



The EU's Carbon Border Adjustment Mechanism

A Piece in the Industry Decarbonization Puzzle

Carole MATHIEU

► Key Takeaways

- By 2035, the European Union (EU) must have fully replaced its unsustainable free allocation regime by an effective Carbon Border Adjustment Mechanism (CBAM). Yet, a rushed implementation may bring little climate benefit and additional strains on industrial competitiveness, in a context of soaring energy prices.
- Even with the CBAM as a complement, the EU emission trading scheme (ETS) is no silver bullet. Triggering large-scale investment in deep-decarbonization projects across the EU requires a package of well-coordinated policies, including those enabling crucial access to affordable low-carbon electricity.
- Climate clubs are not a credible alternative to the EU's CBAM, nor desirable amid the geopolitical crisis. Instead, the EU should convince all large industrial countries that the race for clean manufacturing requires guiding principles, to avoid undue distortion of trade and ensure a fair industrial transition globally.
- Setting expectations about CBAM at the right level – both internally and externally – is the best way to support the EU's green industrial policy while containing diplomatic tensions.

Introduction

As of January 1, 2023, the European Union (EU) will gradually phase in a Carbon Border Adjustment Mechanism (CBAM). Highly sensitive from a climate diplomacy perspective, the world's first attempt to address emissions embedded in imported goods is a salient feature of the French EU presidency policy agenda. Moreover, it has gained explicit support from Germany's new government, despite the initial concerns over trade retaliation risks and the negative impact on Germany's export-oriented economy.

The political promise behind the CBAM is to reconcile the EU's climate and trade objectives, a perfect fit with the Green Deal's ambition of building a climate-neutral and prosperous economy. It is intended to level the playing field between domestic producers and external EU competitors, at a time when the EU embraces systemic change through the Fit-for-55 package. This requires sectors covered by the emission trading scheme (ETS) – essentially power & heat generation and large industrial installations – to reduce emissions by no less than 61% in 2030, compared to 2005 levels.

Competitiveness concerns are heightened by the war in Ukraine

And yet, EU industry is unconvinced that the CBAM will turn climate action into a competitiveness factor, and concerns are heightened by the war in Ukraine and the unavoidable worsening of energy and supply chain crises. Only a small handful of industrial sectors volunteered for

inclusion in the initial scope of the CBAM, while the four which were selected in the European Commission (EC) proposal (cement, steel, aluminum, and fertilizers – on top of electricity) are lobbying against any decrease of their free allowances before the CBAM proves itself to be effective in tackling carbon leakage.¹ They warn of weakening of anti-leakage protection and large increases in carbon costs, which would not only put their competitiveness under additional strain but also reduce their ability to invest in decarbonization. In today's inflationary context, this “economic pain/no climate gain” scenario is equally off-putting for EU policy-makers.

So, what is the way forward? This *Briefing* explores ways to reconcile views by defining reasonable expectations with regards to the introduction of the CBAM. It stresses the complementarity of the CBAM with other internal and external industrial policy tools to drive the decarbonization of European and global energy-intensive industries.

1. CEMBUREAU, EUROFER, “Fertilizers Europe, Eurométaux, European Aluminum”, *Joint Statement by energy intensive sectors on the CBAM*, January 25, 2022, available at: www.eurofer.eu.

The CBAM Must Be Introduced to Replace the Unsustainable Free Allocation Regime

An important clarification is that the CBAM is not the response to a current lack of anti-carbon leakage protection. Until now, energy-intensive and trade-exposed industries have been largely shielded from the EU ETS price signal. They are entitled to receiving free allowances, which are calculated on their historical output, and benchmarks set by the average climate performance of the best 10% installations for each type of industrial process. The protection is partial and degressive as benchmark levels are tightened every year, but ETS prices also remained at a relatively low level until 2018-19. Hence, EU industries have faced a weak carbon price incentive so far, not mentioning the partial refunds (up to 75%) granted in 14 Member States to compensate indirect carbon costs: i.e., the higher electricity prices that industrial firms incur because their energy suppliers are subject to the ETS.² Thanks to these measures and although the other jurisdictions have no, or less, stringent carbon price schemes, ex-post studies have found no evidence of carbon leakage in EU manufacturing industry.³

