

Executive summary

The companies represented by the European Round Table for Industry (ERT) – spanning sectors from (heavy) industry to technology and energy – are united by a shared, yet uneven, exposure to the EU Emissions Trading System (ETS1). As the next ETS1 reform approaches, the debate has become increasingly polarised, with sharply diverging interpretations of both the system’s past performance and its future role in Europe’s decarbonisation strategy. These differences are not abstract – they reflect fundamentally different industrial realities, cost exposures, and transition pathways across sectors, technologies and regions. This paper starts from that divergence. Rather than advancing a single narrative, it seeks to provide a clear-eyed stocktaking of where the ETS1 stands today, explain why perspectives at times differ so markedly, and identify a pragmatic way forward that can command broad support across the full diversity of ERT membership.

Over the past two decades, the ETS1 has proven to be one of the EU’s most effective decarbonisation instruments – particularly in the power sector, where a reliable carbon price coupled with comprehensive public support schemes, the availability of cost-competitive technologies, and the ability to pass through carbon costs, have driven substantial emissions reductions. While carbon pricing remains the most cost-effective and market-friendly policy tool available, the next phase of decarbonisation presents fundamentally different challenges. Energy-intensive industries face (significantly) higher abatement costs, often depend on untested emerging technologies and infrastructures that are not yet available at the required scale, and mostly operate in globally competitive markets where additional costs cannot easily be passed through.

As the system tightens towards 2030 and beyond – with a declining cap and the gradual phase-out of free allocation – these structural differences become increasingly consequential. Higher carbon costs alone are unlikely to deliver industrial decarbonisation where the necessary prerequisites are not in place. At the same time, decarbonisation conditions and costs vary widely across sectors and regions, including differences in trade exposure, technological readiness, and access to affordable clean energy across Member States. Without a carefully recalibrated policy framework, there is a material risk of undermining investment certainty – due to a lack of long-term credibility of the system – and further eroding Europe’s industrial competitiveness amid a renewed energy price crisis and intensifying global competition.

Against this backdrop, a successful ETS1 reform should preserve the system’s overall integrity as a market-based decarbonization instrument, while pursuing three core objectives:

1. **Ensure a credible carbon pricing trajectory** that supports long-term investments while maintaining market liquidity as the cap tightens
2. **Provide effective carbon leakage protection through a sector-specific approach** combining continued free allocation and indirect cost compensation with a carefully calibrated CBAM, complemented by additional instruments for sectors that cannot be adequately protected by CBAM

3. **Systematically reinvest ETS1 revenues in the decarbonisation of the sectors bearing the costs of the scheme**, including the necessary (cross-border) infrastructure

Firstly, to better align the ETS1 trajectory with climate neutrality by 2050 and ensure market liquidity post-2030, EU policymakers should:

- **Lower the Linear Reduction Factor for the next trading period** to better align the ETS1 trajectory with the EU's 2050 net-zero target, while remaining consistent with the evolution of the EU's broader climate framework
- **Reform the Market Stability Reserve to facilitate market liquidity post-2030** by adjusting its intake and release rules, ensuring non-invalidated allowances can be reintroduced into the market when needed, e.g. via earlier and more gradual releases
- **Potentially allow the limited use of high-quality international credits in ETS1**, while safeguarding the carbon price signal and environmental integrity, for example through centralized EU-level procurement (e.g. via a reformed MSR)
- **Integrate domestic carbon removals into the ETS1** from 2031 onwards, in line with the EU's Carbon Removals and Carbon Farming (CRCF) Regulation
- **Expand the geographical scope of the carbon market** within Europe, particularly through a timely linking of the EU and UK ETS

Secondly, EU lawmakers must guarantee an effective carbon leakage protection framework. This entails urgent cross-sectoral improvements to ETS benchmarks and CBAM design, as well as recognising that ETS1 sectors face varying leakage risks and protection challenges depending on their trade exposure and value chain complexity. Policymakers should therefore:

- **Refrain from further ETS benchmark updates until the methodology is revised to better reflect industrial realities**, for example by increasing the share of 'best-performing installations' in the reference group to improve representativeness
- **Expand CBAM to downstream products at factual risk of carbon leakage** to preserve Europe's industrial value chains, while also taking into account the rising administrative burden and compliance complexity for EU importers
- **Swiftly implement the newly proposed CBAM anti-circumvention safeguards**, including measures against harmful resource shuffling as well as the inclusion of pre-consumer steel scrap and all aluminium scrap as a precursor
- **Establish a permanent CBAM export solution** that maintains full free allocation for the share of EU production destined for exports – covering the entire production process emissions (including upstream), while also protecting downstream sectors
- **Slow the free allocation phase-out for CBAM sectors** from at least 2028 onwards and recalibrate it to reach zero significantly later than 2034, reflecting the time needed for industry to transform and for a new system to prove its effectiveness
- **Revert the CBAM factor to pre-2026 levels (i.e. 100%) if CBAM cannot effectively protect all covered sectors against carbon leakage**, as determined by the Commission's report due before 2028, which shall be based on objective criteria
- **Refrain from any horizontal scope extensions until the Commission's CBAM review report is published**, while ensuring any such extension provides effective downstream carbon leakage protection from the outset and is assessed case by case
- **Ensure that CBAM is under no circumstances extended to organic chemicals and polymers**, whose complexity makes it practically infeasible, while developing alternative carbon leakage protection instruments for the chemical industry

- **Potentially move towards a tiered approach that aligns free allocation more closely with sector-specific carbon leakage risks**, allowing limited free allocation volumes to be concentrated where they are most needed
- **Keep indirect emissions outside CBAM for now and instead prolong indirect cost compensation beyond 2030**, extending it to all electro-intensive sectors exposed to global competition and ensuring full compensation of indirect CO₂ costs
- **Require all Member States to fully use indirect cost compensation, potentially by mandating it in the ETS Directive** and ringfencing national ETS1 revenues accordingly, thereby enhancing visibility for companies seeking to (further) electrify

