Research Institute

Investing in carbon before policy reforms

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Investing in carbon before policy reforms

How reforms to the EU Emissions Trading System create attractive investment opportunities

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This report sets out why a 2-4+ year investment in EU carbon allowances (EUAs) is attractive for buy-and-hold investors.

The decline in the ETS price this year is a 'buy low' opportunity. The EUA price fell from EUR 90 in early January 2026 to a low of EUR 67 in March 2026, due to statements from some politicians raising competitiveness concerns in advance of planned ETS policy reforms.

Investor certainty in the continued operation of the ETS has been restored: At the 19 March EU Council meeting, all Heads of State called for the market to be reformed "*while preserving the essential role of the ETS in the climate and energy transition*". This statement restored some investor confidence, starting an EUA price rebound to EUR~75 (as of mid-April 2026). The ETS will not and cannot be dismantled.

Compared to other commodities, analyst forecasts for EUA prices have shown typically higher forecasting errors. **DWS statistical analysis found that historically, the largest return came from buying EUAs before major ETS policy reforms were proposed and agreed**.

The EU Commission will publish proposals in July 2026 for the post-2030 ETS rules. Buyin EUAs before then, is an opportunity as the ETS is structurally short of allowances and the pric likely needs to increase to higher than EUR 100 post 2030 to support industrial decarbonisation.

Introduction

EUAs are a unique commodity that regulates EU power and industrial companies' emissions. Section 1 of this report covers factors affecting the return from investing in carbon a. Section 2 explains how the Emissions Trading System (ETS) works.

The goal of the ETS is to stop it being free for companies to pollute as much as they want. In most markets, if the price of a product or service goes up, then companies will try to produce or supply more of that product or service. The ETS is a 'cap and trade' system where the supply of EU allowances (EUAs) declines every year to help meet climate goals. This makes the EUA a unique commodity market as the supply of EUAs cannot increase if the price of allowances goes up.

Weakening the ETS would not be in Europe's economic interest. In the wake of the Gulf conflict and energy crisis, we believe the EU will focus on strengthening the ETS in ways that support sustainable energy independence and electrification technologies like heat pumps, while protecting industrial competitiveness. There is a case for investors become involved in the ETS reform debate, reflecting the expectation of major asset owners to participate in policy engagement[1].

No assurance can be given that any forecast, target, or opinion will materialize. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect.

[1] Net Zero Asset Owner Alliance (2024) Serving asset owner clients through climate stewardship: a call to action to asset managers

1 / Investing in the Emissions Trading System

Europe's "cap and trade" policy offers unique features and an attractive medium-term investment

This section reviews some of the factors driving the ETS market, forecasting the carbon price, the 'announcement effect' of ETS policy reforms and asset class correlations

A unique commodity supporting Europe's Transformation: sustainable energy independence & climate goals

As we explain in more detail in Section 2, a key factor to understand is that the EU Emissions Trading System (ETS) is different from all other markets because it is created by public policies. Each year, 10,000+ companies from the power, industrial, aviation and shipping industries must give to regulators, one EU Allowance (EUA) for every tonne of their carbon equivalent emissions or face steep fines. Companies and investors can buy and sell EUAs.

Liquid primary & secondary market: Exchange Traded Commodity (ETC) is an easy way to access the ETS

Since the ETS's inception, the market has developed significantly and has liquid trading markets. Alongside the distribution of free allowances to industry and a small number of reserved EUAs sold by European governments to fund subsidy programs, the remainder of EUAs are sold through auctions in the primary market.

The European Energy Exchange (EEX)[2] and Intercontinental Exchange, Inc. (ICE)[3] are the main exchanges for primary and secondary market exchanges for EUA trading, the EU common auction platform and EUA spot and futures trading in the secondary market. Following auctions and industry allocation, EUAs can be traded in the secondary market. The secondary market has become increasingly electronic, with market liquidity spread out across spot, forward and future markets.

For investors, a dedicated EUA focused Exchange Trade Commodity (ETC) can be listed on a stock exchange. This is a lower cost and simpler way than investing in a hedge fund's carbon strategy or holding and managing EUAs directly. All holding and trading of EUAs is conducted via the EU Commission's Union Registry: a regulated online database that helps guarantee the precise accounting of EUAs. The ETC provider buys, sells and stores EUAs on behalf of investor clients.