In terms of emission reduction within ETS sectors, the largest share of the abatement effort has been carried out by the electricity sector: energy efficiency + renewables expansion + coal-to-gas switching led to a fall in emissions of -41%, from 2010 to 2020. By contrast, industrial emissions have only been slightly reduced, by -0,5% in the same period.⁴ The free allocation system was always meant to be a transitional measure to full auctioning. It is now time to prepare for its complete phase out, for at least four reasons:

- First, heavy industries operate in long investment cycles (20-30 years) and a significant share of existing EU assets will require major refurbishments by 2030 (between 30% and 50% of cement and steel plants for instance).⁵ This means that the 2020s are critical for kick-starting the large-scale deployment of breakthrough technologies delivering deep emission cuts. For the sake of the EU's 2050 climate neutrality target, investors need to be convinced that if they continue to invest in conventional technologies, they will face stranded assets. North American and Asian competitors are also in the starting blocks of the clean manufacturing race, so it is the right time to strengthen the investment signal for European companies.⁶

2. The countries are: Belgium, Czech Republic, Finland, France, Germany, Greece, Italy, Lithuania, Luxembourg, the Netherlands, Poland, Romania, Slovakia and Spain.

3. H. Naegele and Z. Aleksandar, "Does the EU ETS Cause Carbon Leakage in European Manufacturing," *Journal of Environmental Economics and Management*, Vol. 93, January 2019, pp. 125-147, available at: www.sciencedirect.com.

4. European Environment Agency, *EU Emissions Trading System (ETS) data viewer, 2022*, available at: www.eea.europa.eu.

5. O. Sartor, A. Cosbey and A. Shawkat, "Getting the Transition to CBAM Right: Finding Pragmatic Solutions to Key Implementation Questions", *Agora Industry*, February 2022, available at: www.agora-energiewende.de.

6. M. Pooler, "Green Steel: The Race to Clean Up One of the World's Dirtiest Industries", *The Financial Times*, February 14, 2022, available at: www.ft.com.

- In addition, prime movers are often at a disadvantage with the shielding approach. Benchmarks rules have been based on the prevailing production routes, with operators switching to low-carbon processes (e.g., production of hydrogen through electrolysis of water) not being entitled to receive free allowances. As an interim solution, the EC has offered to change the implementation legislation (i.e., provide additional product benchmarks and revise definitions) to incentivize the use of low-carbon production routes. The EU Parliament is also discussing a bonus-malus system for installations below or above benchmark values.⁷ Such additional layers of administrative complexity may be necessary in the short-term, but they also underline the growing unmanageable side-effects of the free allocation regime.
- In its proposal, the EC decided not to put an end-date on the free allocation system and preferred strengthening all related parameters. In the first place, the maximum annual update rate of benchmarks stands at 2.5% as of 2026 (up from the current 1.6%). To receive their full share of free allowances, installations will also need to implement the conclusions of the mandatory energy audits required by the Energy Efficiency Directive. And finally, the total amount of free allowances will be further reduced by the cross-sectoral correction factor (CSCF), as the ETS cap on yearly emissions will be significantly reduced in 2024-2030. The CSCF is applied to ensure that the total volume of free allowances does not exceed 43% (or possibly 46%) of the total yearly cap. Even without an end-date, the free allocation regime is bound to lose steam.
- Finally, the strong increase in ETS prices is also strengthening the value of the free allowances granted to industries. Assuming a 80 euros per ton (€/t) average CO₂ settlement price for 2022, the 520 million allowances to be granted for free will represent a record €41.6 billion (bn) shortfall in revenues which could be used to finance climate expenditures. Opting for rigorous application of the 'polluter pays' principle is even more justified in a context in which EU policy-makers intend to introduce carbon pricing schemes for road transport and heating fuels, with direct power purchase implications for final consumers.