Finally, to ensure more effective use of ETS1 revenues while avoiding market distortions from frontloading, EU lawmakers and national governments should:

- **Dedicate a substantially higher share of (national) ETS1 revenues to decarbonising the sectors bearing the costs of the scheme**, including necessary energy infrastructure upgrades
- **Use the Industrial Decarbonisation Bank to organise EU-wide auctions** that avoid lengthy state aid procedures and provide CAPEX and temporary OPEX support, financed by ringfencing national ETS revenues for the best *domestic* projects
- **Avoid financing the ‘ETS Investment Booster’ through frontloading future auction volumes** to prevent ‘REPowerEU-like’ market distortions, and instead rely primarily on EU-level financing solutions similar to the EIB’s ETS2 frontloading facility

1) Introduction

Carbon pricing remains the most cost-effective tool for driving decarbonisation, as it allows markets to identify the most efficient pathways to reduce emissions and rewards innovation. The European Union Emissions Trading System (EU ETS1)¹ has been at the centre of Europe's climate policy for two decades and has made a decisive contribution to reducing emissions, particularly in the power sector. By establishing a robust carbon price signal and combining it with complementary policy support, the ETS1 has successfully accelerated the transition away from fossil fuels – particularly coal – and towards cleaner energy sources.² In doing so, it has reduced the EU's dependency on fossil energy imports, increasing both economic security and local value creation in Europe.

However, the next phase of the transition will be fundamentally different, as many energy-intensive industries face a far more complex decarbonisation challenge. While some clean technologies are already close to competitiveness in certain regions,³ industrial processes often require entirely new technologies, involving significant upfront investment (CAPEX) and persistently higher operating costs (OPEX), as well as large-scale infrastructure development. Moreover, many of these sectors operate in highly competitive global markets where producers outside the EU face significantly lower or no carbon costs. In this context, maintaining both industrial competitiveness and climate ambition requires a carefully calibrated policy framework – including effective carbon leakage protection and measures to create viable business cases for low-carbon production in Europe.⁴

As the ETS1 is entering a decisive new phase, the system is set to tighten significantly over the coming years, with the overall cap declining, free allocation gradually phased out, and the EU moving towards its 2050 climate neutrality objective. These developments raise a number of critical policy questions: how to ensure appropriate market liquidity as the cap declines; how to maintain effective carbon leakage protection; how to reflect structural differences across industrial sectors; and how to ensure that the revenues generated by the system are effectively reinvested into decarbonisation. They also highlight the need to synchronize the ETS1 with the build-out of the required infrastructure and functioning lead markets.

This paper argues that the future success of the ETS1 will depend on recognising the structural differences and challenges between sectors and technologies. While the system has proven highly effective in the power sector, pathways to full decarbonisation in energy-intensive industries are often more complex, unevenly developed, and constrained by global competition – limiting their ability to pass through carbon costs or the higher costs associated with low-carbon production. As a result, a one-size-fits-all approach risks undermining both the long-term credibility and effectiveness of the system.

A pragmatic and economically sound reform of the ETS1 should therefore pursue three overarching objectives. First, it should ensure a credible carbon pricing trajectory that supports long-term investments while maintaining market liquidity as the cap tightens. Second, it must provide robust and effective protection against carbon leakage through a sector-specific approach that combines continued free allocation and indirect cost compensation with a carefully calibrated CBAM, complemented by additional instruments for sectors that cannot be adequately protected by CBAM. Third, it should ensure that ETS1 revenues are systematically reinvested into the decarbonisation of the sectors bearing the

¹ covering emissions from the power sector, energy-intensive industries, intra-EU aviation, and maritime transport.

² The next challenge will be to replace peak-load gas generation.

³ Such as electric steam solutions in countries with many low-price electricity hours (due to a high penetration of clean energy).

⁴ e.g., functioning lead markets for low-carbon products.

costs of the scheme,⁵ including the necessary (cross-border) energy and CO2 infrastructure and innovation support. Finally, going beyond ETS1 reform, additional measures will be needed to create viable business cases for low-carbon production in Europe.

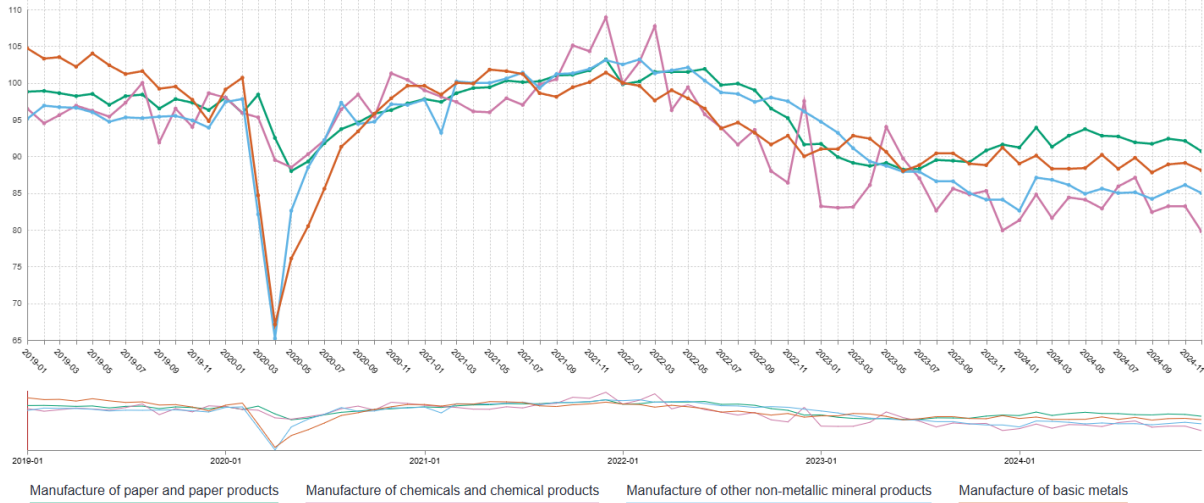
2) Context

2.1) From Early Success to Structural Challenges: The ETS1 at a Turning Point

Any debate on the future of the ETS1 should start with a clear-eyed assessment of its track record. In 2024, ETS1 emissions from power and industrial installations totalled approximately 1,033 Mt CO2eq – around 50% below 2005 levels.⁶ This decline primarily reflects the successful decarbonisation of Europe’s power sector, notably through coal to gas and renewables switching.⁷ For example, the share of renewables in EU electricity generation more than tripled, rising from around 15% in 2005 to over 48% in 2025⁸ – a remarkable achievement over just two decades. These developments underscore the effectiveness of carbon pricing – combined with comprehensive public support schemes for renewable energy – in driving the sector’s transition.⁹