The ETS will likely be structurally short of allowances over the next several years. The supply of allowances (the cap) currently reduces by 4.4% per year to help the EU meet its climate goals. This means that the price of EUAs is likely needs to increase to reflect the scarcity value of EUAs until emissions from the energy and industrial sectors of the economy also reach zero. The research teams in investment banks and other expert companies have models on the potential evolution of supply and demand of allowances and the likely pace of emission reductions. These models show that the ETS price will likely increase as there are fewer allowances available in the market[4].

Up to now, most of the responsibility for reducing emissions has been from the power sector. With the progress that the power sector is making by investing in renewable technologies, this means that the responsibility to reduce emissions will increasingly fall on the industrial sector. This responsibility occurs because industrial companies are receiving fewer free allowances – see Section 2 for more detail.

A higher ETS price is needed to incentivise industrial investment in technologies like heat pumps

The EUA carbon price will need to increase in the medium term to meet the EU's energy independence and climate goals to support the cost of industrial decarbonisation and electrification. Up until now, the ETS has been largely driven by the relative differences in fossil gas and coal prices and how EUAs are needed by electricity generation companies. The focus is shifting to industry. Industrial companies will have fewer EUAs than their emissions and so will have to invest in lower carbon emission technologies such as industrial heat pumps and/or pay a higher EUA price.

[2] EU ETS Auctions | EEX and EU ETS Spot, Futures & Options | EEX
[3] ICE 2026
[4] For instance (but not limited to): Berenberg 2026; Morgan Stanley 2026; Goldman Sachs 2026; Bloomberg 2026.

One investment bank estimated[5] EUR 130 is the weighted average EUA price to support industrial decarbonisation technologies. This means that the price of EUAs is likely to increase to help balance the ETS market.

A portion of the cost of installing industrial low-carbon technologies may be covered by different types of government subsidies. This may mean subsidies help to moderate the 2030's EUA price from rising too high. Governments will still rely on the ETS and a higher carbon price to provide a market signal to companies to make investments to cut their emissions. Thus, the ETS price will very likely increase over the next few years, from its current level.

Forecasting the EU carbon price

Like other markets, the spot and futures carbon prices move every day. In the short term, the biggest effect comes from the energy market. When gas prices rise, power companies tend to burn more coal to generate electricity. This produces more carbon emissions and pushes up demand for carbon allowances. Cold and hot weather has a similar effect, lifting heating (or air conditioning) demand for electricity and fossil energy use in district heating systems. Individual home boilers are not regulated by the main ETS.

Rising fossil gas prices due to the Middle East conflict may lead power companies to use slightly more coal power generation, requiring the companies to increase their demand for EUAs. However, a higher gas price may also lead to reduced industrial output. One assessment concluded that higher gas prices could mean 1-2% lower net demand for EUAs[6].

For the last three years, DWS's Research Institute team have been forecasting the next year's ETS carbon price as part of DWS's quarterly financial market forecast: the CIO View[7]. We draw on the direction of relevant public policies, energy prices, the forward curve and financial institution research forecasts to determine our forecast as shown in Figure 1. Each of the dots is a recent price forecast from a different financial institution tracking the ETS market.

We forecast an EUA price of EUR 90 by Q2 2027.

Figure 1 – EUA carbon price is likely to rise: expert forecasts for the ETS price

Source: DWS, Bloomberg L.P. April 2026 *No assurance can be given that any forecast, target, or opinion will materialize. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect.*

[5] Goldman Sachs 2025
[6] Goldman Sachs February 2026
[7] DWS May 2026 https://www.dws.com/insights/cio-view/our-forecasts/

The "Announcement effect" on EUA price from prior ETS reforms, supports investing in carbon

A factor affecting our EUA price forecast is due to upcoming major reforms to the ETS market rules.

Several academic reports[8] conclude that EUA prices respond to announcements of reform rather to when proposals are formally enacted. The directional finding is consistent: the Commission proposal or EU Parliamentary vote may matter more to the EUA price then when the reform is implemented. Our analysis of the announcement effect of policies, draws on these academic reports to inform our own methodology.

We conducted a statistical analysis of how EUA prices were affected by 23 different policy milestones between 2015 to 2024 that reformed the ETS rules. For each policy event we estimated the return from investing in the European gas market, German power market and EUAs, over a 120 day window before each policy reform[9].

On many days, carbon prices move in line with gas and power markets. But around major policy announcements, the relationship between carbon, gas and power prices explains very little of what happened to the carbon price.

While hedge fund investors may try to anticipate policy announcements, for other investors a likely better strategy is to enter the market at a lower price point and be patient over a several year period when when policy reforms are enacted and when prices are anticipated to rise as shown on the previous pages in Figure 1.

