

Conditionalities, Earmarking, Frontloading :

How to Get the White Smoke on ETS

• Introduction

Introduced in 2005, the European Union Emissions Trading System (EU ETS) was initially presented as the “spearhead”¹ and “one of the most important instruments of EU climate policy”². Two decades and multiple reforms later, it has become a “cornerstone” of the European Green Deal.³ Yet its political and economic environment has shifted markedly. In the aftermath of the 2024 European elections and successive energy shocks, the centre of gravity of EU policymaking has tilted from climate ambition toward industrial competitiveness.⁴ In this context, carbon pricing is, again, increasingly perceived and portrayed not as a driver of transformation, but as a potential liability - an additional cost burden for energy-intensive industries already exposed to international competition.

This *policy paper* starts from a different premise. The problem is not carbon pricing *per se*, but the failure to use ETS revenues and allocation rules in a way that credibly supports industrial decarbonisation. Critics of the ETS often misidentify the carbon market as the problem, while its defenders overstate what conditionality attached to free allocation can achieve. Yet recent experience suggests that generous free allowance has too often functioned as a subsidy without a corresponding decar-

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1 European Commission, 23 January 2008.

2 Council of the European Union – Council conclusions on the review of the EU ETS, Council of the EU, 4 July 2007 (conclusions adopted by the Environment Council on 28 June 2007).

3 Report from the Commission on the Functioning of the European Carbon Market in 2020, European Commission (COM(2021) 962 final), 26 October 2021.

4 Andreas Eisl & Phuc-Vinh Nguyen, “Competitiveness as Europe’s compass for weathering the climate storm?”, Jacques Delors Institute (infographic), 28 February 2025.

bonisation payoff, because firms respond to profit incentives and because deeper structural barriers cannot be overcome by funding alone. Conditionality may help at the margin, but it is not a substitute for the broader conditions needed to trigger investment. **The real challenge is not simply to preserve the ETS, but to turn it into a catalyst for investment, capable of further advancing industrial transformation.**

To do so, Member States must send a clearer political signal about the use of carbon revenues. Our analysis shows that of the **€112 billion of ETS revenues that flowed into national budgets between 2021 and 2024, only €53 billion was disbursed, and just 8% of that spending - around €4 billion - could be clearly identified as supporting industrial decarbonisation**⁵. We therefore recommend that a substantially larger share of annual ETS revenues, at least a quarter to a third, be strictly earmarked for industrial decarbonisation (not accounting for indirect cost compensation). At a conservative price of 80€/tCO₂⁶ over the 2027 to 2030, this would channel roughly €4 billion to €6 billion per year into the transformation of European industry. Such earmarking would help close part of the investment gap facing the sector, which Mario Draghi estimated at around €500 billion over 2025 to 2040, or roughly €33 billion per year. Even so, it would not meet the full need. We therefore propose a second, more ambitious step: some selected incumbent industries could use a share of their free allowances from the 2026 to 2030 period as a guarantee to obtain loans from their national investment bank. Finally, beyond that, we recommend frontloading future carbon revenues amounting to around €100 billion. However, these funds should only be disbursed under strict conditionality and through a national selection process, as discussed further in the recommendation section (p. 13). At both EU and national level, supportive policy frameworks will still remain mandatory if investment is to materialise within a timeframe compatible with the urgency facing the sector.

The upcoming revision of the ETS Directive may be the EU's last opportunity to strengthen an instrument that not only rewards frontrunners through a robust carbon price signal, but also mobilises part of the investment needed to transform European industry.

I • A driver for power decarbonisation, not industry

The ETS operationalises the polluter-pays principle across carbon-intensive sectors, including industry, electricity and heat generation, as well as intra-European aviation and maritime transport. Approximately 10,000 covered installations – responsible for around 40% of the EU's greenhouse gas (GHG) emissions – must surrender allowances for each tonne of CO₂ emitted. The carbon price has stabilised around €70 in 2026,⁷ but its impact has been uneven. Emissions from stationary installations have declined by roughly 50% between 2008 and 2025, yet **most of that reduction came from the power sector, which accounted for nearly three-quarters of the decline, while industrial emissions fell only marginally (21%)**⁸.

This divergence reflects not only the carbon price itself, but the border policy architecture around it. In electricity generation, the ETS has operated alongside

5 To avoid overstating the scale of industrial support, this analysis excludes Germany and the Netherlands, whose reporting does not allow a clean comparison.

6 “EU ETS Revenue Simulator”, *Carbon Market Watch*, page consulted July 7, 2026 (tool based on Climact modelling using the 2023 EU ETS revision).

7 “EU Carbon Permits – Price, Chart, Historical Data”, *Trading Economics*, accessed July 7, 2026.

8 Andrei Marcu, Alexandra Maratou, Tommaso Paperini, Cecilia Meinardi & Marco Sangiovanni, “2026 State of the EU ETS Report”, *ERCST (European Roundtable on Climate Change and Sustainable Transition)*, joint effort with BloombergNEF and Compass Lexecon, published April 2026.

a dense ecosystem of complementary measures – notably the 2009 Renewable Energy Directive⁹ and substantial national support schemes, which mobilised close to €80 bn annually between 2015 and 2020¹⁰. These instruments de-risked investments and accelerated deployment, allowing wind and solar to rise from negligible levels (1 and 2% respectively in 2005) to 13% and 17% of the EU electricity mix in 2025¹¹.

Industrial decarbonisation, by contrast, has been far more constrained. In many sectors, **emissions cuts have largely reflected output contractions or incremental efficiency gains (of which, fuel switching) rather than genuine structural transformation**. Between 2020 and 2023, production fell sharply in several energy-intensive sectors, including cement (-20%), pulp and paper (-15%) or chemicals (-10%)¹², the latter marked by significant plant closures¹³. Elsewhere, abatement has come from marginal energy efficiency gains, for example in refining and glass. **One underlying reason is that industrial decarbonisation still remains, in many cases, technologically and economically constrained**. In chemicals, deep decarbonisation hinges on low-carbon hydrogen and carbon capture and storage (CCS), neither of which is yet supported by the infrastructure needed for large-scale deployment. In iron and steel, electric arc furnaces offer a viable pathway, but they require substantial capital investment and abundant low-carbon electricity. These constraints have persisted and been reinforced since 2022 by elevated and volatile energy prices, which have further weakened the business case for low-carbon investment.

