



PERSPECTIVES Special

EU carbon market: more to come

March 10, 2025

Authors:

Markus Müller, Chief Investment Officer Sustainability

Daniel Sacco, Investment Officer EMEA

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Key takeaways

- From 2026 onward, the European Union Emissions Trading Scheme (EU ETS) will tighten significantly due to the cessation of frontloading auctions, the full implementation of the carbon border adjustment mechanism (CBAM), and stricter emissions caps. European Union Allowance (EUA) prices are expected to move higher as a result.
- In the long term, the EU ETS is likely to serve as a global benchmark for carbon pricing mechanisms. However, meeting EU climate targets will require a delicate balance between regulatory stringency, encouraging technological innovation, ensuring competitiveness and market stability.
- As the EU ETS evolves, financial investors are likely to find increasing opportunities in the market, particularly during periods of structural scarcity. However, short-term volatility and regulatory uncertainty remain risks that will require careful navigation.

Market drivers

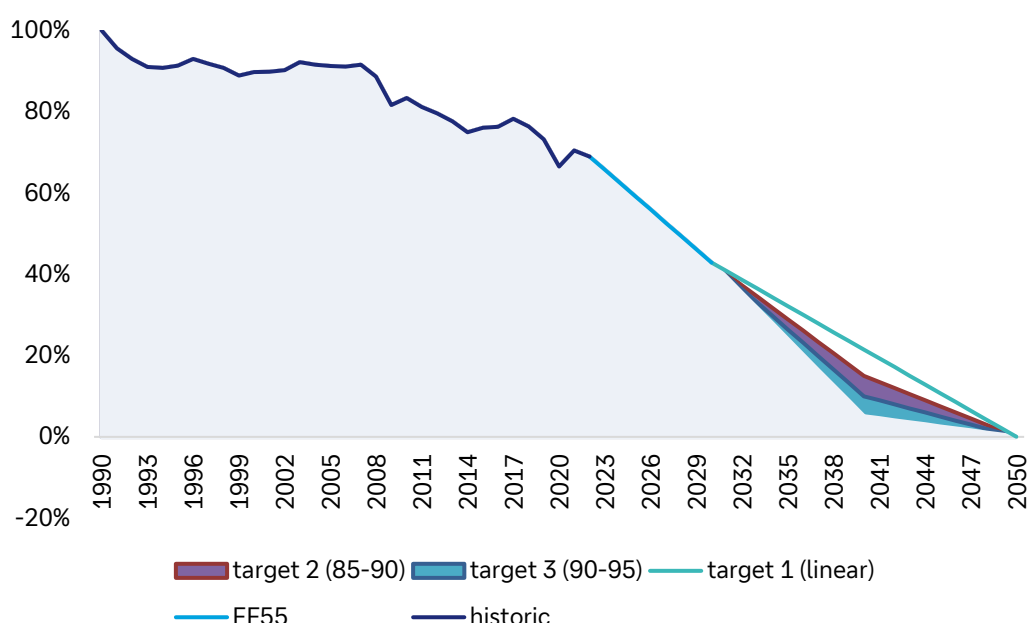
2025 will be another transitional year for the EU Emissions Trading System (ETS) market. Last year, the system's application to industry and aviation carbon emissions was strengthened, with 25% fewer free allowances allocated to aircraft operators. Shipping emissions are now also partly covered under the system. This year, only 40% of the sector's emissions are subject to compliance obligations (i.e. require allowances to cover them), but this will scale up to 100% by 2026. While the partial inclusion of shipping initially increased the supply of allowances in the EU ETS, the cancellation of these surplus credits between 2025 and 2027 is expected to tighten supply further in the medium term. (How the EU carbon market functions is described in a report we published last year, [Investing in EU carbon markets: where now?](#))

The **progressive tightening of the emissions cap**, a measure that directly limits the total number of allowances in circulation (TNAC) is central to the evolution of the market. This was reduced by 90 million allowances in 2024 and, under the Fit-for-55 reforms, the linear reduction factor (LRF) – the annual rate at which allowances are reduced – has been increased to 4.3% per year. As shown by Figure 1, this faster pace reflects the urgency of meeting the EU's climate target of a 55% and 90% reduction in emissions by 2030 and 2040 respectively, compared to 1990 levels.

The proposed target is based on an impact assessment that looked in detail at the implications of three target options for 2040: a linear trajectory between 2030 and 2050 bringing to a reduction of up to 80% compared to 1990; a reduction of 85-90%, compatible with the level of net GHG reduction that would be reached if the current policy framework were extended to 2040 and finally a reduction of 90-95%. To achieve such an ambitious target, there will be two one-off reductions in the TNAC over the next years, known as "rebasing", making the market structurally tighter over time.