Looking forward, the CBAM is the EU's best chance of shifting away from this unsustainable shielding approach and instead going for the full exposure of domestic industries to the ETS price signal, while requiring importers to incur an equivalent carbon cost constraint. The next question is how fast such a shift can be effectively implemented.

7. EU Parliament ENVI Committee, *Draft Report* on the proposal for a directive amending Directive 2003/87/EC establishing a system for greenhouse gas emission allowance trading within the Union, January 24, 2022, available at: www.europarl.europa.eu

2023-2035: Twelve Years to Establish A Fully-Operational CBAM

The Fit-for-55 package is all about systemic change. But, along with the EC's proposal for a very cautious introduction of the CBAM in five sectors, it may look to be out of step with the climate emergency: there are only reporting obligations during the 2023-2026 test phase, while actual payments will carry a 10-percentage point decrease in free allowances each year, with the CBAM being applied proportionally in 2026-2035. On these grounds, the lead rapporteur at the EU Parliament's Environment Committee proposed to strengthen the climate ambitions of the CBAM by widening its initial scope (to organic chemicals, hydrogen & polymers), extending its application to indirect emissions from electricity supplies and accelerating CBAM implementation to achieve a complete phase out of free allowances in all sectors covered by 2028.⁸ But is it worth rushing the first steps of implementation?

Industry Decarbonization Is Driven by Medium-Term Carbon Price Signals, Not the Short-Term Ones

After electricity and transport, energy-intensive industries are the latest sector to engage in a deep transformation process and a sign of the times is the growing number of studies highlighting sectoral climate neutrality pathways for each sector.⁹ All tend to argue that "traditional" potential areas of emission reduction (such as energy efficiency and fuel substitution) have already been largely exploited, while the next urgent step is the massive roll out of breakthrough solutions (e.g., direct use of decarbonized electricity, decarbonized hydrogen, carbon capture and storage (CCS) technologies, high use-rates of recycled materials).

Looking at the EU steel sector, the past few weeks have been marked by a remarkable acceleration of deep-decarbonization investments, and the front-runners' project delivery dates refer to 2030-2033: SSAB will invest €4.2bn to replace all its Nordic blast furnaces with direct reduced iron (DRI) plants, and electric arc furnaces (EAF) based on fossil-free electricity and hydrogen by 2030; Salzgitter is opting for the same transformation of all its assets in Germany by 2033; and ArcelorMittal announced a €1.7bn investment by 2030 in DRI and EAF technologies for its Fos-sur-Mer and Dunkirk production sites. Yet, even if such massive investments become widespread, their execution and related climate benefit take years to materialize.

8. European Parliament ENVI Committee, *Draft Report on the Proposal for a Regulation of the European Parliament and of the Council Establishing a Carbon Border Adjustment Mechanism*, December 21, 2021, available at: www.europarl.europa.eu.

9. See for example: EUROFER, *Low Carbon Roadmap: Pathways to a CO₂ -Neutral European Steel Industry*, November 2019; Fertilizers Europe, *Paving the Way to Green Ammonia and Low-Carbon Fertilizers*, June 2020; CEMBUREAU, *Cementing the Green Deal – Reaching Climate Neutrality along the Cement and Concrete Value Chain by 2050*, May 2020.

The question of an early removal of free allowances is even more sensitive as EU ETS prices came close to €100/t in February 2022, whereas the EC's impact assessment of the upcoming ETS reform assumed a €50-85 price range for 2030. Carbon prices had more than doubled year-on-year and a large part of the increase was linked to the strongly higher demand for quotas in the electricity sector, due to the combination of a tight gas market, lower than expected nuclear and wind output pushing up high-emitting coal-fired generation (+18.6% in 2021).¹⁰ Following Russia's invasion of Ukraine, the ETS price collapsed by 35%, but the fundamentals remain unchanged, and the potential loss of Russian gas supplies would inevitably strengthen the role of coal-based electricity and push carbon prices up. In this context, a hasty phase out of free allowances would only exacerbate short-term competitiveness concerns.