Weak industrial investment, however, cannot be explained solely by the absence of supportive frameworks. The ETS design itself also softened the incentive to decarbonise. Between 2012 and 2022¹⁴, free allowances – introduced to limit carbon leakage and support the industry’s international competitiveness – were worth around €127 billion, far exceeding the carbon costs actually borne by many firms. Therefore, between 2008 and 2019, in fifteen sectors, including iron and steel, refineries, cement or petrochemicals, firms received more free allowances than their verified emissions – generating estimated windfall profits of €26 to €46 billion¹⁵. Although this pattern has narrowed, it has not disappeared: as of 2025, sectors such as cement and lime, iron and steel, or pulp and paper still receive more free allowances than they need, even if this is no longer the case for others such as chemicals or non-metallic minerals¹⁶. This over-allocation is now being phased out in principle. From 2026 onwards, free allocation is being gradually reduced as the Carbon Border Adjustment Mechanism (CBAM) enters into force. CBAM is designed to prevent carbon leakage by applying the ETS carbon price at the border to imports

9 “Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources”, *EUR-Lex*, adopted 23 April 2009, published 5 June 2009

10 “Report from the Commission – 2024 Report on Energy subsidies in the EU”, *European Commission (COM(2025) 17 final)*, 28 January 2025.

11 Beatrice Petrovich, “European Electricity Review 2026 – 2025 at a Glance”, *Ember*, 22 January 2026.

12 Andrei Marcu, Alexandra Maratou, Tommaso Paperini, Cecilia Meinardi & Marco Sangiovanni, “2026 State of the EU ETS Report”, *ERCST (European Roundtable on Climate Change and Sustainable Transition)*, joint effort with BloombergNEF and Compass Lexecon, published April 2026

13 Steve Ranger, “Chemical plant closures surge in Europe, investment drops”, *SCI (Society of Chemical Industry)*, 28 January 2026.

14 Andrew Lilico & Deborah Drury, “The EU Emissions Trading System: Method and Effects of Free Allowance Allocation”, *European Parliament, Policy Department for Budgetary Affairs (PE 755.098)*, October 2023.

15 Sander de Bruyn, Daan Juijn & Ellen Schep, “Additional Profits of Sectors and Firms from the EU ETS 2008-2019”, *CE Delft (commissioned by Carbon Market Watch)*, May 2021.

16 Elisabetta Cornago, “A stronger carbon market is necessary for a more competitive European industry”, *Centre for European Reform*, 2 July 2026.

of covered goods such as aluminium, cement, fertilizer, iron and steel, hydrogen and electricity. In theory, this should put domestic producers and importers on a more equal footing. In practice, however, industry argues that the CBAM remains too limited in scope to fully prevent carbon leakage, and continues to push for free allowance extension beyond 2034. So far, **for much of European industry, the ETS has therefore acted less as a clear investment signal than as a cushioned cost and a system that generates profits for shareholders.** In some sectors, that dynamic was reinforced by the political expectation that Member States would continue to protect industrial output and jobs from the full pressure of tighter climate policy.

Although the proposal is expected on 17 July, the ETS is already being shaped through debate on several related parameters. In March 2026, the amendment of the European Climate Law opened the possibility for Member States to meet 5 percent of their 2040 target through international carbon credits. The Commission has also recently reviewed the 2026-2030 benchmark methodology, which determines how many free allowances covered installations will receive over the next trading period. As reflected in the figure below, the final compromise – adopted by [17 MS voting in favour, with 5 against and 5 abstentions](#) – points to possible alliances and fault lines that could reappear in the ETS negotiations. Those dynamics are likely to matter for **several interlinked parameters** that will shape the future of the carbon market:

- the Linear Reduction Factor (LRF), which determines the pace at which the overall emission cap declines;
- the Market Stability Reserve (MSR), which absorbs surplus and unallocated allowances and places them in reserve;
- the possible use of international carbon credits as a flexibility tool to help meet Europe's 2040 target;
- the integration of carbon removals into the ETS.

I MEMBER STATES EARLY-POSITIONING ON THREE CONTESTED PARAMETERS

Ahead of the proposal, Member States have already begun to signal their preferences through public or joint statements, letters to the Commission, and interventions in European Council meetings. Drawing on the European Parliamentary Research Service analysis¹⁷ and recent press reporting, the mapping below highlights how Member States diverge on three contentious issues: benchmarks, the LRF along with free allowances, and the use of ETS revenues.

¹⁷ Update of the EU emissions trading system for stationary installations, aviation, and maritime transport, European Parliament Research Service, 14 April 2026.

TABLE 1. Member States' positions on three contested parameters of the ETS reform

	Benchmarks Product benchmark methodology	Free allocation & LRF Free allocation and the linear reduction factor	Use of ETS revenues Use of ETS revenues as resources for EU budget
Denmark	–	Defender	–
Finland	–	Defender	–
Luxembourg	–	Defender	–
Netherlands	–	Defender	–
Portugal	–	Defender	–
Sweden	–	Defender	–
France	Median +	Median +	Median –
Germany	Median +	Median +	–
Spain	Median +	Median +	–
Estonia	Median +	Median +	Reformer
Cyprus	Median –	–	–
Austria	–	Reformer	–
Lithuania	Reformer	–	Reformer
Latvia	Reformer	–	–
Malta	Reformer	–	–
Croatia	–	Reformer	Reformer
Hungary	Median –	Reformer	Reformer
Slovenia	Median –	Reformer	Reformer
Bulgaria	Median –	Reformer	Reformer
Slovakia	Median –	Reformer	Reformer
Italy	Reformer	Reformer	–
Romania	Reformer	Reformer	Reformer
Czechia	Reformer	Reformer	Reformer
Greece	Reformer	Reformer	Reformer
Poland	Reformer	Reformer	Reformer
	4 5 8 8	6 4 11 4	11 13 position unknown

Defender – defends current ambition
Median + – targeted, rule-based adjustments
Median – – cautious, partial alignment
Reformer – broad roll-back or suspension

▲ Source : Jacques Delors Institute

I BENCHMARKS

Under the ETS Directive, the European Commission is required to update benchmark values used for free allocation every five years. For 2026-2030, this amounts to 54 benchmarks in total: 52 product-specific benchmarks, and two fallback benchmarks for heat and fuel use, applied where no product-specific benchmark can be defined. These reference values, based on the average emissions of the 10% least carbon-intensive installations in the EU, directly determine the volume of free allowances received by covered sites. In theory, this approach rewards efficiency; in practice, it also decides which sectors are still partially insulated from the carbon price and which are left to face it more directly.

Several Member States argued that the proposed revision moved too quickly relative to the effective pace of industrial decarbonisation. The controversy centred above all on the two fallback benchmarks, the least precise and most politically sensitive element of the system. Applied where no product benchmark exists, they were slated for a 50 percent reduction compared with their 2013–2020 levels.