The picture looks different for ETS1-covered industrial process emissions, which increased slightly from about 562 Mt CO2eq in 2005 to roughly 569 Mt CO2eq in 2019, before declining sharply (by almost 22%) between 2019 and 2024.¹⁰ This sharp decline coincided with a significant production drop across energy-intensive industries (EIIs), especially gaining traction since the beginning of the energy crisis in late 2021. Since 2021, EU production in energy-intensive industries has fallen by around 12%.¹¹

Figure 1. EU production in EIIs, 2019–2024 (*index 2021=100; seasonally and calendar adjusted*)¹²



It is also worth noting that, unlike the power sector, most energy-intensive industries – exposed to international competition and therefore constrained in their ability to pass through carbon costs – have so far been shielded from the full ETS1 carbon price through the free

⁵ Going forward, CBAM revenues should also support the decarbonization of sectors bearing its costs.
⁶ European Commission, [2025 Carbon Market Report](#), p. 20.
⁷ ERCST (2025), [Future of Emissions Trading in the EU: Price signal and competitiveness](#), p.12.
⁸ Our World in Data, [Share of electricity production from renewables](#), accessed 23 March 2026.
⁹ Also supported by the mandated coal phase-out in several Member States.
¹⁰ ETS1 emissions from all industrial installations (excl. combustion) amounted to ≈ 444 Mt CO2eq in 2024. Data: [European Environment Agency: EU ETS data viewer](#).
¹¹ [Draghi Report, Part B](#), p. 96.
¹² Energy-intensive industries comprise NACE Rev. 2 sectors C17 (paper and paper products), C20 (chemicals and chemical products), C23 (other non-metallic mineral products), and C24 (basic metals). Data: [Eurostat](#).

allocation of allowances. As a result, the effective carbon price they face reflects only a fraction of the market price.

One widespread assumption is that rising (effective) carbon prices for industry will automatically drive decarbonisation, similar to what has been observed in the power sector. However, experience suggests that this holds only where alternative and commercially viable technologies¹³ are available at competitive cost and with relatively low risk.¹⁴ This limitation is particularly relevant in sectors that cannot (fully) pass on higher costs to customers due to global competition, as without such technologies higher CO₂ costs primarily translate into increased operating costs that global competitors do not face.

In sum, while the ETS1 has demonstrably contributed to decarbonisation in the power sector – supported by the availability of viable technologies and the ability to pass through costs – the available evidence does not allow for an assessment of whether it can drive structural decarbonisation in energy-intensive industries to the same extent. Or, as Jos Delbeke – one of the main architects of the EU ETS – puts it: “*While the past 20 years allowed the EU ETS to reap the low-hanging fruit, the next 20 years will be significantly different*”.¹⁵

2.2) Structural Fault Lines: Why ETS Reform Will Require a Differentiated Approach

Reforming the ETS1 will be politically and economically complex, as the system covers sectors, technologies and regions with fundamentally different decarbonisation conditions. As a result, any reform is likely to create both winners and losers.

Firstly, ETS1 covers structurally very different sectors – ranging from electricity generation to cement and globally traded commodities such as base chemicals and metals. These sectors differ substantially in their ability to pass on carbon costs to customers. In the power sector, carbon costs are simply reflected in wholesale electricity prices.¹⁶ Cement producers primarily compete in regional (largely intra-EU) markets given comparatively high transport costs – although imports from neighbouring third countries such as Turkey constitute an important exception.¹⁷ By contrast, base chemicals and most metals are globally traded commodities. Moreover, highly complex and deeply integrated value chains (e.g. in the chemical sector) make effective CBAM protection practically infeasible. As a result, ETS1 sectors differ markedly in their exposure to carbon leakage risks and in the challenges they face if (effective) CO₂ prices in the EU were to rise significantly – particularly relative to carbon costs faced by competitors in other regions.

Secondly, differences also exist within sectors. Several companies have already made substantial investments in decarbonisation, often involving large-scale, multi-billion-euro projects based on emerging low-carbon production technologies. These technologies remain significantly more costly – both in terms of CAPEX and OPEX – than conventional production routes and many projects are therefore not yet commercially viable without public support. These ‘early movers’ have taken investment decisions in anticipation of a strong and credible

¹³ (and the associated enablers, such as electricity grids).

¹⁴ Cf. Jos Delbeke (2026), [Policy Brief: Preparing the 2026 EU ETS/MSR Review](#), Florence School of Transnational Governance, p. 5.

¹⁵ Jos Delbeke (2026), [Policy Brief: Preparing the 2026 EU ETS/MSR Review](#), Florence School of Transnational Governance, p. 3.

¹⁶ partly offset through indirect cost compensation for eligible sectors.