The Importance of a Gradual CBAM Implementation to Handle A Growing Level of Complexity

The second challenge relates to ensuring the effectiveness of the CBAM and thus the ability for covered sectors to pass through their carbon costs. The introduction of the CBAM is: a practical headache due to the necessity of calculating emissions embedded in imported products and defining reference levels; an administrative headache due to the necessity of collecting, monitoring, and verifying data; and a legal headache due to the necessity of ensuring compliance with current World Trade Organization (WTO) rules. Thus, the feasibility criterion has weighed the most in the EC's decision to propose a "first phase of the CBAM" with a limited scope of well-identified products, a focus on direct emissions only, and gradual implementation.

The logical next step will be to expand the CBAM

With its cautious approach, the EC's proposal is robust enough to make the CBAM enforceable, but it cannot be the end of the story. The logical next step will be to expand the CBAM to more sectors and thus remove a potential competitiveness bias between CBAM sectors and non-CBAM sectors, but also include more intermediate and/or final products to reduce the risk of shifting carbon leakage further down the value chains. Finally, the CBAM should ultimately cover indirect emissions from electricity while also taking due account of the specificities of the EU electricity market design. Indirect emissions already represent the largest climate impact in some sectors, and this trend is likely to strengthen as more industrial sectors turn to electricity as a way of decarbonizing their processes. Although challenging from a feasibility point of view, such developments are needed to make the CBAM the cornerstone of the EU's anti-leakage strategy by 2035. While sticking to the EU's cautious initial scope, EU policy-makers can already make a clear commitment to a much wider application of the CBAM

10. ACER, *Wholesale Electricity Markets Monitoring 2021 – Key Developments*, February 17, 2022, available at: <https://extranet.acer.europa.eu>.

and launch the preparatory work immediately. This way, industrial stakeholders would have a clear incentive to share their expertise and assist the EC in setting up the right methodologies. The medium-term investment signal would be strengthened without impacting short-term competitiveness.

However, industrial stakeholders have also flagged concerns which go beyond methodological issues and which refer to the actual impact of the CBAM on global trade flows. In the first place, they stress that the cost-competitiveness of EU producers will drop on global markets in the absence of export rebates. Yet, EU legislators struggle to address the issue without breaching the commitment to a WTO-compatible CBAM – the uncrossable red line. Second, the risk of circumvention cannot be ruled out. Exporters to the EU may change trade flows and direct their low-carbon products to the European market, while the remaining high-carbon products would continue to be sold domestically or elsewhere. In addition to “resource shuffling” practices, the incremental cost of the CBAM on foreign competitors may well be offset by state subsidies, diluting the EU’s attempt to level the playing field. Despite the EU’s best efforts in improving the design of the CBAM, global heavy industries have a long history of trade-distortive measures and there is no guarantee that extra-EU competitors will play by the EU’s CBAM rules. Therefore, the EU should not put all its eggs in the same basket.

The risk of
circumvention
cannot be ruled out

Complementing Carbon Price Signal with Well-Designed Supporting Policies

If EU industries are to be fully exposed to the ETS price signal by 2035, there should be a very clear case for accelerating decarbonization investments as of today, and so reduce future ETS compliance costs. Yet, ETS prices remain highly volatile as recent weeks confirmed, which means that investments in breakthrough technologies are unlikely to emerge, especially in the absence of carbon price floors.

Combining the CBAM with LCA Standardization Efforts

Hence, the political attention around the CBAM should not overshadow complementary initiatives which can also facilitate the pass-through of carbon costs. For example, Member States have started developing regulation based on the calculation of life-cycle emissions, such as France’s RE2020 which encourages the use of low-carbon materials in the construction sector with maximum thresholds expressed in kgCO₂eq/m². There is certainly merit in

targeting an EU-wide application of these standards through the Energy Performance of Buildings Directive, and replicating the initiative in other markets such as fertilizers.¹¹

If it covers a sufficiently wide range of product groups, the EU's upcoming Sustainable Product Initiative may also help streamlining Life-Cycle Assessments (LCA) and support green procurement strategies from both private and public stakeholders. For instance, the automotive sector is expected to be a leading sector for low-carbon steel demand because of the pressure from financiers and customers: Volvo signed a green steel collaboration agreement with SSAB in 2021, and Salzgitter concluded an offtake agreement with the BMW group in early 2022. Defining EU-wide LCA calculation standards will help such commitments to spread amongst downstream players, as their communication to end-customers will be facilitated. Compared to the CBAM, the environmental footprint approach is bound to face similar – if not higher – methodological hurdles, but they should be considered complementary responses to the same complex issue.