Critics¹⁸ warned that this would be particularly abrupt for sectors such as chemicals, where abatement options are more constrained. As reflected in Table 1, Germany, Italy and Poland asked for a revision of the draft, while France, Spain, Germany and Estonia focused more narrowly on the fallback values. Czechia, Greece, Poland and Romania¹⁹ went further, calling for benchmark values to be frozen at 2021–2025 levels, arguing that the current methodology, based on the 10% best-performing installations, no longer fully reflects what is physically or economically achievable across all sectors.

The Commission response confirms that this was never just a technical calibration exercise, but a political one. By softening its initial proposal and increasing free allocation through revised fallback benchmarks²⁰, including retroactive application from 1 January 2026 to 31 December 2030, it acknowledged that benchmark setting must be adapted to reflect the immediate pressures faced by the industry, from high energy prices to long investment cycles. The final agreement that results in an extra €4bn worth of free allowances for the industry, especially the chemicals, was supported by 17 Member States. It suggests that governments will be seeking to exploit the legal review window to give industries more breathing room in a more adverse economic context as also suggested by the information surrounding the upcoming proposal on fallback benchmarks that should increase free allocation to installations receiving heat and fuel by €6 bn²¹. **Yet this ambition is only defensible if it is accompanied by a corresponding funding strategy;** without it, additional protection risks becoming a substitute for transformation rather than a bridge to it.

I LINEAR REDUCTION FACTOR & FREE ALLOWANCES

The Linear Reduction Factor (LRF) is the mechanism through which the EU ETS cap declines annually, gradually tightening the supply of allowances. Between 2024 and 2027, the LRF stands at 4.3% per year and is expected to rise to 4.4% from 2028, putting the cap on a trajectory to reach zero around 2039. In a business-as-usual scenario, covered installations would need to be fully decarbonised by then or face penalties. **That trajectory is now being challenged by several Member States, which disagree over the starting date, pace and end point of the reduction.** Germany has argued for a decrease only from 2036²², Poland has proposed a much steeper easing of the trajectory, from 4.3% to 2.4%²³, and France wants the cap to reach zero only by 2050 rather than in 2039²⁴. By contrast, seven Member States (Spain, Denmark, Finland, Luxembourg, the Netherlands, Portugal and Sweden) have called for the LRF to be adjusted only from 2036 onwards while remaining aligned with the 2040-target²⁵. These positions reflect **a broader tension between maintaining pressure on incumbent industry to be entirely decarbonised by 2040 or soften it to provide more breathing space for the sector.**

18 Cefic consultation response: revision of the benchmark values for free allocation of emission allowances (2026–2030), Cefic, 2026

19 “Czechia leads call to freeze ETS benchmarks as Commission promises wider revamp”, *Contexte*, 2026

20 “Commission presents updated EU Emissions Trading System benchmarks for consultation”, *European Commission – Press Corner*, 10 May 2026.

21 EU Plans More Flexibility for Industry in Carbon Overhaul, Bloomberg, 8 July 2026.

22 Germany, *Draft non-paper on ETS* (April 2026), as published by Contexte:

23 “Varsovie exhorte à revoir le rythme de réduction des quotas carbone pour poursuivre l’ETS au-delà de 2039”, *Contexte, énergie*:

24 France wants to ‘smooth the curve’ of EU ETS, sees market running out to 2050, Carbon Pulse, 17 March 2026.

25 “Joint Statement – ETS”, *Contexte*, July 2026

Lowering the LRF would indeed put more allowances into the market and, all else being equal, increase emissions²⁶. It would ease short-term pressure on industry, but it would also likely weaken the carbon price and the signal sent to firms that are already investing – the so-called first movers. At a time when Europe still accounts for around a quarter of the global pipeline of industrial decarbonisation projects – many of which still have not reached final investment decision²⁷ –, a slower cap reduction risks rewarding delay rather than first-mover action. The Commission appears inclined to “reduce the speed”²⁸ of the ETS by extending the cap beyond the current 2039 endpoint, even if the exact calibration remains uncertain.

On free allocation, it has acknowledged the need to “find a more realistic trajectory for free allowances” and to “extend allowances far into the 2040s”²⁹. Under the current directive, free allowances are meant to be phased out gradually. In CBAM-covered sectors – aluminium, steel, fertilisers, hydrogen, cement, iron – they are set to disappear by 2034 as CBAM is phased in. However, the Commission is considering extending free allocation beyond 2030, while tightening the conditions attached to it³⁰. **The stated aim is to turn free allowances from a passive compensation mechanism into a tool that actively supports industrial decarbonisation investments.**

That shift reflects a growing political squeeze. Denmark, Finland, and the Netherlands oppose extending free allocation beyond 2034 and instead argue for a review only from 2030. By contrast, Austria, Bulgaria, Croatia, Czechia, Greece, Hungary, Poland, Italy, Romania and Slovakia³¹ support extending free allocation beyond 2034 and smoothing the phase-out from 2028 onward. Germany has also backed a slower reduction³². Their argument is that free allocation is not a windfall, but a transitional instrument introduced in the context where the business case for deep decarbonisation is too weak to stand on its own, especially given the intense international competition. Reducing free allocation too early, they argue, would expose industry before the conditions for investment are fully in place.

The split that is equally visible within industry. Incumbent sectors continue to rely on free allocation as a buffer against carbon costs, even though it was originally designed to prevent carbon leakage. In practice, ETS costs in 2025 represented only around 6 percent of production costs in chemicals and just 1 percent in steel³³, suggesting that **the ETS is not the main cause of their current difficulties**. Even as exposure to carbon pricing is expected to increase over time – as forecasted by BloombergNEF³⁴ – recent findings points to a weak link between free allocation

26 “Lowering the LRF from 2031 onward lead to corresponding additional cumulative CO2 emissions amount to approximately 1,100 Mton with a 3.4% LRF and 3,200 Mton with a 2.4% LRF”. See: Maarten de Vries & Sjoerd Boerdijk, *Potential impacts of lowering the ETS LRF*, CE Delft, Policy Brief No. 26.260277.089a, Delft, June 2026, commissioned by Natuur & Milieu.

27 Ottmar Edenhofer, Stefan Kolev, Andreas Löschel & Bernd Weber, “*Investitionen statt Symbolpolitik: Die ETS-Reform als wirtschaftspolitische Richtungsentscheidung*” (joint statement), EPICO – Energy and Climate Policy and Innovation Council, July 2026.

28 Makuch, Ben. “Ireland prepares to play dealmaker on EU’s biggest climate fight of the year”, *E&E News* by POLITICO. 29 June 2026.