Figure 1: Historical and potential 2030-40 EU emissions targets



Source: [EU Commission February 2024](#), Deutsche Bank AG. Data as of January 2025.

Even though the emissions cap is being reduced, the European Commission's decision to **frontload allowances** (i.e., bring forward the issuance of 248mn additional EU allowances, EUAs) under the RePowerEU initiative has temporarily increased EUA supply. This measure has raised EUR20bn to fund energy security and renewable energy projects but has also created a short-term oversupply, keeping market conditions loose (in effect, it represents an 18% increase in EUA supply during 2024-26). This oversupply will delay the full impact of structural tightening in the EU ETS until these additional allowances are absorbed.

Demand for EUA has also been a concern. Electricity demand across the EU continues to lag, at roughly 5% below pre-energy-crisis levels.¹ Figure 2 shows final consumption in European OECD countries (a broader grouping) in recent years. Meanwhile, deployment of renewable energy sources is also accelerating. According to the IEA, renewable energy had a 45% share in power generation in the EU in 2023, with this figure expected to rise 64% by 2030.

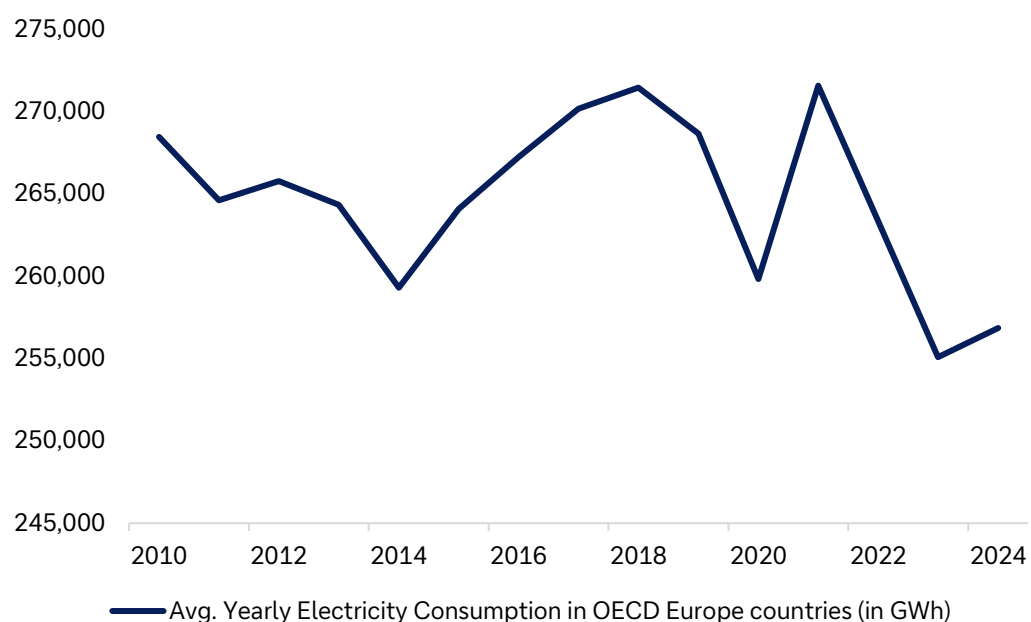
This combination of lower demand for electricity and more renewables supply has led to a significant decline in emissions from the power sector. Power demand and fossil fuel generation is the largest emissions sector in the EU, and because power does not receive free allowances, it represents more than 80% of demand in the traded market for EUAs. It therefore has a major impact on the EU ETS.

On the other hand, stagnation in European industrial output (figure 3) is weakening demand for allowances from this sector. For industries, the demand for EUA tends to be correlated with natural gas usage: growth in this remains sluggish, with only a modest 3% increase over the past year.²