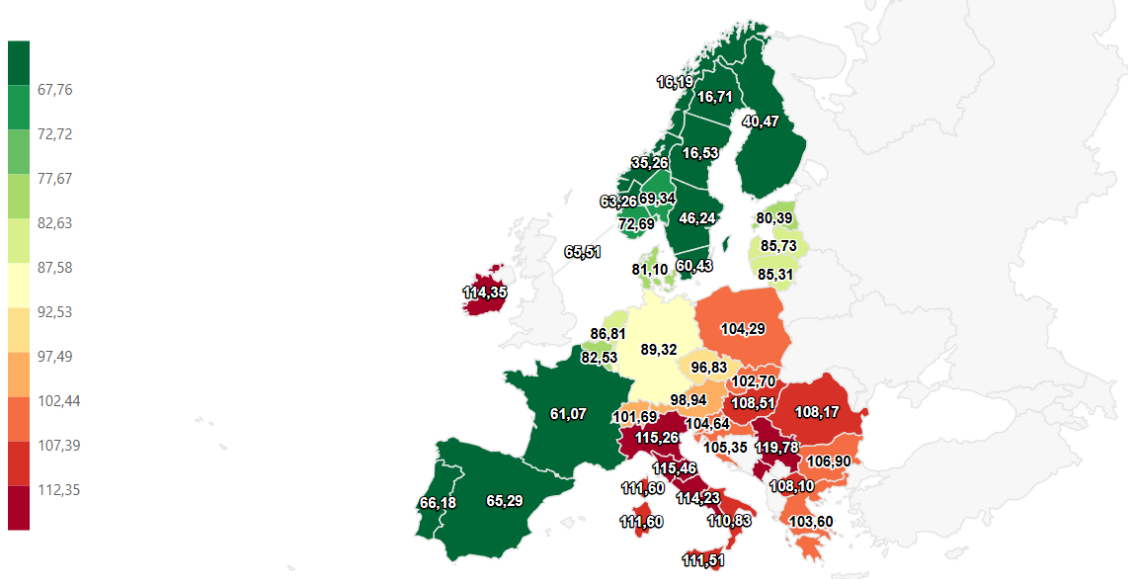
¹⁷ However, cement and clinker imports into the EU have increased in recent years (and are geographically concentrated along the EU’s eastern, south-eastern and southern borders), while EU producers face declining exports due to unilateral carbon costs – underscoring the need for an effective CBAM, incl. an export solution.

carbon price signal.¹⁸ Maintaining investment certainty for such projects is therefore crucial. At the same time, although ETS1 revenues could be used more effectively, available public funding remains limited and cannot cover all installations that would require support for deep decarbonisation. Many companies – still representing a large share of Europe’s energy-intensive industries – would therefore face further significant challenges if (effective) carbon costs were to increase too rapidly.

Finally, the conditions for clean industrial production differ significantly across EU Member States. Much of the industrial transition will rely on electrification – either directly or, where this is not feasible, indirectly through energy carriers such as clean hydrogen. As a result, electricity prices are likely the single most important indicator of the attractiveness of decarbonisation conditions in a given country or region. While internationally competitive wholesale power prices currently exist in some regions of Europe,¹⁹ this is not the case across the Union (see Figure 2). Consequently, views on potential ETS1 reforms are also shaped by the regional context in which companies operate, particularly where the majority of their industrial assets are located.

Taken together, these structural differences suggest that a nuanced and differentiated approach to ETS1 reform will be required.

Figure 2. Average electricity spot market prices, 2025 (in EUR/MWh)²⁰



3) Aligning the ETS Trajectory with Climate Neutrality & Ensuring Market Liquidity Post-2030

If the current linear reduction factor (LRF) trajectory were maintained, the issuance of new allowances would approach zero around 2039.²¹ It is highly unlikely that all ETS1 installations will be fully decarbonised by then. Industries with longer-term decarbonisation pathways and/or unavoidable process emissions may therefore not be able to operate from 2040 onwards if operators cannot access the necessary allowances or other compliance tools such as carbon removal credits. This uncertainty already discourages investments today in

¹⁸ However, more than 90% of announced clean industrial projects in Europe have not yet reached the final investment decision (FID) stage (see EPICO & Frontier Economics (2026): *The EU ETS at a Turning Point*, p.5).
¹⁹ Most notably in the Nordics, France, and the Iberian Peninsula.
²⁰ Fraunhofer Institute for Solar Energy Systems (ISE), *Energy-Charts: Average Day-Ahead Electricity Prices in Europe, 2025*, accessed 4 March 2026.
²¹ Not accounting for small volumes of allowances for the aviation and maritime sectors.

installations with lifetimes beyond 2039 – for instance in critical sectors such as refining. The LRF (currently set to reach 4.4% from 2028 onwards) should therefore be lowered to better align the ETS1 trajectory with the EU's 2050 net-zero target, while remaining consistent with the evolution of national targets under the Effort Sharing Regulation and the LULUCF²² framework. However, to ensure regulatory stability, no changes to the LRF should be made during the remainder of the current trading period (i.e. until the end of 2030).

Alongside a targeted adjustment of the LRF, additional flexibilities will need to be introduced to maintain sufficient market liquidity beyond 2030. This should include the sector-neutral integration of domestic carbon removals²³ into the ETS1 from 2031 onwards, and potentially a limited use of high-quality international credits.²⁴ To ensure environmental integrity, such credits could be centrally procured at EU level (for instance via a reformed Market Stability Reserve) and introduced into the EUA market in a controlled and gradual manner. This would also help ensure that the carbon price signal is not undermined, and that the primary focus remains on driving decarbonisation investments within Europe. In practice, however, credit supply is likely to remain limited in any case, reflecting high costs and constrained availability.

The Market Stability Reserve (MSR) will need to be made future-proof and adapted to a situation in which allowances become increasingly scarce. It should therefore evolve from a mechanism that primarily withdraws allowances from the EUA market into one that injects liquidity when needed. In this context, the Commission's recent proposal to suspend the automatic invalidation of reserve holdings is a reasonable first step. Building on this, the upcoming reform this summer should reassess the MSR's intake and release rules to ensure that the additional buffer can be effectively used to safeguard market liquidity going forward, including by enabling earlier and more gradual releases.