29 Ibid.

30 Ewa Krukowska, Alberto Nardelli. “EU Seeks Stronger Liquidity Safeguards in Carbon Reform”. Article. *Bloomberg*. June 25 2026.

31 “ETS: Dix États appellent la Commission européenne à prolonger les quotas carbone gratuits au-delà de 2034”, *Contexte*, 18 March 2026.

32 *ets-draft-non-paper-from-germany.pdf*

33 Andrei Marcu, Alexandra Maratou, Tommaso Paperini, Cecilia Meinardi & Marco Sangiovanni, “2026 State of the EU ETS Report”, *ERCST (European Roundtable on Climate Change and Sustainable Transition)*, joint effort with BloombergNEF and Compass Lexecon, published April 2026.

34 Leon de Graaf & Victor van Hoorn, “Can Europe’s industry still be saved?”, *LinkedIn (Business Advisers on Climate & Competitiveness, with Cleantech for Europe)*, 2026.

and actual decarbonisation spending: between 2021 and 2025, the three largest steelmakers by output – ArcelorMittal, Thyssenkrupp and Voestalpine – received €25.73 billion in free allowances but committed only €3.2 billion of their own capital to decarbonisation investment³⁵. That gap strengthens the case for attaching clear investment conditionalities to the allocation of free allowances.

The broader problem is that, in the absence of a meaningful carbon cost, some firms have been able to prioritise short-term shareholder returns or other cost pressures over long-term transformation. **Rather than using the value of free allowances to prepare for future carbon-price increase, incumbent players in steel and chemicals have often pushed for a freeze of the ETS**³⁶. BASF³⁷, for example, has warned that its costs could rise to nearly one billion euros by the end of the next decade if free allocations are abolished. That position is increasingly contested. A growing number of first movers see prolonged free allocation as a liability because it weakens the price signal that underpins their own business case. More than 100 companies have signed an open letter³⁸, calling on the Commission to maintain a strong ETS, with signatories spanning steel, mining, cement, among others³⁹. Six Europe-based steelmakers have also urged the Commission to defend the integrity of the carbon market, arguing that the real competitiveness pressures come from high electricity prices, infrastructure gaps and global overcapacity rather than from carbon pricing itself. **Free allocation is now trapped between two conflicting logics.** For its defenders, it remains a necessary bridge for exposed industries toward decarbonising their processes. For its critics, it has become a structural delay mechanism that softens the ETS's decarbonisation signal. If that tension is left unresolved, the debate risks hardening into a sterile confrontation between protection and ambition, driven more by mistrust than by a credible strategy for industrial transition.

A possible compromise is emerging around conditionality. Conditionality in the ETS is not new and was introduced in the 2023 revision. In some cases, energy-efficiency improvements are required, and if they are not met, a 20 percent reduction in free allocation applies. The same penalty applies if the greenhouse-gas emissions of a specific sub-installation exceed the relevant benchmark threshold. For district heating installations, an additional 30 percent of allocations can be granted, but only if this is tied to investments whose value is at least equivalent to the economic value of the extra free allocation. That model offers **a useful blueprint for what conditionality attached to additional free allocation could look like: the award of extra allowances would be contingent on a minimum level of investment.** Following that logic, Czechia, Greece, Poland and Romania⁴⁰ have suggested last May that additional free quotas could be granted to industries that commit to emission-reduction plans and reinvest an amount equivalent to the value of those allowances into decarbonisation or energy infrastructure projects within the EU. The idea is to bridge the gap between protection and performance: instead of treating free allocation as an automatic entitlement, it would make it conditional on demonstrable investment and emissions cuts. In that sense, it reflects a broader shift from passive compensation to a more disciplined form of support while also acknowledging that the industry needs more time to achieve its transition.

³⁵ “Free Allocation vs. Decarbonisation Investment in the EU ETS”, *SteelWatch*, 2 July 2026.

³⁶ Ben Makuch, “Steel and chemicals giants demand freeze to EU’s flagship climate policy”, *POLITICO*, 16 June 2026.

³⁷ Alice Hancock, “EU must reform ‘obsolete’ emissions trading system, warns BASF boss”, *Financial Times*, 10 February 2026

³⁸ “Ecocem and 100 companies send open letter on EU ETS”, *Cemnet (Global Cement)*, 16 March 2026.

³⁹ To construction materials, hydrogen, energy storage, batteries, CCS, chemicals, biotech, climate finance and transport.

⁴⁰ “EU ETS – AOB from CZ, PL, EL, RO”, *Contexte*, May 2026 (joint note from Czechia, Poland, Greece and Romania)

The Commission is expected to move in a similar direction⁴¹. Under this approach, free carbon permits could still be extended, but the additional share of allocation would depend on investment in decarbonisation within the EU and on increased domestic production of low-emission goods. **Several questions, however, remain open:**

- whether firms would have to prove investments upfront or could receive allowances upstream and comply later;
- what should qualify as a clean investment, and whether a taxonomy-style classification would be needed;
- which metric should be used to assess whether the emissions reduction is sufficiently transformative relative to the size of the investment;
- how this would interact with other EU support instruments such as the Innovation Fund⁴²;
- and how long the delay should be, and for which sectors.

That last point particularly matters because delaying the phase-out of free allowances has been estimated to reduce cumulative ETS revenues between 2026 and 2040 by €30 billion with a two-year delay, and by €90 billion with a six-year delay⁴³.

Still, even if additional free allowances were granted in exchange for investment in industrial transformation, this would not by itself create a viable business case for incumbents. Decarbonisation decisions also depend on a supportive regulatory framework, lower energy prices and public investment. For that reason, additional free allowances should be made conditional on Member States directing a share of their carbon revenues toward industrial decarbonisation, so that public money helps leverage private investment.

I USE OF ETS REVENUES

If free allocation is no longer treated as an unconditional shield, the next issue is whether ETS revenues are actually being recycled in a way that supports industrial transformation. Although several Member States have criticised the carbon market for its costs, publicly available data⁴⁴ suggest that only a limited share of ETS revenues is in fact being used to support industry decarbonisation.

That question matters all the more because there is also disagreement over who should control these revenues: whether they should remain primarily in the hands of Member States or be channelled through the EU budget. In that regard, the Multiannual Financial Framework (MFF) proposed that a 30% share of the ETS revenues (~€10 bn) go to the EU budget⁴⁵ as an own resource. Usually, Member States are opposed to any centralisation, warning that diverting ETS revenues to the EU budget would dilute their climate purpose. Their position reflects a broader political preference for national spending autonomy – provided the money continues to serve climate-related objectives as required under the current directive. **The more relevant question, then, is not who collects the revenues, but how they are actually used, and the extent to which they support industry decarbonisation.**

⁴¹ Ewa Krukowska, Alberto Nardelli. “EU Seeks Stronger Liquidity Safeguards in Carbon Reform”. Article. *Bloomberg*. June 25 2026.