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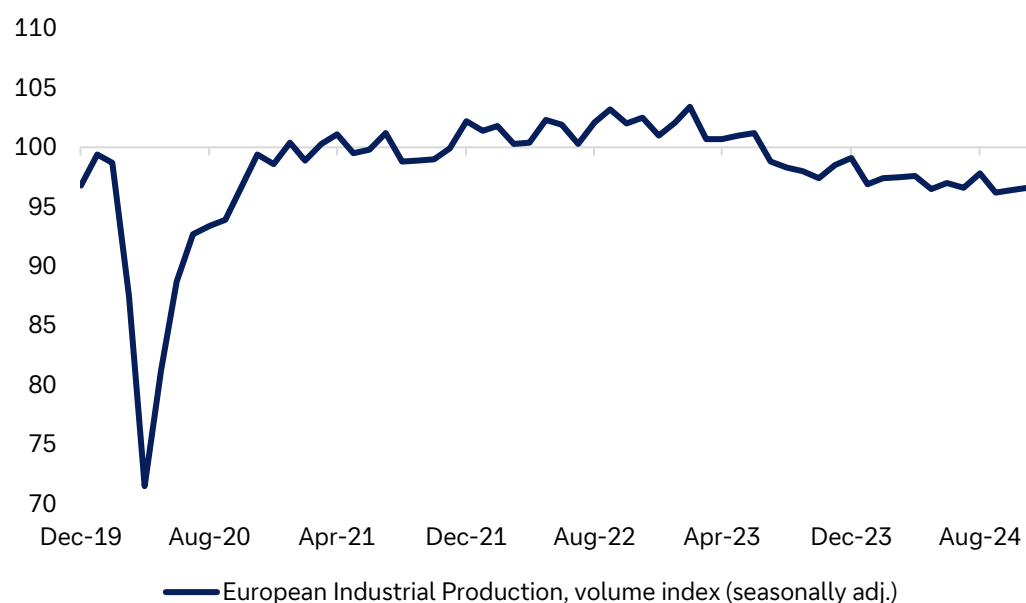


Figure 2: Average yearly final electricity consumption in OECD Europe Countries (in GWh)



Source: IEA, Deutsche Bank AG. Data as of October 2024.

Figure 3: European industrial production over the past five years



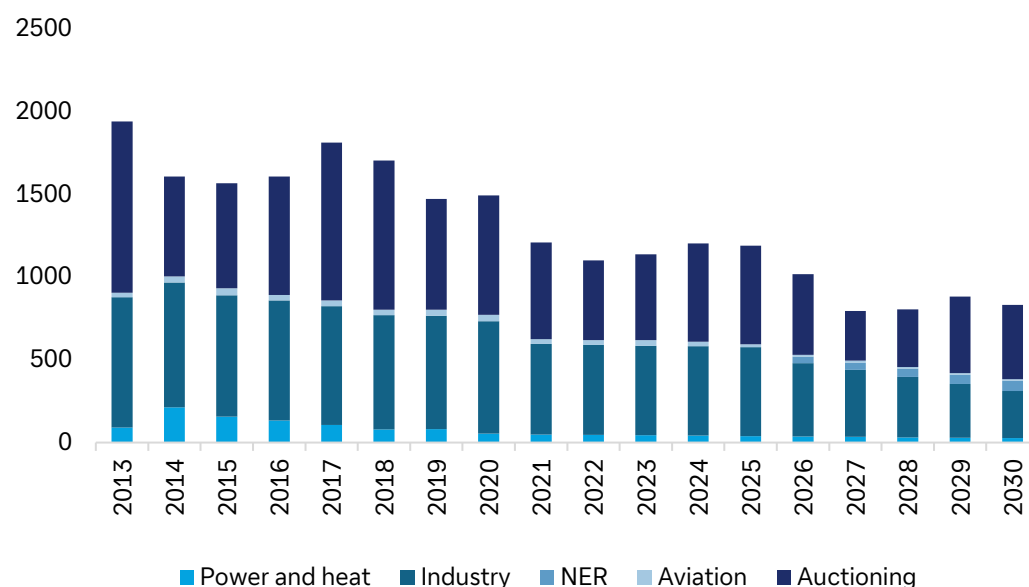
Source: Refinitiv, Deutsche Bank AG. Data as of January 2025.

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All in all, the EUA market has faced major headwinds over the last years. But **financial investors** in the market have turned more positive recently, perhaps in anticipation of future changes to this market. According to BloombergNEF (BNEF), at the end of 2024, the 'Investment firms' category of EUA positioning has been closing net shorts and moving net long for the first time since the summer of 2023. This could provide some tailwinds to EUA prices as, according to BNEF, financial investors hold approximately 15% of TNAC.

Figure 4: Actual and forecast issuance of allowances until 2030



Source: Refinitiv, Deutsche Bank AG. Data as of October 2024.

02

Regulatory outlook

The **Carbon Border Adjustment Mechanism (CBAM)** aims to address the problem of carbon leakage (i.e., companies trying to escape stricter carbon regulations by bringing in goods from countries with less stringent rules).

