costs of such support, and the costs of risk of leakage and competitiveness impacts, against the benefit of bringing more producer countries into the agreement. At some point of critical mass, the risk of leakage in third country markets would start to abate as standards there strengthened.

5 Conclusions and Recommendations

The GSA negotiations are very much the product of this moment in history, founded as they are in the current Trans-Atlantic trade challenges, the hard realities of global trade patterns in steel and aluminum, and the climate crisis and its policy response. Yet they hold the potential for innovative international collaboration on these challenges, that transcends US-EU relations and helps advance global efforts to decarbonize and rationalize these sectors and others.

Steel and aluminium are fitting subjects of this effort. Despite economic trends and trade patterns that have resulted in a decline of domestic production, both remain politically and strategically important sectors in Europe and North America. Finding a viable solution to competitive pressures

as these hard-to-abate sectors decarbonize is going to be critical for global emissions neutrality, including in manufacturing and construction.

Surging production capacities of relatively more carbon-intensive steel and aluminum production in emerging economies, primarily in East, Southeast and South Asia, with less market orientation than the EU or the U.S. have contributed to these competitive pressures and threaten to undermine global decarbonization objectives.

However, despite close historical ties and broadly aligned political visions on international cooperation in the areas of trade and climate policy, the talks have foundered. The U.S. and the EU have substantially different starting points when it comes to addressing competitive pressures and decarbonization of the steel and aluminum sectors, owed to very different political economy contexts, diverging climate policy choices, and a markedly different structure of production in both sectors.

Such differences have been reflected in transatlantic trade conflicts involving both sectors, escalated by the introduction of tariffs on steel and aluminum imports during the Trump administration, and threatening a full-blown trade war that has been temporarily averted with the suspension of tariffs and judicial action pending the negotiation of the GSA. While both sides in the negotiations broadly agree on the objectives of addressing the twin challenges of excess market capacities and industrial decarbonization in the steel and aluminum sectors, negotiations have revealed fairly fundamental differences in the visions for a successful outcome that are owed to the aforementioned different starting points.

As regards the climate policy dimension of the GSA, these differences have become particularly manifest in the proposed choice of instruments to promote decarbonization of global steel and aluminum production, with the EU favoring an approach that aligns with its domestic carbon pricing regime and CBAM, whereas the U.S. has expressed a preference for a tiered tariff system based on emission intensity benchmarks that would supersede the CBAM. Neither side is likely to easily abandon their preferred approach, given deeply entrenched path dependencies in terms of climate policy instruments, complex stakeholder politics, and the expected benefits of each option for domestic producers. Both sides also differ in their concern about the role of WTO law. With both the U.S. and the EU entering an election year, it will be difficult to advance this complex agenda and its interrelated goals, calling for a rethink about viable ways to overcome the impasse.

However, it would be too easy in the face of these difficulties and recent setbacks to write off the GSA as an impossible prospect, with negotiating spans that are too far to bridge. A well-crafted deal that served as the basis for truly global efforts to decarbonize sectors that between them make up over 10% of global GHG emissions could be an important piece in the overall effort to address the climate crisis.

The only pragmatic way forward starts with the recognition that neither the U.S. nor the EU will suffer their hard-won domestic climate policy approaches to be fundamentally revised in the

service of this international agreement. Whatever success looks like, it must be founded in instruments of strategic accommodation.

One viable landing place for the negotiations is agreement on product-based maximum GHG intensity standards – PCRs – as a condition of sale of the domestic market. There are ways to craft these that can fulfill the ambitious climate-related mandate the two partners have set themselves, and can accommodate the different approaches and different industrial structures on each side of the Atlantic that have proven barriers in the negotiations to date.

In searching for a way forward, it is important to assess the various potential subjects of cooperation independently, for each asking what the chances of success are. It seems clear that the U.S. and the EU should collaborate on product-based GHG-intensity standards, but perhaps not on such issues as carbon pricing and subsidies. It is also important to consider where such cooperation is best seated, without assuming it can all be done within the boundaries of this bilateral discussion. Agreement on GHG-intensity standards, for example, might best be pursued in other fora where those talks are already progressing.

While accommodation of domestic priorities and circumstances in the EU and the U.S. will be critical to revive the GSA negotiations in the short term, it is equally clear that any future sectoral arrangement, to be effective, will have to remain inclusive and able to integrate emerging economies, where the majority of steel and aluminum is already being produced, typically with higher emission intensities, and were most of the future growth in production and consumption will also be concentrated.

A truly global GSA is worth pursuing. If we do hope to bring on board a critical mass of producing countries, the Arrangement would have to be founded on instruments of cooperation that could accommodate different approaches and starting points, and would have to contain measures to help decarbonize steel and aluminium production in developing countries.

Going forward, it will also become increasingly important to align efforts under the GSA with the growing number of public, private and hybrid initiatives that are sourcing and channeling investment, promoting innovation and the development of best practices, and fostering cooperation on aspects such as data collection and exchange to ensure an efficient division of labor and avoid replication of efforts.

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