Expanding the geographical scope of the carbon market within Europe could provide an additional source of liquidity, in particular through a timely linking of the EU and UK ETS.

4) Ensuring Effective Carbon Leakage Protection Through a Sector-specific Approach

Effectively tackling climate change continues to require global cooperation, with the world's major regions contributing their fair share. On a positive note, interest in carbon pricing through emissions trading is growing worldwide: 38 ETS systems are already in operation globally, covering roughly 23% of global GHG emissions, with around 20 additional jurisdictions currently considering or developing similar schemes.²⁵ The ERT supports the Commission's efforts to increase that share through effective climate diplomacy – with CBAM now forming part of the toolbox. However, it is not sufficient to look only at whether an ETS-like scheme exists (or is planned), but also at whether these schemes are comparable to the carbon costs European companies face (and are expected to face in the near future). When doing so, one must conclude that the EU ETS1 remains one of the most ambitious carbon pricing schemes in the world – with no other major region currently coming close.²⁶

²² Land Use, Land-Use Change, and Forestry.

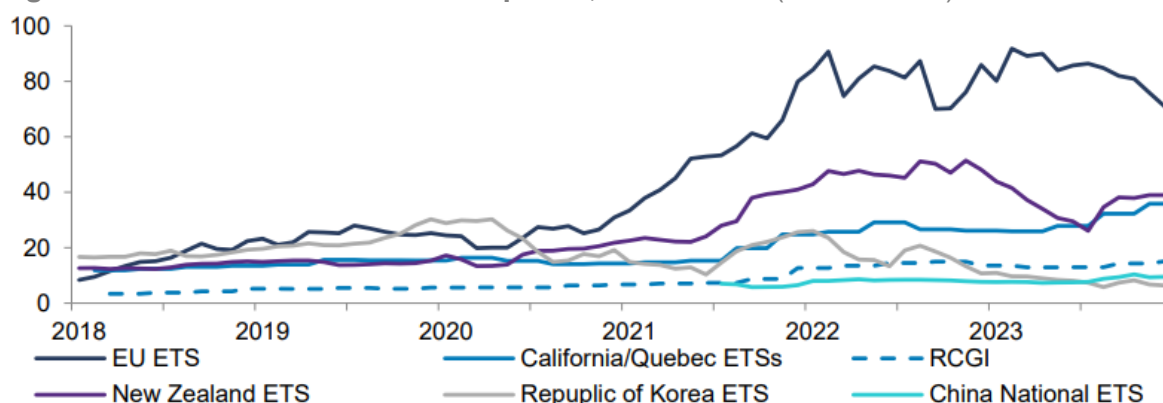
²³ In line with the EU's Carbon Removals and Carbon Farming (CRCF) Regulation.

²⁴ The 'pilot period' suggested in the recently revised European Climate Law should be used to thoroughly assess the potential market impacts of including a limited amount of high-quality international credits in the ETS1.

²⁵ International Carbon Action Partnership (ICAP), [Emissions Trading Worldwide - Status Report 2025](#) pp. 9f.

²⁶ In fact, the EU and its Member States account for around 80% of annual global carbon pricing revenues (see [Emissions Trading Worldwide - Status Report 2025](#) p. 27), indicating that the vast majority of explicit carbon costs are borne in Europe.

Figure 3. Selected historical carbon prices,²⁷ 2018-2023 (EUR_{nom} / ton)²⁸



Absent effective carbon leakage protection, this poses an existential risk for Europe’s energy-intensive industries exposed to global competition. In the past, such protection was (partly) provided through the free allocation of ETS allowances, based on performance benchmarks reflecting the average emission intensity of the EU’s top 10% most efficient (‘best-performing’) installations. With the introduction of the CBAM – currently applying to a limited set of products from ETS1-covered sectors²⁹ – the EU aims to gradually replace free allocation with a new mechanism whose effectiveness remains uncertain, and for which essential improvements are still being negotiated by EU lawmakers.

The upcoming reform of the ETS Directive therefore cannot be discussed in isolation and must be closely aligned with future adjustments to the CBAM Regulation, and complemented by exploring additional or alternative carbon leakage protection instruments. The objective must be to ensure effective carbon leakage protection for EU producers across sectors and value chains – either through the continuation of sufficient levels of free allocation or through a *functioning* alternative carbon leakage protection mechanism³⁰ (depending on the feasibility for each individual sector). Failure to do so risks further eroding the competitiveness of European industry, leading to a loss of EU value creation and potentially increasing global emissions through the relocation of comparatively clean EU production to regions with less ambitious climate regulations.

4.1) Freezing ETS Benchmarks & Recalibrating the Methodology to Better Reflect Industrial Realities

Several European industries are currently facing a fundamental competitiveness challenge, driven by persistently high energy costs and increasing – in some cases unfair – competition from abroad. The Commission’s recent update of ETS benchmarks, while less far-reaching than initially foreseen, has nonetheless further tightened benchmark values, thereby increasing the effective carbon costs faced by numerous ETS1 installations.

The latest tightening of benchmarks not only comes at a particularly challenging time amid a profound industrial crisis; the current benchmarking system is also increasingly diverging from industrial reality. Benchmarks are based on the emissions performance of the top 10 % ‘best performing’ installations,³¹ but this approach becomes distorted when the reference group includes heavily subsidised pilot projects, niche technologies, or production processes

²⁷ RCGI is the Regional Greenhouse Gas Initiative covering US states in the North-East.

²⁸ CompassLexecon (2024), [Energy and climate transition: How to strengthen the EU’s competitiveness](#) p.65.

²⁹ Cement, iron and steel, aluminium, fertilisers, electricity, and hydrogen.

³⁰ Such as an effective CBAM that also protects exports.