Under CBAM, importers need to report the embedded emissions of specific categories of goods imported into the EU and will then have to pay for CBAM certificates for every ton of CO₂e. The price of CBAM certificates, calculated weekly, will mirror the price of the EU Allowances. Since its transitional phase began in late 2023, companies have only been required to report emissions data for goods like steel, cement, aluminium, and fertilizers. The calculation rules for embedded emissions are complex and different from traditional international carbon accounting standards. The system covers six sectors currently and 100+ goods within these, including finished products. CBAM covers EU as well as non-EU importers, although it now appears likely that only the largest EU importers will be required to comply with the scheme.

From 2026 CBAM should escalate to full compliance, with importers purchasing CBAM certificates priced in line with EU Allowances. To align with CBAM, free allowances allocated to sectors under the EU ETS (to shield them against imported carbon) will be phased out gradually between 2026 and 2034.

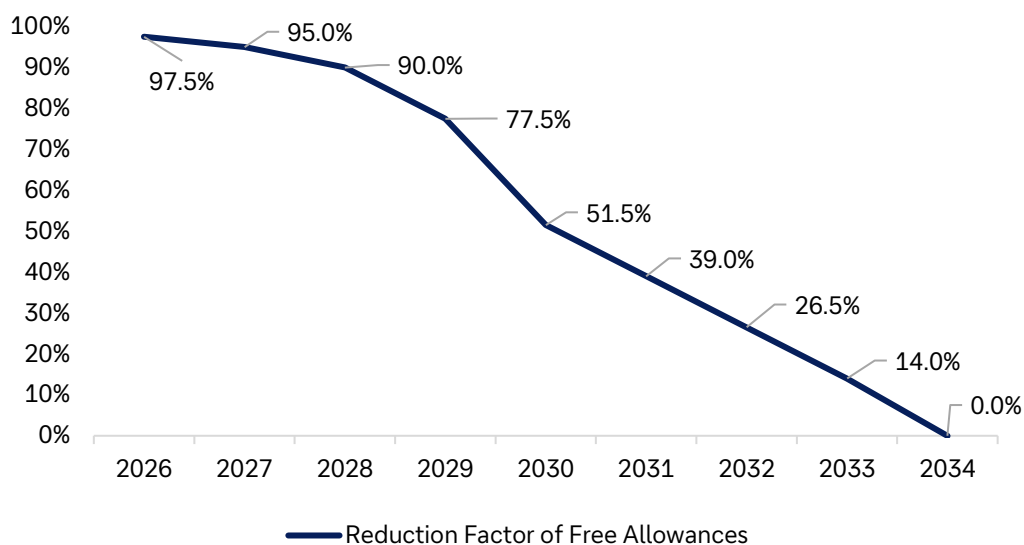
The EU has been planning to extend the scope of the CBAM to all EU ETS products by 2030. Additional products such as chemicals and polymers are to be determined by 2026. Approximately 2% of China's exports to the EU might fall under the initial scope of the CBAM.³ This could increase if organic chemicals and plastics end up being covered at a later point of the CBAM, in which case this share could rise to more 11% of Chinese exports to the EU.

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Figure 5 below shows the future pace of carbon pricing implementation as free allowances (for CBAM and other initiatives) are gradually phased out.

Figure 5: Removal of EU ETS free allowances to 2034



Source European Union, Deutsche Bank AG. Data as of January 2025.

Ultimately, we think the EU may try to tax all imports (not only ETS products) on their embedded carbon in order to reduce opportunities for “carbon arbitrage”. The potential impact on inflation may make this politically challenging but it may be necessary if the EU is to achieve its net-zero goals via the ETS. On the other hand, the recent changes in the European Parliament (with the call by the European People’s Party for a two-year CBAM freeze for example) highlights a greater focus on competitiveness going forward.

While we do not think a rehearsal of the CBAM is likely, there could be some delays to lighten the regulatory burden on businesses. Just recently, the first ‘Omnibus’ packages (February 2025) has introduced legislative simplifications across sustainable finance, due diligence, EU Taxonomy, CBAM, and investment programs. A key proposal simplifies CBAM by exempting small importers (under 50 tonnes), easing compliance for larger importers, and strengthening anti-abuse measures. A full CBAM review later in 2025 will explore extending its scope and addressing carbon leakage risks, with a legislative proposal expected in early 2026.

We think this focus on simplification will continue but, more broadly, we think the CBAM could encourage other regions to follow suit and create carbon markets to price in carbon emissions, helping to level the playing field for EU industries.