⁴² “The EU ETS at a Turning Point: Balancing Competitiveness and Decarbonisation”, *EPICO – Energy and Climate Policy and Innovation Council, with Frontier Economics*, 13 March 2026.

⁴³ Maarten de Vries & Sjoerd Boerdijk, “Delaying the phase-out of free EU ETS allowances”, *CE Delft (Policy Brief 26.260277.089b, commissioned by Natuur & Milieu)*, June 2026.

⁴⁴ “Dataflow 1527”, *Reportnet 3 – European Environment Agency*, accessed July 8, 2026

⁴⁵ “The 2028-2034 EU budget for a stronger Europe”, *European Commission*, proposal presented 16 July 2025, page accessed July 8, 2026.

The question cannot be answered by looking at annual revenues alone. **What matters is not just revenue intake, but revenues that are spent:** some Member States spend only part of what they receive in a given year, while others spend more than that year's intake by drawing on revenues accumulated previously. Annual income would therefore distort the underlying fiscal effort, either overstating commitment where funds remain unspent or by understating it where earlier windfalls are deployed later.

Tracking spending over a multi-year 2021-2024 period, rather than focusing on a single year, also provides a more accurate picture of how ETS proceeds are actually translated into decarbonisation-relevant expenditure over time. This horizon corresponds to the start of the ETS Phase IV and is long enough to capture patterns rather than one-off fluctuations. The chosen period is also analytically useful as it straddles the June 2023 revision of the ETS Directive. Before that reform, Member States were only encouraged to spend at least 50% of ETS revenues on climate – and energy-related purposes. The revised framework tightened early marking, now requiring all collected revenues to support climate action and energy transformation, except for revenues used to compensate electricity-intensive industries for indirect carbon costs (ICC)⁴⁶. **In principle, this should have strengthened the link between ETS revenues and decarbonisation; in practice, however, substantial national discretion remains over where and how funds are spent,** so the key question is not simply whether the legal wording became stricter, but whether it produced any observable change in spending behaviour and if not, is the European Commission willing to enforce it at at which pace.

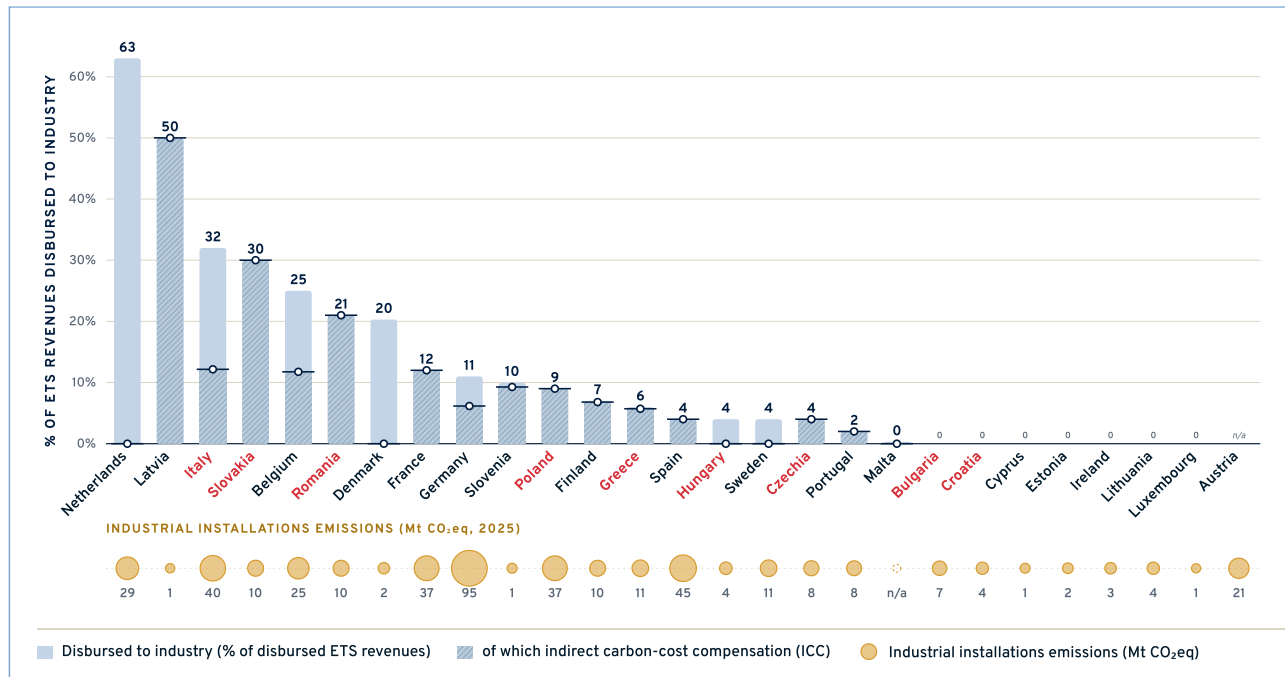
The window also captures the 2022-2023 energy price crisis, when a significant share of climate and energy spending was redirected toward compensation for electricity-intensive industries under the ICC framework, a channel explicitly exempted from the earmarking obligation. This makes the window a useful test case for whether Member States merely used the crisis to compensate exposed industry or whether they went further and treated the shock as an opportunity to accelerate decarbonisation.

The start of Phase IV (2021-2024) generated around €153 billion in ETS revenues. Of this amount, €112 billion, or 74% of the total, went directly to EU Member States' national budgets. A further €21 billion was allocated to the Modernisation Fund, close to €10 billion to the Innovation Fund, and around €8 billion had been channeled to the Recovery and Resilience Facility (RRF). To avoid overstating the scale of industrial support, this analysis excludes Germany and the Netherlands, whose reporting does not allow a clean comparison: Germany channels a large share of climate spending through its Climate and Transition Fund (KTF), while the Netherlands does not earmark ETS revenues but report broader climate spending. This matters because both countries are major ETS recipients and host large industrial installations, so including them would risk inflating the apparent amount of industry support.

Excluding these two cases, **Member States have disbursed around €53 billion.** Yet only a marginal share of that spending was directed toward industrial decarbonisation. In absolute terms, **only about €4 billion – or 8% of spent revenues over 2021-2024 – can be clearly identified as industry-directed decarbonisation spending.**

⁴⁶ "How do Member States use ETS revenues?", *European Commission – Climate Action*, accessed July 7, 2026 (most recent data covering use of ETS revenues in 2024).