A Policy Package of Pull & Push Measures

Another way to bridge the gap between demonstration and commercialization of breakthrough technologies is to de-risk investments with direct public support, and this message is now well-understood at both the EU and national levels. As part of the latest ETS reform (2018), the EU launched the “Innovation Fund” focusing on the first industrial

implementation of innovative technologies for renewable energy sources, energy storage, CCS and energy-intensive industries. In 2020, the first call for proposals was launched with a €1 billion grant funding, that was 22 times oversubscribed (with 311 projects submitted of 7 selected projects).¹² These results confirmed industry's readiness and EU policy-makers are now all in favor of strengthening the Innovation Fund in the context of the new ETS reform. Its budget will be increased, notably through

the auctioning of allowances in sectors covered by the CBAM, and its scope will be extended to price-competitive tendering for carbon contracts for difference (CCfDs), covering the difference between an agreed CO₂ strike price and the actual ETS price. Yet, industrial stakeholders are still on a defensive position with regards to free allowances because the Innovation Fund is unlikely to be benefit to all sectors and all players, and there are also concerns about the delays in obtaining EU public support.

De-risking investment with direct public support

11. The Shift Project, *Décarboner l'industrie française sans la saborder*, January 20, 2022, available at: <https://theshiftproject.org>

12. European Commission, “EU Invests over €1 Billion in Innovative Projects to Decarbonize the Economy”, Press release, November 16, 2021, available at: <https://ec.europa.eu>.

At Member States level, industry decarbonization was an important component of the majority of submitted resiliency and recovery plans, although deep decarbonization was not necessarily a strong focus.¹³ The situation is about to change thanks to the revision of the EC's Guidelines on State aid for climate, environmental protection and energy, which increase the possibilities to grant aid for industrial decarbonization.¹⁴ Following the Dutch SDE++ scheme example,¹⁵ France is about to launch calls for deep decarbonization projects with a total budget of €4bn, while Germany is also working on the design of its CCfDs and industry transformation will be at the heart of the \$200 billion investment package proposed by finance minister Lindner to build a more independent and climate-friendly German economy.¹⁶

In addition, the EU and Member States play a crucial role in providing the related infrastructures: Europe's industry decarbonization hinges on the availability and affordability of decarbonized electricity supplies, decarbonized hydrogen and CCS opportunities. Successful and timely results in these areas will play on the advantage of domestic industries, as well as favorable contractual arrangements to access decarbonized energies and feedstocks. In the context of sky-high wholesale electricity prices and growing direct and indirect electrification needs, high electricity prices may turn out as the main leakage risk and several Member States are currently trying to facilitate long-term bilateral contracts between electro-intensive consumers and low-carbon electricity suppliers.¹⁷ Compared to the CBAM, a well-functioning internal market delivering abundant and affordable low-carbon electricity probably has much higher potential to support the EU's green industrial policy.

Member States play a crucial role in providing infrastructures

Ensuring a Fair Industrial Transition across the EU

Ultimately, strong reliance on Member States' fiscal capacities to support prime movers through direct support or public investments in enabling infrastructures carries the risk of creating a competitiveness bias within the internal market. While the Innovation Fund and the Connecting Europe Facility contribute to Europeanizing public support, cohesion policy funds can help fill in regional gaps, but they still have a limited budget compared to

13. L. Guevara Opinska *et al.*, "Moving towards Zero-Emission Steel", Publication for the ITRE Committee, European Parliament, 2021, available at: www.europarl.europa.eu.