Beyond 2026, other changes are planned. The **EU ETS 2**, extending the system to include emissions from transport and buildings, is scheduled to launch in 2027 or 2028. This should increase its coverage to roughly 75% of total EU emissions.⁴

Another question is whether **carbon dioxide removal (CDR) credits** can be integrated into ETS. A consultation will start in the EU from 2026, with one important issue being the type of removals credits allowed. If integration is limited to Direct Air Carbon (DAC) projects, then the impact could be limited. Integration of more types of Carbon Dioxide Removal (CDR) mechanisms would have a bigger impact, but we do not expect these to be embedded into the EU ETS any time soon.

The phasing-out of free allowances, coupled with stricter emissions caps, is likely to drive up the value of EU allowances. At the same time, mechanisms like the **Market Stability Reserve** will be reviewed in 2026, potentially further impacting supply and demand.

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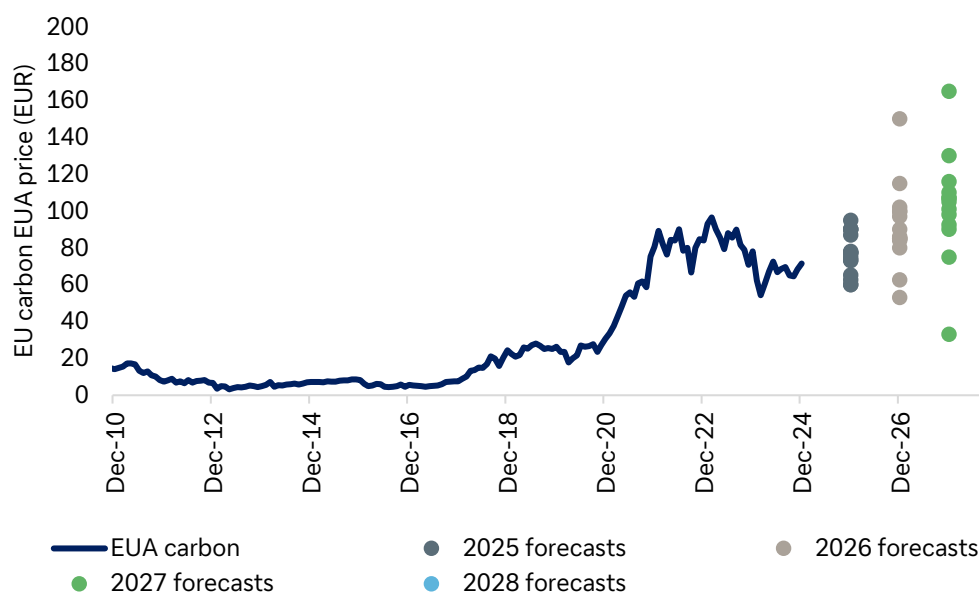


03

Carbon price outlook

Figure 6 below shows forecasts for the next three years by our DWS colleagues. As explained in the previous chapters, the oversupply from RePowerEU auctions, weak demand, and limited policy catalysts are expected to constrain upward price movement in 2025. Figure 6 below gives the DWS forecast range of carbon prices for the next few years.

Figure 6: EU carbon price trends and DWS forecasts



Source: DWS, Bloomberg Finance LP, Deutsche Bank AG. Data as of January 2025.

Looking beyond this year, reducing net emissions to -90% below 1990 levels by 2030 would imply that an emission reduction of 134 MtCO₂-equivalents (CO₂e) needs to be achieved every year from now until 2030, on average. Beyond 2030, this pace of reduction must be at least maintained.⁵

The implications of these medium- and long-term goals vary across sectors. To meet them, power would need to be fully decarbonized by the latter half of the 2030s. For industry, an increasing focus will need to be on the 'harder-to-abate' sectors and on enhancing carbon capture and removal technologies in the post-2040 period. Sectoral implications will need to be monitored closely to understand potential risks and opportunities from carbon pricing.