Figure 2 shows how in the 30 days and 5 days *before* policy reforms that created major strengthening of the market (such as the Phase 4 rules for ETS over 2020-230), we found high levels of potential return. We show the policy reforms that resulted in >5% cumulative return.

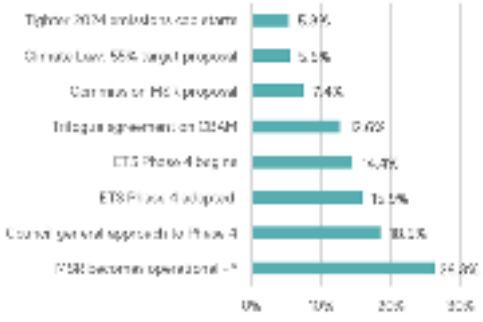
Figure 3 shows how in the 30 days and 5 days *after* policy reforms were announced or agreed.

Our analysis of EUA investing before major past policy reforms, supports our recommendation for a 2-4+ year investment in EUAs, before the July 2025 European Commission proposals that will create the Phase 5 ETS rules for 2030-2040.

Figure 2 – The return from investing in EU carbon allowances *before* past ETS policy reforms

Policy linked return 5 days *before* ETS policy reforms

Policy linked return 30 days *before* ETS policy reforms

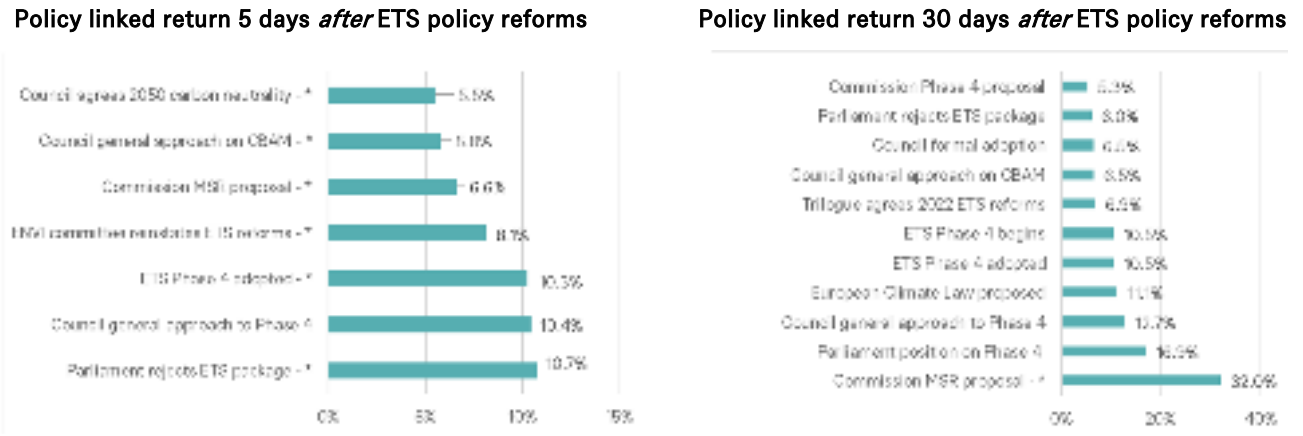


Source: DWS analysis, Bloomberg L.P. April 2026;
Statistical analysis of how EUA prices were affected by 23 different policy milestones between 2015 to 2024 that reformed the ETS rules * * = Statistically significant at 10%
No assurance can be given that any forecast, target, or opinion will materialize. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect. Past performance is no guarantee of future results.

[8] Sitarz et al (May 2024) EU carbon prices signal high policy credibility and farsighted actors *Nature Energy*,
Lynch et al. (May 2023) The Evolving valuation effect of the EU ETS. *European Journal of Finance*;
Fuchs et al (Sep 2024) Carbon price uncertainty *CEPR;*
European Central Bank (Aug 2024) Effects of the ETS on European investment in the short run.

[9] Methodology for statistical analysis available on request

Figure 3 – The return from investing in EU carbon allowances, *after* ETS policy reforms



Source: DWS analysis, Bloomberg L.P. April 2026;
Statistical analysis of how EUA prices were affected by 23 different policy milestones between 2015 to 2024 that reformed the ETS rules
* = Statistically significant at 10%
No assurance can be given that any forecast, target, or opinion will materialize. Forecasts are based on assumptions, estimates, views and or analyses, which might prove inaccurate or incorrect. Past performance is no guarantee of future results.

Interestingly, we did not observe a large difference in the number of policy events with a >5% return based on the type of policy event (i.e. Commission proposal vs EU Council agreement etc).