³¹ However, the benchmark setting requires a minimum performance improvement, leading to situations where benchmarks have been set (far) below the average of the 10% best performers.

relying on inputs that are structurally constrained. For example, some benchmark values – such as the fallback heat benchmark (applying to a broad range of industries that do not have a product-specific benchmark) – currently reflect production routes using biomass, waste-derived fuels or exothermal process heat. While these options can deliver very low emission intensities in specific cases, they are not necessarily available or scalable across the wider industrial base due to resource constraints, infrastructure limitations or process-specific conditions. As a result, benchmarks increasingly reflect individual best-case configurations rather than solutions that are technically and economically deployable at scale.

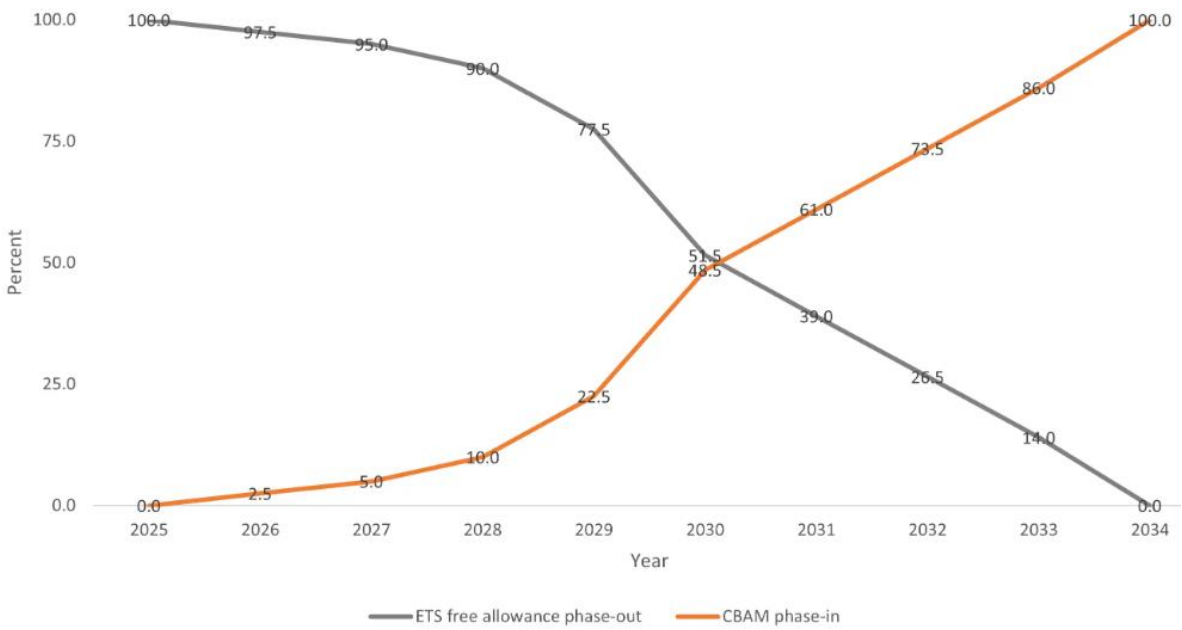
This challenge is further compounded by methodological changes in the current round of updates. In previous benchmark calculations, an adjustment was applied to ensure a fair comparison between installations using fuels and those using electricity, as electricity-related emissions occur outside the installation while fuel emissions are counted on-site. The omission of this adjustment (the so-called ‘exchangeability factor’ for fuels and electricity) changes how emissions are accounted for in the benchmark. As a result, historical and updated benchmark values are no longer fully comparable. In practice, part of the observed improvement reflects this change in accounting rather than real efficiency gains, which risks overstating emission reductions and artificially increasing benchmark reduction rates.

Against this background, no further benchmark updates should take place under the current methodology. Benchmark values should be maintained at their current levels until the benchmarking methodology has been fundamentally recalibrated to better reflect industrial realities. Part of the solution could be increasing the share of ‘best performing installations’ considered in the reference group to improve representativeness, without effectively tightening free allocation through other ETS design features. This could also help mitigate, to some extent, the impact of differing regional circumstances while preserving a level playing field.

4.2) Making CBAM Work Where it can – While Recognizing its Limits

As of 1 January 2026, CBAM has entered its full implementation phase and will be gradually phased in until 2034. At the same time, free allocation is being phased out for the sectors covered (see Figure 4). However, in its current form the mechanism remains severely flawed: its limited scope allows circumvention through imports of more processed downstream goods; it risks facilitating harmful resource shuffling, whereby third country producers could, for instance, redirect lower-carbon production to the EU market while continuing or even expanding higher-emission production elsewhere; and it provides no protection for EU exports. Moreover, part of the secondary legislation required for smooth implementation, for instance the application of CBAM to electricity, is being delayed.

Figure 4. EU ETS free allowance phase-out and CBAM phase-in for covered sectors³²



While the Commission has acknowledged the key weaknesses of CBAM (in its current form) in its proposals from 17 December 2025,³³ the solutions presented are still being negotiated by co-legislators.

Firstly, the Commission has proposed extending the scope of CBAM to certain downstream products containing significant quantities of CBAM-covered materials (focusing on steel and aluminium). Around 180 additional product categories would be brought within scope – including machinery, appliances and specialised industrial equipment – likely subjecting thousands of additional EU importers to CBAM compliance obligations. The inclusion of additional downstream products at factual risk of carbon leakage is justified and necessary to preserve European industrial value chains, as free allocation is phased out and downstream sectors become increasingly exposed to import competition. Any final decision on extending the downstream scope should be guided by objective criteria (such as the share of CBAM-covered input materials in a product), with the prevention of carbon leakage for EU producers as the primary objective. At the same time, the administrative burden and compliance complexity for EU importers must be taken into account, as these increase disproportionately with further downstream coverage. Credible default values (by country and production pathway) must for instance always be available – especially for complex products.