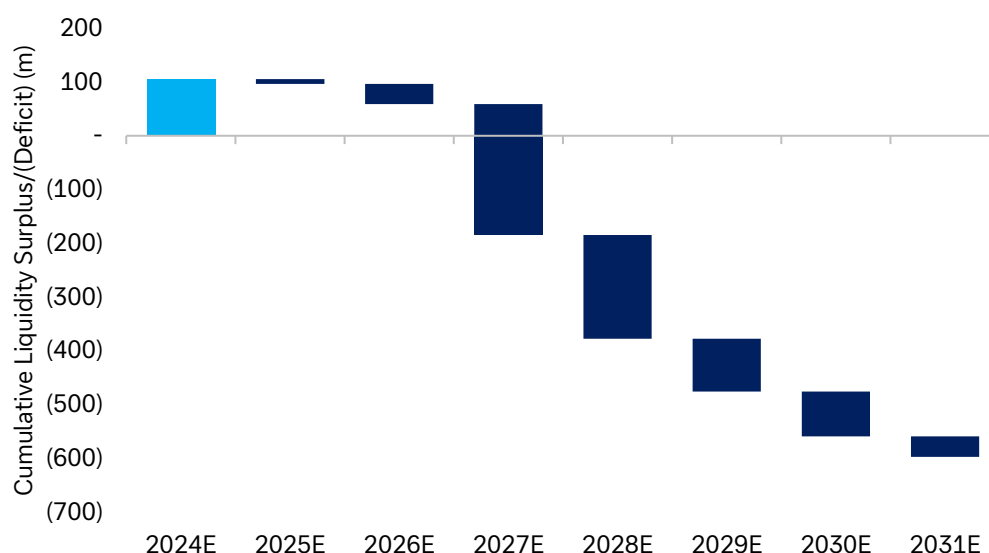
From 2026 onwards the market is expected to tighten significantly for reasons we described in the previous sections – e.g., the cessation of frontloading auctions, the end of free allowances to the aviation sector, the full implementation of CBAM (which will imply a progressive reduction of free allowances allocated to industrials), and the phase-in of shipping compliance obligations. By frontloading auctions to finance RePowerEU, the EU has effectively borrowed from the future EUA market supply, which will consequently have to be lower over the next years, exacerbating any scarcity effects. Figure 7 shows supply/demand dynamics expected for the few years, according to recent analysis from Berenberg: based on these forecasts, liquidity in EUA is expected to fall.

In addition, the recently **announced agreement to reform the debt brake** with quite large fiscal policy measures **in Germany** could have substantial implications if approved. While Trump proposed tariffs have added uncertainty to the growth outlook, Germany major step-up in defence spending would give its defence industry manufacturing (the largest demand centre for EUAs) a substantial boost.

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Figure 7: EUA supply shortfalls may increase



Source: DWS, Deutsche Bank AG. Data as of January 2025.

Independently from growth dynamics in the major European countries, only one-third of the allowances allocated in 2022 will be allocated each year by 2030. These changes, coupled with a faster decline in the emissions cap, are projected to drive EUA prices materially higher from 2027.

Looking beyond the DWS forecasts out to 2028 in Figure 7 above, other forecasters are suggesting further gains. BNEF forecasts, for example, forecasts that the price of EUA could reach EUR145/t CO₂e in 2030 in its base case scenario, and EUR175/tCO₂e by 2036.

04

Risks for investors

Short-term EUA price volatility has resulted from, inter alia, weather patterns (due to their impact on renewable power generation), prices of other correlated commodities such as natural gas (due to coal-to-gas switching by industries) and the market behaviour of non-compliance participants.

Unexpected policy changes also create risks. The results of the 2024 EU parliamentary elections opened the door to potential tactical alliances to water down environmental policies, especially on competitiveness concerns, although we do not think a sharp reversal in regulations is likely in the short term. Political discussions are more likely focus on the post-2030 period, policy changes have potentially significant political costs to the parties advocating them, and the introduction of CBAM from 2026 onwards should provide a way to maintain (to an EU audience) that the EU ETS will maintain the competitiveness of EU industries, not threaten it, particularly if compliance costs are reduced.

In this regard, on February 26th, the newly formed European Commission announced its Clean Industrial Deal initiative, aiming to lower energy costs for businesses while fostering climate action. This should serve as a transformative business strategy that integrates climate action with increased competitiveness. In particular, the EC proposed allocating EUR100bn to support clean manufacturing within the EU, with a focus to support energy-intensive industries.

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In parallel with the Clean Deal, the Commission has also unveiled its Action Plan for Affordable Energy to reduce energy bills for consumers and energy-intensive industries, with the objective of saving up to EUR45bn this year on fossil fuel import costs.