FIGURE 1. ETS revenues to industry, indirect carbon-cost compensation and ETS emissions, by Member State



▲ NP: Countries in red are those most reformist in recent ETS reform debates. ETS revenue reporting is not fully comparable across Member States. Some do not formally earmark revenues (Austria, Germany, the Netherlands) and report climate spending rather than directly traceable ETS revenue use. This can lead to apparent overreporting, notably for the Netherlands and Germany. Some years are restricted for Bulgaria (2022), Estonia (2022), Cyprus (2023), Germany (2024). Spain does not include indirect cost compensation in its ETS revenue-use reporting before 2024. For countries with very small ETS revenues, high percentages should also be interpreted with caution (Latvia).

▲ Source: Alice Moscovici, Phuc-Vinh Nguyen (Jacques Delors Institute). Calculated from Reportnet and European Environmental Agency data.

The picture becomes even more fragmented when the composition of this spending is examined. **Eighteen Member States report some ETS-funded support for industry, but in ten cases this takes the form exclusively of indirect carbon cost compensation rather than direct decarbonisation support, amounting €3,5 billion.** This distinction matters because indirect cost compensation is fundamentally compensatory rather than transformative: it protects firms from higher electricity prices, but does not change their production processes, lower their emissions, or reduce their dependence on carbon-intensive inputs. In that sense, it may help preserve short-term competitiveness, but it does not create the conditions for structural transition. It cushions the carbon price signal instead of amplifying it, and therefore does little to turn ETS revenues into a genuine investment lever for industrial decarbonisation.

By contrast, only three Member States appear to use ETS revenues primarily for direct industrial decarbonisation. Denmark supports demonstrations of new green energy technologies, Sweden finances research to reduce process emissions, and Hungary reports hydrogen-based developments. This may reflect the fact that these countries already have relatively low residual industrial emissions. **More importantly, however, these examples show that ETS revenues can be used not only to compensate industry for higher carbon costs, but also to support the technological shift needed to reduce those costs over time.**

Crucially, the small number of such cases suggest a wider design problem: **too little of the revenue generated by industrial emissions are being recycled back into**

the sectors that actually pay the ETS. If industrial decarbonisation is genuinely high on the EU competitiveness agenda, then a fairer contribution rate is needed, one that ensures a more meaningful share of ETS revenues flows back to exposed sectors in proportion to the carbon costs they bear. Italy and Belgium illustrate that combining indirect carbon cost compensation with direct decarbonisation support is possible, through Italy's 'Fondo Teso' and Belgian investment subsidies for low-carbon technologies.

I MSR

Established in 2018, the **Market Stability Reserve (MSR)** was designed to reduce the surplus of allowances and stabilise the carbon price. It operates once a year on the basis of the Total Number of Allowances in Circulation (TNAC), withdrawing allowances from the market when the total exceeds 833 million and releasing them when it falls below 400 million. On the contrary, quotas are released from the reserve when the same number falls below 400 million. By the end of 2024, the MSR had already invalidated 3,2 billion⁴⁷ allowances. Yet the mechanism remains rigid and **volume-based**: neither Member States nor the Commission can intervene flexibly as the adjustment is triggered automatically by predefined thresholds. That rigidity has fuelled criticism that the MSR is too slow to respond to real market conditions, particularly price volatility. Some critics therefore argue for a shift towards a **price-based approach**, under which supply could be adjusted in response to sharp price movements or when a predefined price threshold is reached, as in the ETS2⁴⁸. The issue is that such a change would mark a significant departure from the market-based logic that has underpinned the ETS for the past two decades - a shift the Commission is unlikely to fully embrace.

Instead, in response to Member States' concerns expressed at the March European Council about "*reduc(ing) the volatility of the carbon price*"⁴⁹, the European Commission proposed in April 2026 to amend the MSR by suspending the invalidation mechanism for allowances held above the 400 million threshold. The idea is to keep these allowances in reserve as a buffer in case of future supply shortage and subsequent price increase. The European Parliament, however, chose to postpone the adoption of its position until the full ETS revision is presented⁵⁰, so that the changes to the MSR can be assessed alongside the broader reform package. **That sequencing is the more appropriate approach. The key parameters under discussion – benchmarks, the MSR, carbon credits – are deeply interlinked. Treating them separately risks underestimating their cumulative effects on allowance supply and, ultimately, weakening the ETS carbon-price signal through the excessive addition of allowances. Any amendment to these parameters should therefore be assessed jointly, in light of their combined impact on market scarcity and price formation.**

That said, the invalidation proposal also raises a fundamental concern⁵¹: while its immediate impact on market balance may be limited, it could open the door to greater political intervention. Even with the 100 million annual release-rate limit,

⁴⁷ "EU reinforces the stability and predictability of its carbon market", *European Commission – Press Corner*, 1 April 2026.

⁴⁸ "Proposal for a Decision of the European Parliament and of the Council amending Decision (EU) 2015/1814 as regards ceasing the invalidation of allowances in the market stability reserve", *European Commission, COM(2026) 153 final*, 1 April 2026.

⁴⁹ "European Council conclusions, 19 March 2026", *Council of the European Union*, 19 March 2026

⁵⁰ Frédéric Simon, "EU Parliament puts reform of ETS Market Stability Reserve on hold", *Carbon Pulse*, 3 July 2026.

⁵¹ "EU ETS Reform: Let's not invalidate climate policy! – A response to proposed reforms to the EU Emissions Trading System", *Sandbag*, Technical Brief, June 2026.

a larger reserve would give policymakers more room – and more temptation – to intervene if prices spike, especially under pressure from the incumbent industry.