Secondly, the Commission has proposed stronger anti-circumvention safeguards. A key element is the introduction of provisions to address harmful resource shuffling for products and countries at very high risk. These provisions aim to prevent available low-carbon production from abroad being diverted to the EU market, which would weaken the business case for European producers to supply these products domestically. In the steel sector in particular, where high-risk products and countries are well known and relevant criteria are met, timely implementation is critical. Another change is the proposed inclusion of pre-consumer aluminium and steel scrap as a precursor in CBAM calculations, intended to support the use of recycled materials. The inclusion of pre-consumer scrap is particularly

³² PwC (2022), [EU deal reached on the CBAM: what you need to know](#).
³³ European Commission (2025), [Press Release: Commission strengthens CBAM](#).

important for the aluminium industry, which has also called for the inclusion of post-consumer scrap. This reflects the global pricing structure of aluminium, where prices are set by a global reference price at the London Metals Exchange, applying to both primary and secondary metal (which are typically perfect substitutes), meaning that carbon costs are indirectly reflected across all aluminium products, including scrap. Excluding aluminium scrap as a precursor from CBAM would therefore place EU recyclers at a competitive disadvantage.

Thirdly, a separate Commission proposal would establish a Temporary Decarbonisation Fund to support EU producers of CBAM goods remaining exposed to carbon leakage risks, particularly in export markets. The fund would partially reimburse carbon costs ex post for the period 2026–2027, provided beneficiary companies demonstrate credible decarbonisation efforts. It is explicitly designed as a bridging instrument, with a more permanent export solution to be developed as part of the upcoming ETS1 reform. Such a solution should maintain full free allocation for the share of EU production destined for export.³⁴ Moreover, it must cover the entire production process emissions, including upstream stages, as limiting compensation to the final production step (e.g. a rolling mill), while most emissions and ETS costs occur upstream, would not effectively protect against carbon leakage. A solution is also needed for downstream sectors not covered by the ETS1 but still exposed to carbon costs through ETS-covered inputs. Failing to adequately address exports could lead to suboptimal capacity utilization, reduced profitability, and eventual plant closures – further increasing financial pressure and impacting future investment decisions.

Additionally, the Commission would be required to present a comprehensive report before 2028 – potentially accompanied by legislative proposals – assessing CBAM’s overall functioning and its effectiveness in mitigating carbon leakage risks. It is important that the Commission uses this report to conduct an objective assessment of whether CBAM can effectively protect against carbon leakage across all covered sectors, based on clearly defined criteria. If the report concludes that this is not the case, the CBAM factor shall revert to pre-2026 levels (i.e. 100%) until effective solutions have been identified.³⁵ In any event, and independently of CBAM’s performance, the phase-out of free allocation for CBAM sectors should be slowed down at least from 2028 onwards and recalibrated to reach zero significantly later than 2034, reflecting both the time needed for industry to transform and for an entirely new system to prove its effectiveness.

By the end of 2027, the Commission may also propose to further extend the scope of CBAM horizontally, i.e. to entirely new product groups. The Commission should refrain from considering such extensions until its comprehensive review report – due before 2028 – has been published. Any potential scope extension would have to ensure effective downstream carbon leakage protection from the outset and be assessed on a case-by-case basis, as sectors differ significantly in their compatibility with CBAM. In its latest CBAM report, the Commission for instance concluded that *“the assessment of chemicals and polymers shows that the complexity of the chemical industry (...) would make a potential inclusion of these products in the CBAM technically very challenging”*.³⁶ The ERT concurs with this assessment: given the sector’s high complexity and interconnected production routes, CBAM should under no circumstances be extended to organic chemicals and polymers. Moreover,

³⁴ In sectors such as refining, exports are typically conducted by traders rather than the installation subject to ETS obligations. This raises practical challenges for any export-based compensation mechanism and makes a targeted allocation difficult.

³⁵ This reversion may be applied in a targeted manner, where the assessment identifies shortcomings in CBAM’s effectiveness for specific sectors only.

³⁶ European Commission (2025), [Report on the application of the Regulation on the Carbon Border Adjustment Mechanism](#), p. 54.

an immediate solution must be found for the roughly 30% share of ammonia used as a feedstock in the chemical industry, as applying CBAM to these volumes increases the risk of downstream carbon leakage.

For sectors that cannot be adequately protected by CBAM,³⁷ continued reliance on free allocation remains necessary to address persistent carbon leakage risks until effective alternative instruments have been identified. However, given the declining overall volume of ETS allowances, ensuring sufficient protection for these sectors might require a more targeted use of the remaining free allocation. One option is to move towards a more differentiated (tiered) approach, in which free allocation levels are more closely aligned with measured carbon leakage risk (e.g. based on a combination of emission intensity and trade exposure). Such an approach would allow limited free allocation volumes to be concentrated where they are most needed.

4.3) Keeping Indirect Emissions Outside CBAM & Strengthening Indirect Cost Compensation

Carbon leakage protection measures under the ETS1 address both direct emissions and, more selectively, indirect emissions. For the latter, the main instrument is the indirect cost compensation (ICC), under which Member States may compensate electro-intensive industries listed in the ETS State aid guidelines for a share of electricity-related carbon costs. These indirect carbon costs differ across Member States due to variations in the carbon intensity of the marginal price-setting generation technology. In 2027, the Commission is expected to assess whether and, if so, how indirect emissions could, at some point, be included in CBAM across all covered sectors.³⁸

However, effectively accounting for indirect emissions and associated costs in CBAM is technically challenging. For instance, renewable PPAs in the EU are generally priced against wholesale electricity markets³⁹ that incorporate EU ETS carbon costs, whereas renewable PPAs in most third countries do not reflect comparable carbon pricing. Allowing third-country producers to rely on PPAs when calculating indirect emissions would therefore distort the level playing field. Hence, CBAM would have to rely on country-level average grid emission intensities – which are often difficult to determine accurately and may thus prove politically contentious.