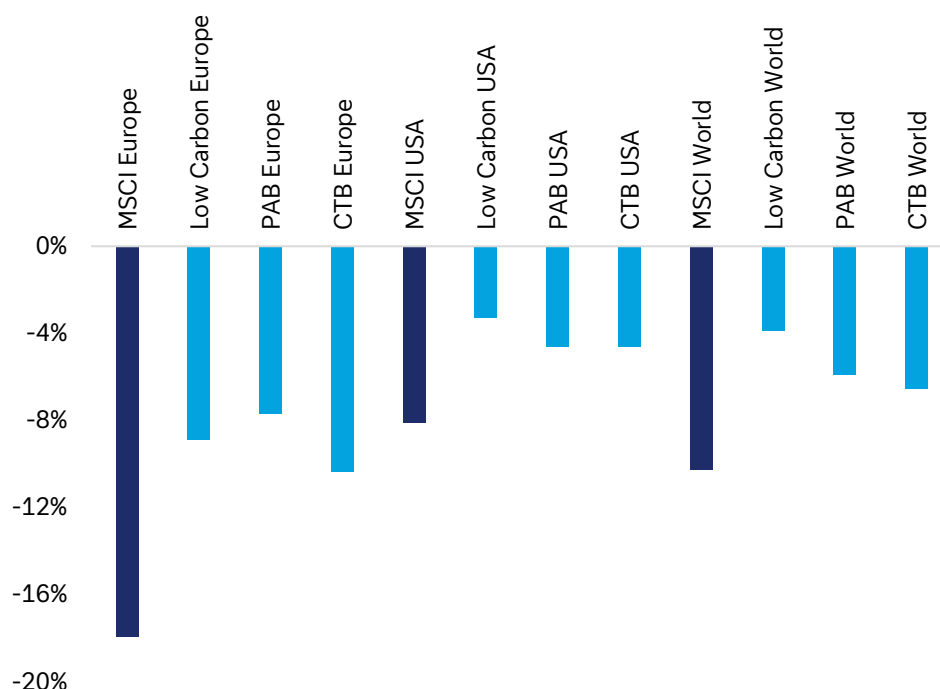
Hence, despite the recent discussion about delaying and simplifying regulations in the EU, we believe the increased focus on competitiveness should not dampen climate action. At the same time, there could be foreign pressure to scale back the EU ETS, if it is seen by non-EU players (for example the U.S.) as unfair. There is a risk that the ETS becomes a bargaining chip in broader trade disputes.

Lower marginal abatement costs (MAC). Policy and technological developments that could lower MAC of mitigation approaches in hard-to-abate sectors (e.g., cement and steel) could have a strong impact on the price of the EUAs. This helps explain the market focus on carbon capture and storage (CCS) and Green Hydrogen. Higher carbon prices would encourage investment into these technologies, in the hope of making them commercially viable. For most technologies, however, the cost of abatement remains much higher than the current ETS carbon price.

Demand. Future industrial demand for EUA will largely depend on future economic growth. But there are many other sources of uncertainty. There include the effects of the EU's new Clean Industrial Deal, unveiled on February 26, the extent of additional EU & member states funding for industries, and global trade policies and competitiveness, particularly vs. the U.S. & China. As noted above, increasing use of low-carbon and renewable sources of energy could also negatively affect EUA demand, even if overall electricity demand keeps rising.

Impact on equities. Investors may also need to consider the possible impact of higher carbon prices on companies. Figure 8 below shows the potential equity market value loss across the different indices, in a scenario where the carbon price rises to USD150/tCO₂ according to analysis by DWS. The forecast impact on company equity value is significant. In this scenario, the MSCI World index comes down by -10%; in a scenario where the price rises to USD300/tCO₂, the fall is -15%). While the forecast impact of much higher carbon prices is consistently negative, it is less pronounced on ESG indices, as might be expected.

Figure 8: Carbon price stress test: Potential equity market loss at USD150/t



Source: DWS "Stress testing equity markets with higher carbon prices". Data as of October 2024.

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05

Conclusion

This history of carbon markets is a long and not always successful one. However, after transition years in 2024 and 2025, the EU ETS market is likely to tighten from 2026 onwards and make an increasingly meaningful impact on carbon emissions. The longer-term outlook for carbon prices under the EU ETS is therefore probably upwards and this could be an increasingly interesting asset class for investors.

However, as history also suggests, short-term price volatility is possible due to the difficulties of matching supply and demand. Other risks include unexpected policy shifts, possibly from outside the EU: CBAM, for example, may succeed in creating a more level global playing field for counting embedded emissions, but it may also create the risks of foreign regulatory reprisals. The overall rationale for the EU carbon market will remain good, however, particularly with carbon abatement costs likely to remain high.

Carbon markets provide a market-based mechanism to drive corporate decarbonization by assigning a tangible cost to greenhouse gas emissions, creating financial incentives for companies to reduce their carbon footprint. Unlike policy-driven subsidies or mandates, carbon markets should operate independently of political cycles, ensuring a consistent economic signal that encourages long-term investments in low-carbon technologies and sustainable practices. By putting a price on emissions, they align financial performance with climate action, making emissions reductions a strategic business decision rather than a regulatory burden.