Methodology for policy announcement statistical analysis

We assessed how the ETS reacted to major policy announcements by examining the policy signal from energy market conditions. We examined twenty-three legislative or regulatory milestones between 2015-224 including Commission proposals, EU Parliamentary votes, EU Council positions, Trilogue agreements (where the EU Parliament, Council and Commission agree a joint position), and formal adoption or implementation.

On the days when a major policy reform is announced, carbon prices sometimes move in ways that have nothing to do with what the gas, coal and power markets are doing. That extra movement is the policy signal: the market's reaction to the policy news. For instance, various reforms to ETS Phase 4 (the rules for the market during 2020-2030) resulted in carbon emissions being capped more tightly, meaning lower supply of allowances.

For each of the twenty-three major announcements, we estimated how carbon futures prices normally respond to gas and power price movements during a 'quiet' 120-day period before the policy event. We use this baseline relationship to predict what carbon prices should have done on the policy announcement day, purely based on energy market conditions.

The difference between the actual carbon price movement and the predicted price movement is our measure of the policy signal. In other words: the portion of the carbon price reaction attributable to the policy news rather than the energy market and trading activity. The statistical analysis included TTF natural gas and German baseload power prices, the coal price, EUA futures trading volume and 30-day historical volatility, and weekly EUA auction volume. For the policy reforms after 2018, the statistical analysis included data on the trading position of investment funds in the market known as Commitment of Traders (investors were required to start disclosing their trading to the European financial regulator ESMA starting in 2018).

Readers who are interested in more technical detail on our methodology, are welcome to contact us.

2 / How does the EU ETS work?

Cap and trade for cost-effective emissions reductions.

EU Emissions Trading System

Emissions trading is a regulated market that stops it being free for companies to pollute as much as they want. When companies have to pay a carbon price (by paying a tax or buying carbon allowances in a trading system), this encourages a switch to cleaner alternatives.

The EU Emissions Trading System (ETS) is the world's largest carbon market, established in 2005. Each year, 10,000+ companies from the power, industrial, aviation and shipping industries must give to regulators, one EU Allowance (EUA) per tonne of emissions, or face steep fines.

Figure 3: Emissions trading – cap and trade

Source: Credit Agricole as of October 2024

Declining emissions cap

The number of allowances declines each year, which is the "cap" on emissions. This makes the EUA a unique commodity. Normally, higher commodity pricies will lead to more production of that commodity in future years.

The legislated cap falls 4.3%/year, creating market scarcity or the 'supply' of EUAs that cannot be changed. **The declining cap on emissions plus other policies, have led ETS regulated emissions to fall 39% since 2005, while the economic activity of these companies grew by 71%[10].**

Trading to cost effectively reduce emissions

Companies that can cut their emissions at a low cost may sell EUAs to companies for whom it is more expensive to reduce emissions or the company can keep the EUAs for future use.

This establishes a market price, encourages companies to operate efficiently, incentivises investment and development of low carbon technologies. By facilitating trading, the EU ETS helps ensure that emission reductions occur in a cost-effective manner.

Distributing responsibility to cut emissions

The third key aspect of the ETS is which sectors and companies take the lead in reducing emissions. Electricity generators (if they use fossil fuels), must buy all their allowances from government auctions. This is the 'polluter pays' principle. From 2020, ~57% of EUAs are auctioned by governments each year.

Most manufacturing industries receive some EUAs from governments for free, to address "carbon leakage" competitiveness risks (competition with companies not regulated by climate policies). Based on evidence of industries' and companies' competitive and ability to share the cost of carbon pricing with their customers, some (but not all) major industrial sectors' companies are eligible for free EUAs.

There are 54 sector specific benchmarks that distribute allowances. The benchmarks are based on the 10% most efficient installation per sector, creating an incentive for companies to reduce their emissions, even with the free

[10] EU Commission 2026

allocation of allowances. **The quantity of free allowances being provided to industries is declining,** with the implementation of Europe's carbon border tax

Carbon border tax and competitiveness

To protect major industries' international competitiveness, the EU developed a carbon border tax. Starting in January 2026, the Carbon Border Adjustment Mechanism (CBAM), requires companies importing iron, steel, cement, fertiliser and aluminium into the EU to buy certificates equivalent to the EUA price. This helps protect the competitiveness of European companies, as their international competitors exporting iron, steel, cement, fertiliser and aluminium into the EU, have to pay a carbon price. The EU has proposed legislation to expand CBAM to cover products with high steel and aluminium content such as vehicle components and kitchen appliances.