In that regard, **we recommend leaving the MSR and its invalidation mechanism unchanged, while focusing the reform on other ETS parameters.** Retaining additional allowances in the reserve creates too much uncertainty and increases the risk of political intervention that would weaken the credibility of a market-based price signal. Seven Member States have already signalled support for ending invalidation, and recent political reactions by Chancellor Merz and Prime Minister Meloni⁵² following the war in Iran suggests that, in the event of another energy shock, this option could quickly regain traction. **If policymakers nevertheless choose to allow greater market intervention, we argue that a price corridor would be preferable to the current invalidation mechanism.**

A price corridor would be more interventionist than the current MSR design, but it would also provide a clearer framework for managing volatility while preserving a meaningful carbon price. A ceiling would prevent extreme price spikes, while a floor would ensure that the price does not fall below a level that still drives decarbonisation investment. For some clean technologies, the relevant marginal abatement cost are estimated to require a carbon price between €100/tCO₂ and €250/tCO₂⁵³ - depending on the technology involved. Yet as it stands, a €100/tCO₂ level is not foreseen before 2030⁵⁴, and would in any case be politically unsustainable. A gradually rising corridor could improve investment certainty by making future returns on clean technologies more predictable. However, a price corridor could either be qualified as a tax, triggering the unanimity requirement for fiscal measures, or **be characterised as a carbon market regulation tool; the absence of clear jurisprudence means the legal classification remains uncertain.** If policymakers want to pursue this option, the safest route would be to use the *passerelle clause*. Since the ETS directive falls under environmental policy (art. 192 TFEU), the Council could unanimously agree to shift the specific decision on the corridor and its price level to qualified majority voting. A carbon price floor would provide more predictable revenues and could support the frontloading of ETS revenues⁵⁵ for industrial decarbonisation, but current Member States dynamics make that outcome difficult to achieve. **Still, this should not obscure the broader point being that if designed properly, frontloading could become the most powerful tool for accelerating industrial decarbonisation.**

• Recommendations

To address the concerns voiced by incumbent industries without penalising early movers whose business model depends on a strong carbon price signal, **we recommend that at least 25 percent, and preferably up to one third, of ETS revenues be ring-fenced for industrial decarbonisation.** This should exclude the ICC mechanism, since the aim is not to compensate industry in the abstract, but to ensure that Member States channel revenues into decarbonisation. However, not all Member States have an industrial base in which to invest. The obligation should therefore apply only to those where covered industry installations account for more than 5% of European industrial emissions, namely Germany, Spain, Italy, France, Poland, Netherlands, Belgium and Austria.

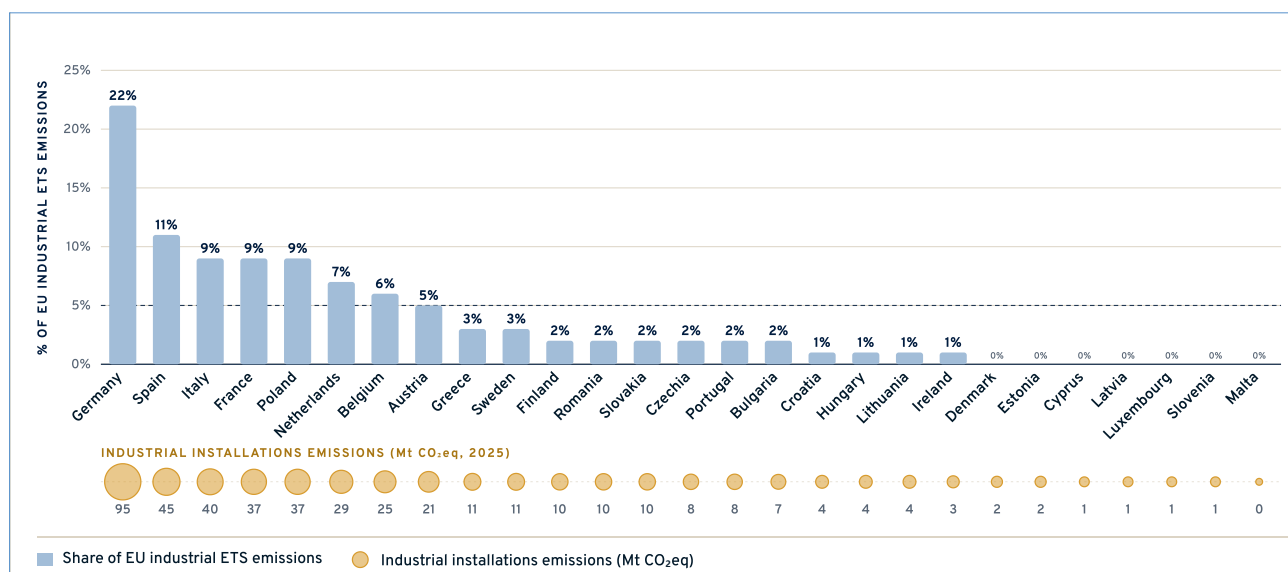
⁵² AFP, “Environnement : l'Italie veut suspendre le marché carbone Europe pour baisser les prix de l'énergie”, *Sud Ouest*, 6 mars 2026.

⁵³ International Energy Agency (IEA), *Breakthrough Agenda Report 2025*, 30 October 2025.

⁵⁴ See ClearBlue Markets forecast.

⁵⁵ Nguyen, P.-V. “ETS2 : clé de voûte du Pacte vert européen ou premier des dominos ?”, Policy paper, Institut Jacques Delors, Novembre 2025.

FIGURE 2. Percentage of EU industrial ETS emissions by country



▲ Source : Jacques Delors Institute

At a conservative carbon price of 80€/tCO₂⁵⁶ over the 2027 to 2030, we estimate that this would channel roughly €4 billion to €6 billion per year into the transformation of European industry. This should be read against the fact that, according to our analysis, only about €4 billion of the €53 billion in ETS revenues disbursed by Member States – excluding Germany and the Netherlands – can be clearly identified as industry-directed decarbonisation spending between 2021 and 2024. In effect, our proposed earmarking would channel about as much money each year into heavy-industry decarbonisation as was spent in total during the first four years of the decade. To ensure that Member States actually spend these revenues as intended, the Commission should also require much greater transparency. The current reporting system, based on an Excel file that is sometimes not even available in an official EU language, makes spending difficult to trace and creates unnecessary scope for error or misuse. Enforcement by the Commission will be key if these rules are to be respected in practice, rather than ignored as they have too often been in recent years.⁵⁷

Still, as shown above, earmarking ETS revenues would help bridge - but not close - the estimated annual investment gap of around €33 billion needed to decarbonise European industry through 2040. It may also be politically difficult for Member States to earmark carbon revenues that they can currently use more flexibly for broader climate-related purposes. To address both constraints, we recommend that selected incumbent industries use a share of their free allowances from the 2026-2030 period as a guarantee to obtain loans.

Over that period, free allowances are estimated to be worth around €150 billion⁵⁸. The proposal would allow firms selected at Member State level to access part of the future value today. Companies would apply for loans from national investment banks (NIB) and secure them against future free allocation. Lending should

⁵⁶ “EU ETS Revenue Simulator”, *Carbon Market Watch*, page consulted July 7, 2026 (tool based on Climact modelling using the 2023 EU ETS revision).

⁵⁷ Costanza Scano, Francesca Bellisai & Giulia Novati, “How much revenue does ETS generate in Italy and how is it used?”, *ECCO Climate*, 16 March 2026.