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4 [ETS2: buildings, road transport and additional sectors – European Commission](#)

5 European Commission “Climate Action Progress Report” (2024).

Appendix

Historical performance

	7.3.2020 – 7.3.2021	7.3.2021 – 7.3.2022	7.3.2022 – 7.3.2023	7.3.2023 – 7.3.2024	7.3.2024 – 7.3.2025
Performance					
EUA Futures	66.5%	49.0%	60.9%	-37.9%	15.8%
STOXX Europe 600 EUR Total Return Index	14.3%	4.7%	14.0%	13.0%	13.5%
EURO STOXX 50 EUR Total Return Index	15.9%	-2.5%	25.0%	19.2%	13.1%
MSCI World Gross Total Return USD Index	29.6%	5.2%	-1.2%	27.2%	12.0%
MSCI Europe Gross Total Return USD Index	19.3%	-3.5%	11.3%	16.9%	12.7%
MSCI USA Gross Total Return USD Index	33.7%	9.1%	-4.0%	31.8%	12.7%

Source: Deutsche Bank AG, Bloomberg Finance L.P., LSEG Datastream; Data as of March 7, 2025.

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Glossary

BloombergNEF (BNEF) is a research organization that provides analysis on energy transition, including carbon markets, renewable energy, and sustainable finance.

The **carbon border adjustment mechanism (CBAM)** is a policy tool introduced by the EU to prevent carbon leakage by imposing a carbon price on imported goods from countries with less stringent climate policies. It ensures that imported products bear a cost similar to those covered under the EU ETS.

Carbon dioxide removal (CDR) is a set of technologies and natural processes that capture and store atmospheric CO₂, to mitigate climate change. Methods include direct air capture, afforestation, bioenergy with carbon capture and storage (BECCS), and enhanced weathering.

Climate Transition Benchmarks (CTB) are financial benchmark designed to help investors align their portfolios with the transition to a low-carbon economy. The CTB has less stringent decarbonization requirements than the Paris-Aligned Benchmark (PAB) but still aims to reduce climate-related financial risks and support the shift toward net-zero emissions. It includes companies that are making credible efforts to reduce their carbon footprint.

EU allowances (EUA) are the tradable carbon credits within the EU Emissions Trading System (EU ETS). Each EUA represents the right to emit one tonne of CO₂, (or equivalent greenhouse gases). EUAs are allocated to companies through auctions or free allocation and can be traded on the carbon market.

The **European Union Emission Trading Scheme (EU ETS)** is a carbon emission trading scheme that began in 2005 and is intended to lower greenhouse gas emissions in the EU.

EUR is the currency code for the euro, the currency of the Eurozone.

The **International Energy Agency (IEA)** is an intergovernmental agency studying energy-related issues.

Linear reduction factor (LRF) is the annual rate at which the cap on emissions under the EU ETS is reduced. It determines the pace of emission cuts by decreasing the number of allowances available in the system.

Marginal abatement costs (MAC) is the cost of reducing an additional unit of CO₂, emissions. It helps determine the most cost-effective strategies for emissions reductions across industries and technologies.

The **MSCI AC World Index** tracks the performance of around 1,600 large- and mid-cap stocks across 23 developed- and 23 emerging-market countries.

The **MSCI Europe Index** includes large and mid cap stocks across 15 developed markets countries in Europe.

The **MSCI USA Index** is designed to measure the performance of the large and mid cap segments of the U.S. market.

The **Market Stability Reserve (MSR)** is a mechanism designed to provide stability for the EU ETS. It addresses the current surplus of allowances and improves the system's resilience to major shocks by adjusting the supply of allowances to be auctioned.

The term "**Net Zero**" refers to a situation in which the economy, society, or a particular economic sector emits no carbon dioxide (CO₂), either because it does not produce any or because it collects the CO₂ it does produce for use or storage.

Paris-Aligned Benchmark (PAB) is a financial benchmark designed to align investment portfolios with the goals of the Paris Agreement. It requires a significant reduction in carbon intensity and excludes companies that do not comply with strict decarbonization criteria. The PAB ensures that portfolios contribute to the transition toward a low-carbon economy by favoring companies with lower emissions and stronger climate policies.

The **REPowerEU** policy is a European Commission proposal to end reliance on Russian fossil fuels before 2030 in response to the 2022 Russian invasion of Ukraine.

Total number of allowances in circulation (TNAC) is key metric in the EU ETS used to assess the surplus of carbon allowances in the market. It influences adjustments in the Market Stability Reserve (MSR), which helps regulate allowance supply to prevent excessive price volatility.

USD is the currency code for the U.S. Dollar.



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