The carbon broader tax creates an incentive for international companies to cut emissions. For instance, two major Turkish steel companies announced a USD3.2bn investment to cut their emissions by 25%, in anticipation of Turkey's domestic carbon policies and the EU's carbon border tax.[11]

The carbon border tax creates an incentive for countries outside of the EU to develop carbon pricing. If companies exporting to the EU pay a home market carbon price, their border tax payments would be lower. This means that governments outside of the EU retain the money instead of companies paying the EU. Brazil, India, Chile, China, Colombia, and Turkey have been strengthening their policies. Globally, ~24% of emissions face a carbon price, a significant increase from ten years ago[12].

The implementation of CBAM in 2026 and the gradual wind-down of free allowances has raised concerns by some energy intensive companies regarding industrial competitiveness, leading to a strong lobbying effort for example by the chemical industry.[13] Industry lobbying is mostly focused on the post-2030 proposals as there is not any legal ability to suspend or dismantle the ETS during the current phase.

Other companies and energy industry associations[14] are strongly supporting the ETS and stating that any policy weakening would reward laggard companies. The Financial Times warned that weakening the ETS would reward laggard companies and penalise green innovators.[15] Major pension funds and insurers[5] have called on governments to strengthen carbon pricing policies.

Financial institutions' role in the market

Potsdam Institute academics[16] concluded that financial institutions play a key role in the ETS. They state that there is "*a widespread misconception that speculation is simply unethical*". China and South Korea's markets limit financial institution participation, resulting in low trading and high price volatility.

Investment banks are active in the ETS, connecting companies needing to buy and sell allowances with the market, helping companies hedge their risk, and ensuring liquidity for buyers and sellers.

[11] Erdemir and Isdemir (Oyak Group): AGBI (January 2024)
[12] IETA June 2025; World Bank 2025
[13] BusinessEurope 2026; Cefic 2026
[14] Business for CBAM 2026
[15] Financial Times (2 March 2026) The EU's climate retreat problem: punishing early movers
[16] Quemin, Simon and Michael Pahle (March 2022) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3985079

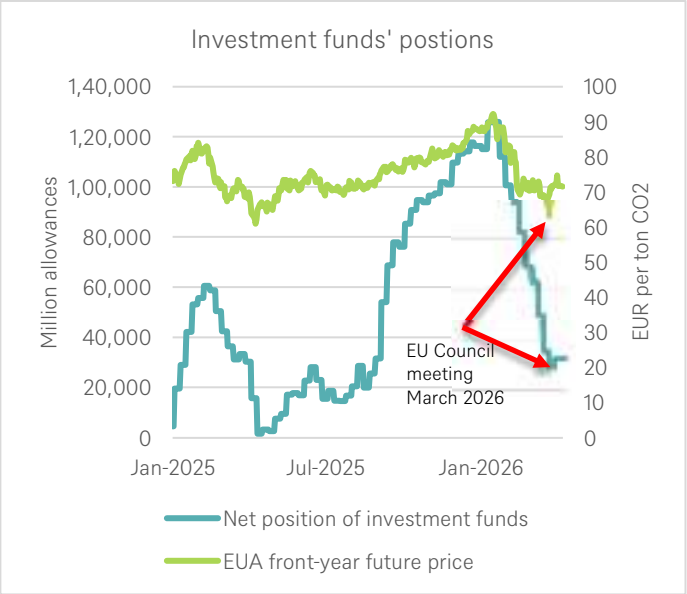
The European Securities and Markets Authority (ESMA) concluded that the ETS market is functioning as expected[17]. ESMA regulates financial institution participation in the ETS.

Speculators (particularly hedge funds) constantly research and trade on where carbon pices are heading. This activity pushes prices toward a level that reflects real information about future supply, demand and policy, typically making the market more liquid.

The Commitment of Traders data shows whether investment funds such as hedge funds expect the ETS price to increase or decrease. As the uncertainty increased regarding political support for the ETS starting in early January, investors reduced their positions (blue line) and EUA price fell (orange line).

Figure 4 show how **the March 2026 EU Council meeting of Head of State signalling support for the ETS, the price immediately jumped above EUR 70.** Investment funds appear to be slowly rebuilding their long position in the market. The Commitment of Traders data is a an important market barometer investors should consider.

Figure 4: EUA price and investor long positions re-bounded after the EU Council meeting in March 2026



Source: DWS, Bloomberg L.P. as of April 2026

The sentiment-driven price declines creates an attractive opportunity for a 2-4year+ buy-and-hold EUA investment.

[17] ESMA (2022) Final Report – Emission allowances and associated derivatives

Important information – EMEA, APAC & LATAM

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