Indirect emissions must therefore remain outside CBAM for electro-intensive industries until the EU electricity grid is significantly closer to full decarbonization. In the meantime, the ICC must be prolonged beyond 2030 and extended to all electro-intensive sectors exposed to global competition, while ensuring that indirect CO₂ costs are fully compensated.⁴⁰ Moreover, it must be ensured that all Member States make full use of this instrument.⁴¹ One option would be to mandate ICC directly in the ETS Directive and ringfence national ETS1 revenues accordingly. This would also enhance visibility and investment certainty for companies seeking to (further) electrify their processes.

³⁷ This may also include sectors currently covered by CBAM, should it prove insufficient in providing effective carbon leakage protection.

³⁸ Including whether to explore a more gradual approach that could coexist with indirect cost compensation.

³⁹ Among other factors.

⁴⁰ Through realistic regional emission factors and sufficiently high aid intensities.

⁴¹ In 2024, only 15/27 Member States provided aid for indirect costs incurred in 2023, with varying aid intensities.

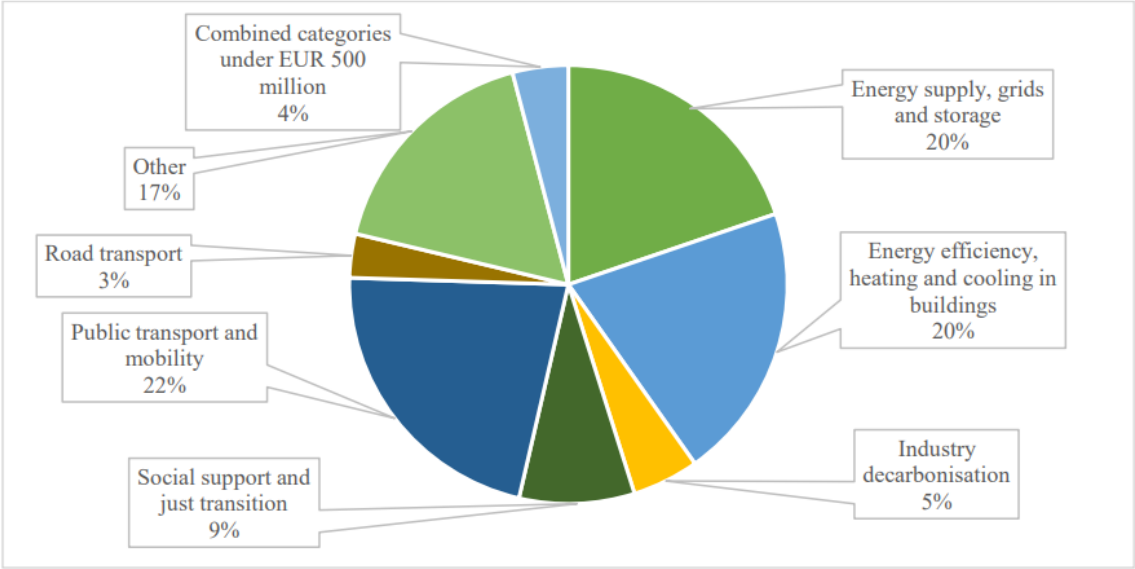
If the Commission nevertheless intends to assess the inclusion of indirect emissions in CBAM, one option could be adopting a hybrid approach, whereby CBAM would cover only the share of indirect emissions not compensated under the ICC.

5) Using Auction Revenues More Effectively

In 2024, total ETS1 auction revenues amounted to EUR 38.8 billion. Of this amount, EUR 24.4 billion accrued directly to Member States,⁴² while EUR 6.3 billion financed the Modernisation Fund and EUR 2.3 billion the Innovation Fund.^{43 44}

Under the ETS Directive, Member States are required to use 100% of their national revenues⁴⁵ to support climate action and the energy transition, or to compensate indirect carbon costs.⁴⁶ In practice, however, only a small share of the revenues is used to support the decarbonisation of installations actually covered by the ETS1. For example, of the ETS1 auction revenues reported by Member States as disbursed in 2024, only around 5% were spent on industry decarbonisation (see Figure 5).

Figure 5. Member States’ use of ETS revenues (split per category of the EUR 16.4 billion of the 2024 ETS auction revenue reported as disbursed)⁴⁷



Going forward, a substantially higher share of ETS1 revenues should be dedicated to decarbonising the sectors bearing the costs of the scheme,⁴⁸ including necessary energy infrastructure upgrades. The Industrial Decarbonisation Bank recently announced by the Commission could play an important role by organising EU-wide auctions that avoid lengthy State aid procedures and provide both CAPEX and temporary OPEX support for the best projects. However, national revenues should not be increasingly centralised at EU level but remain available for national decarbonisation projects. Therefore, rather than further ‘Europeanising’ ETS revenues, national revenues should be ringfenced to support domestic investments in industrial decarbonisation.

⁴² EUR 0.3 billion went to Iceland, Liechtenstein, Norway and Northern Ireland.
⁴³ The remaining EUR 5.6 billion supported the Recovery and Resilience Facility under the REPowerEU plan.
⁴⁴ European Commission, [Carbon Market Report 2025](#), p.22.
⁴⁵ Or an equivalent financial value.
⁴⁶ European Commission, [Carbon Market Report 2025](#), p.23.
⁴⁷ European Commission, [Carbon Market Report 2025](#), p.25.
⁴⁸ CBAM revenues should also support the decarbonization of sectors bearing the costs of the instrument.

The recently announced 'ETS Investment Booster', envisaging EUR 30 billion in short-term industrial decarbonisation support financed through the monetisation of 400 million ETS allowances, could provide a useful bridge towards an EU-level Decarbonisation Bank. However, its design will be critical. In particular, frontloading future auction volumes should be avoided, as past interventions (e.g. around 250 million EUAs auctioned under REPowerEU) have shown that advancing auction supply can weaken the carbon price signal in the short term while tightening supply later, thereby creating volatility and undermining investment certainty. To preserve the integrity and predictability of the ETS1, any such instrument should rely, to the extent possible, on EU-level financing solutions similar to the European Investment Bank's ETS2 frontloading facility.