14. European Commission, Executive Summary of the Impact Assessment Report accompanying the "Guidelines on State Aid for Climate, Environmental Protection and Energy 2022", January 27, 2022, available at: <https://ec.europa.eu>.

15. S. Cornot-Gandolphe, "Un nouvel élan pour le captage, stockage et utilisation du carbone (CCUS) en Europe", *Études de l'Ifri*, 2021, available at: www.ifri.org.

16. "Germany to Spend \$220 Billion for Industrial Transformation by 2026", Reuters, March 6, 2022, available at: www.reuters.com.

17. A. M. Vélez, "Spain Calls on EU to Endorse Renewable Energy Contracts for Industry", Euractiv, February 14, 2022, available at: www.euractiv.com.

the overall investment needs. A way to further level the playing field between Member States may be to exempt such climate-related investments from European fiscal rules and/or bet on the launch of a new EU joint borrowing scheme. However, a rigorous application of the updated State aid guidelines would still be necessary to avoid creating a race for subsidies and a widespread misuse of taxpayers' money.

Industry decarbonization requires strong strategic planning

Another discrepancy between Member States relates to their administrative capacities, not only to implement effective support schemes but also to encourage partnerships between national stakeholders in a value chain approach and anticipate structural challenges. Industry decarbonization is a three-decade journey which requires strong strategic planning in all Member States. From the outset, it must be acknowledged that transitioning to net-zero will also lead to winners and losers across Europe and within countries, since not all industrial sites will have access to the same technological options at the same cost. For example, only 20% of the French cement plants are close enough to potential CO₂ storage sites to be eligible for CCS technologies.¹⁸ Paying due attention to local circumstances and re-skilling challenges will be essential for successful and fair industry decarbonization across the whole of the EU.

Fostering a Global Conversation on Industry Decarbonization

The war in Ukraine is no reason to slow down the adoption of the CBAM. But will it ever be implemented? Back in 2012, the EU already had to give up on the inclusion of international aviation into the ETS, following threats from a 'coalition of the unwilling' to restrict EU carrier access to their airspace.¹⁹ Many trade partners have already voiced harsh reactions to the CBAM. The EU has every interest in establishing a CBAM on transparent and robust methodological bases, but the CBAM may still be instrumentalized in wider trade or geopolitical conflicts.

With more than 140 countries representing 80% of the global GDP now covered by a net zero target, there is a strong case for a global conversation on fair rules for industry decarbonization. The EU is not the only trade block pursuing industry decarbonization goals: the Biden administration recently announced new actions across federal agencies to "support American leadership on clean manufacturing," including support for clean hydrogen, additional efforts to mobilize investments in breakthrough technologies, green public procurement for low carbon materials and the use of trade policy to reward clean

18. ADEME, *Plan de Transition Sectoriel de l'industrie cimentière en France : Premiers résultats technico-économiques – Rapport de synthèse*, October 2021, available at: <https://librairie.ademe.fr>.

19. Sandbag, *Aviation and the EU ETS: What Happened in 2012 during "Stop the Clock?"*, December 2013, available at: <https://ember-climate.org>.

manufacturing.²⁰ In the course of 2022, the Chinese government is also expected to release carbon peaking implementation plans (before 2030) for its industrial sectors, focusing on cutting capacities but also promoting investment in deep decarbonization, notably in the iron & steel sector. Frontrunners in the sector, such as Baowu, are already working on clean hydrogen-based technologies (the Zhanjiang hydrogen furnace should start operations in 2023), and have committed to reaching carbon neutrality by 2050.