⁵⁸ Elisabetta Cornago, “A stronger carbon market is necessary for a more competitive European industry”, *Centre for European Reform*, 2 July 2026.

take place through the NIB rather than the EIB, as national institutions are better placed to assess domestic industrial ecosystems and identify which firms should be supported. Member States also have the clearest visibility over who receives free allocations and in what amount, since firms must apply to national authorities to be included in the national implementation measures list. **Because lending capacity is limited, Member States would need to be selective.** One option would be to prioritise strategic sectors facing acute strain, such as the chemicals. Another would be to identify competitive firms within the European value chains and support those that still have a credible chance of succeeding. In that sense, this approach would preserve the ETS's logic of rewarding winners while giving the state a more active role in backing firms with the strongest potential to remain viable in a decarbonised economy.

The amount available would be calculated on the basis of a Conservative Carbon Price Assumption (CCPA). **The loan would be granted only if the company commits to investing the full amount of the estimated value of free allowances in decarbonising its processes through a dedicated plan with binding milestones (1:1 ratio).** The loan would be interest-free unless the amount lent exceeds the value of the share of free allowances. Any difference between the CCPA and the Effective Carbon Price Observed (ECPO) over the period would be allocated accordingly:

- If $CPA < ECPO$, and if the company delivers the investments on time and reports effective CO₂ emissions reductions, the difference between the revenues initially foreseen and the revenues actually generated would be awarded to the company as an incentive. If the investments or the emission reductions do not materialise, the difference would go to the National Investment Bank;
- If $CCPA > ECPO$, Member States would be allowed to reimburse the NBI using their own carbon revenues, including those falling under the 25 percent threshold we recommend. However, this scenario remains unlikely, as the CCPA would be set conservatively, for example at a level around 10 percent below the carbon price observed at the start of the loan, in a context where prices are expected to rise over the following four years.

With the upcoming adjustments already foreseen (higher free allowances through benchmark and conditionalities, a lower LRF, and an adjustment of the MSR) price dynamics are expected to soften, meaning that incumbent industry's carbon exposure will remain limited in the short term. The scheme is designed to exploit this short window of opportunity, while allowances remain abundant and cost coverage low, by enabling companies to secure final investment decisions through investments backed by their future free allowances. This proposal draws inspiration from the Québec model. Whenever price conditions are favorable enough to ensure a return on investment or price parity, the NIB would auction the free allowances used as collateral and place the proceeds in a dedicated escrow account. Since the investment would materialise only after 2030, **the funds would remain consigned until the deadline set in the transition plan submitted by the heavy-industry firm. Disbursement would take place in tranches, based on conditionalities that could include:**

- The signing a **long term contract**, such as a Contract for Difference or a Power Purchase Agreement, with an electricity producers, for industries able to electrify their process;
- **A verified decline in fossil fuel use alongside higher electricity consumption** without a significant drop in output;
- **A 1:1 matching of public support with private capital**, ensuring that the **private contribution was not planned beforehand** and that the investment has a **genuinely transformative objective**, meaning process decarbonisation rather than efficiency upgrades.

- **A staged disbursement based on verified CO₂ abatement**, so that each tranche is released only in proportion to the amount of emissions actually avoided, mirroring the French scheme.

The gradual payout is inspired by the French AO GPID scheme, which demonstrates that annual disbursements can be made conditional on decarbonisation performance, with funding halted immediately if the expected emissions reductions are not delivered. **This type of conditionality should be mandatory, and we recommend that they also apply to any mechanism linked to additional free allowances that the European Commission may introduce.** To complement our proposal, under which allowances would act as collateral until 2030, additional free allowances should only become available from 2031 onward and should be introduced gradually. The share made conditional on investment should follow a stepped trajectory: 25 percent in 2031 to 33 percent in 2032, 50 percent in 2033, 75 percent in 2034, and 100 percent in 2035.

While the flexibility could give industry more breathing space, and, in some cases, help trigger final investment decisions depending on the lending ability of the NIB, it will still be insufficient to close the sector's investment gap. **We therefore recommend, in addition, the frontloading of future carbon revenues.** This mechanism would allow the European Investment Bank (EIB) to lend to Member States so that funds can be invested immediately in industry decarbonisation and repaid through future carbon revenues. It would mirror the lending facility established for ETS⁵⁹ and, according to our estimate⁶⁰, could **raise money of at least €100 billion** – broadly comparable to Japan's frontloaded package of €117 billion over 10 years following the introduction of its own carbon market⁶¹. Given the budgetary constraints facing Member States, they are unlikely to be able to subsidise the upfront costs required of industrial decarbonisation on their own. Frontloading offers the possibility of delivering a macroeconomic shock without resorting to common debt. Ultimately, the €100 billion frontloaded should be combined with other initiatives announced by the European Commission, including the €30 billion Investment Booster, to generate a countercyclical effect. Additionally, the €100 billion Decarbonisation Bank announced in February 2025 could receive part of the frontloaded revenues that would otherwise have accrued to the Innovation Fund (rising revenues expected starting from €5 bn) and the Modernisation Fund (~€35 bn expected until 2030), while the remainder could be made available to Member States according to the current distribution key.

Finally, as in the previous revision, where the ETS directive was negotiated as part of a broader package including CBAM, **the upcoming reform of the carbon market should not be considered in isolation.** This means that **any amendment to the parameters aforementioned should be assessed jointly, in light of their combined impact on market scarcity and price formation.** It also means that the target of concluding negotiations by April 2027⁶² should, where possible, be aligned with the timetable for the Industrial Accelerator Act (IAA) and for the forthcoming revision of the public procurement directive. Indeed, a key issue for strengthening the business case for industrial decarbonisation is demand. In particular, decarbonised heavy industry will need clearer market access and stronger demand for clean tech-

⁵⁹ “ETS2 Frontloading Facility”, *European Investment Bank – Projects Register*, approved 4 February 2026

⁶⁰ Nguyen, P.-V. “ETS2 : clé de voûte du Pacte vert européen ou premier des dominos ?”, Policy paper, Institut Jacques Delors, Novembre 2025.

⁶¹ Japan's 1trn dollar bet on the climate transition, LSEG October 2025.

⁶² Pepe Escrig, Domien Vangenechten & Manon Dufour, “The EU Emissions Trading System at a juncture – What is at stake for the EU?”, *E3G*, 7 July 2026.

nologies if investment is to materialise. The EU alone cannot deliver this framework alone. Member States should also play their part by putting in place **accelerated procedures at national level. This included designating decarbonisation projects as priority areas, with** shorter grid-connection timelines and faster environmental and construction permitting. Without such an enabling framework, the carbon-price signal is unlikely to be sufficient on its own, even if conditionality is attached to free allocation.

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