If the CBAM is often portrayed as disguised protectionism, all forms of standards and support schemes can be equally trade-distortive. In an ideal world, all regions of the world would adopt convergent frameworks, but this is unlikely to happen in a timeframe compatible with the climate emergency. In the context of the G7 Presidency, Germany advocates creating an “international climate alliance for climate, competitiveness and industry,” with some hope of adopting a minimum carbon price – mirroring the minimum corporate income tax agreed in 2021 – and joint anti-leakage instruments such as a CBAM.²¹ The intentions are good, but pushing for uniform practices at the G7 level risks being interpreted as a barrier to imports from developing countries and the focus on carbon pricing has little potential in the US political context.²² This said, there is a strong political appetite – and support from the powerful United Steelworkers Union²³ – to agree with the EU on “carbon-based sectoral agreements”, starting with the steel sector.²⁴ On the one hand, it is an opportunity for the EU to engage a dialogue on anti-leakage frameworks and avoid an outright rejection of its CBAM. On the other hand, picking up the one sector where US and EU producers currently have a better average climate performance than external competitors (due to a larger share of EAF steelmaking) is the best way to make the anti-leakage discussion explosive and exacerbate international divisions.

Avoid an outright rejection of the EU's CBAM

A wiser approach would be to reach out to all countries with large energy-intensive industries and a strong commitment to decarbonization, including the G7, but also at least China and India which represent 60% of global steel production.²⁵ This wider country coverage would come with a more reasonable agenda: defining common methodologies for calculating embedded emissions in key products, agreeing on the

20. The White House, “Biden-Harris Administration Advances Clean Industrial Sector to Reduce Emissions and Reinvigorate American Manufacturing,” February 15, 2022, available at: www.whitehouse.gov.

21. Federal Ministry of Finance, “Steps towards an Alliance for Climate, Competitiveness and Industry – Building Blocks of a Cooperative and Open Climate Club,” *Joint Key-issues Paper*, August 2021, available at: www.bundesfinanzministerium.de.

22. C. Mathieu (ed.), “Can the Biggest Emitters Set Up a Climate Club? A Review of International Carbon Pricing Debates”, *Études de l’Ifri*, June 2021, available at: www.ifri.org.

23. USW, “USW Supports Interim Arrangement with EU on Section 232”, Press Release, October 30, 2021, available at: <https://m.usw.org>.

24. The White House, “Fact Sheet: The United States and European Union to Negotiate World’s First Carbon-Based Sectoral Arrangement on Steel and Aluminum Trade”, October 31, 2021, available at: www.whitehouse.gov.

25. O. Sartor and S. Sourisseau, *La proposition de la Commission européenne sur le Mécanisme d’Ajustement Carbone aux Frontières (MACF) : analyse des modalités d’application*, February 2022, available at: <https://finance-climact.fr>.

types of green subsidies that are acceptable, developing guidelines for anti-carbon leakage frameworks deemed compatible with open trade, and joint commitments to support industry decarbonization in the least developed countries. After all, such guiding principles would be enough to support the EU's decarbonization plans, and they are less likely to heighten geopolitical tensions and more effective in triggering a global and fair industrial transition.

Carole Mathieu is Head of EU Policies at the Center for Energy & Climate of the French Institute for International Relations (Ifri). Her research areas primarily cover climate change policies and the transformation of energy systems, European energy policy and security of supply. Prior to joining the Ifri Center for Energy & Climate, she was an analyst at the French Energy Regulatory Commission (2010-2014). Holding a Master's degree in Public Administration – Energy from Sciences Po Paris, Carole Mathieu has also studied at Boston College (Massachusetts, U.S.).

How to quote this publication:

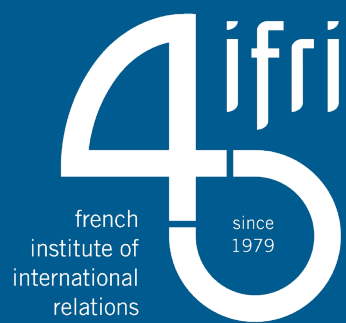
Carole Mathieu, "The EU's Carbon Border Adjustment Mechanism: A Piece in the Industry Decarbonization Puzzle", *Briefings de l'Ifri*, Ifri, March 9, 2022.

ISBN: 979-10-373-0506-0

The opinions expressed in this text are the responsibility of the author alone.

© All rights reserved, Ifri, 2022

Cover: © Iam Anuphone/Shutterstock.com



27 rue de la Procession
75740 Paris cedex 15 – France

Ifri.org

