



SparkChange

An investor's guide to the Carbon Market

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Written by



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Carbon markets exist to fight climate change

There can be few commodities that have captured the imagination and attention of investors more over the past few years than carbon allowances. The rapid emergence of climate change as a political and social priority has led to immense interest from investors, who are now searching for ways to gain exposure to the transition to a low-carbon future.

Carbon allowances are a “virtual” commodity. They exist only in government operated registry systems, so they cost nothing to store. They're created by law, so they don't lose their value over time. And because the goal is to drive carbon emissions down over time, allowances are only becoming scarcer.

EUAs are one of the [top performing commodities of recent years](#). EU allowances – legal permits to emit carbon dioxide from industrial installations – have increased by 270% during the last three years¹, and some analysts see EUAs topping [€100 this decade](#).

As with any commodity market, the price of EUAs is governed by demand and supply, but carbon allowances are the only commodity market where supply is shrinking at a predetermined rate, while demand tracks economic growth and the speed of decarbonisation.

And, because supply of allowances is set up to decline over time, investors can amplify the impact of tightening supply on the market by buying allowances and holding them.

In short, this is a market where regulators intend the supply to decrease and prices to rise.

It's not easy to get access to this market, but by broadening the opportunities for investors to help drive decarbonisation, SparkChange hopes to create a safer future for everyone.

Introduction to the carbon market

Greenhouse gas emissions, particularly carbon dioxide, are heating up our planet, disrupting weather patterns and causing billions in damage around the world.

The Economist [estimated](#) in 2019 that climate change could cost the global economy as much as \$7.9 trillion in lost growth by the middle of the century.

It's not only an economic cost. Changing weather patterns will drive migration away from the worst-affected areas, creating a humanitarian crisis, while the cost to our planet in terms of the loss of biodiversity and the desertification of vast swathes of land will be immense.

The work to prevent catastrophic climate change has reached a tipping point with [\\$4.3tn in funds publicly committed to net zero](#). Investing in renewable energy to replace fossil fuels in all sectors of the global economy – electricity, transport, heating – will take trillions of dollars of investment over the next 30 years.

And that investment needs an economic incentive.

Many countries have opted to set up a [cap-and-trade](#) system, which brings greenhouse gas emissions under legal regulation and limits the amount that can be released into the atmosphere. The permission to emit is then created by issuing tradable emissions allowances, and requiring industrial plants to

¹ EEX (€15.03 on 02.07.18 rising to €56.25 on 30.06.21)

surrender one allowance for every tonne of carbon dioxide they emit.

Europe's EU Emissions Trading System (EU ETS) is the world's largest cap-and-trade system, and has been operating since 2005. In that time it's [cut industrial emissions](#) from more than 2 billion tonnes a year to just over 1.3 billion tonnes, while prices have risen from less than €3/tonne to more than €55/tonne.

The [market](#) covers more than 9,000 industrial installations, including power plants, steel mills, oil and gas platforms, refineries and chemical plants, cement factories and the full range of industrial plants that manufacture or transform raw materials: paper, bricks, glass, food.

The price of [EU emissions allowances](#) (EUAs) represents an economic incentive for the owners of these plants to reduce emissions and to invest in the transition at the same time. As the supply of EUAs declines, their cost rises and exceeds the cost of cleaner processes and technology. So it makes sense to invest.

The EU has led the way in developing emissions trading. It's [reformed](#) its market on three separate occasions, each time increasing the ambition of the market by reducing allowance supply, and boosting other measures that will assist the energy transition.

And it certainly wants the price of carbon to increase.

"A rising carbon price is exactly what was intended to address the 'climate crisis,'" according to [Peter Vis](#), one of the market's architects, who worked at the European Commission in the early 2000s. "The involvement of financial intermediaries in the market has greatly added to liquidity, which enhances the cost-effectiveness of emissions trading as an instrument of climate policy."

The market in depth

The EU ETS issues allowances each year: around half are sold at [auctions](#) held every day, while the remaining are [handed out](#) free of charge to industries that are at risk of carbon leakage – relocation abroad to countries with lower costs on climate pollution.

This free allocation declines over time, so that the ultimate goal of the EU ETS is for every covered installation to buy all the allowances it needs in order to comply. With future measures such as a [Carbon Border Adjustment Mechanism](#) being considered by the EU legislature in the coming year, the potential exists for free allocation of EUAs to fall much faster, thereby increasing the market call on EUAs.

Allowances are held by installations on an EU-wide registry, which tracks transfers and surrenders, and also serves as the main database of emissions data.

Companies must monitor and report their emissions each year, subject to independent verification, and surrender allowances matching their emissions to the regulator. The penalty for non-compliance is €100/tonne plus the purchase and surrender of any shortfall.

In earlier years the market suffered from an excess supply of allowances, and the European Commission tackled this by introducing a [Market Stability Reserve](#), a mechanism that withdraws a portion of the surplus each year.

Each May, the Commission calculates the total supply in the market, and in the event that supply exceeds 833 million EUAs, it removes 24% of the outstanding surplus by reducing the volume of allowances to be sold at auction.

Trading carbon

Trading takes place in a variety of ways: the main futures exchanges are the [Intercontinental Exchange](#) and the

[European Energy Exchange](#) (EEX), who both list contracts for immediate delivery as well as monthly and annual contracts.

EEX also hosts the daily auctions on behalf of Germany, Poland and the remaining EU member states.

Participants also trade bilaterally “over-the-counter”, which is particularly useful for small and medium-sized enterprises that don't have the financial clout to join an exchange. Banks and independent traders, sometimes referred to as “aggregators”, act as intermediaries between the largest participants and SMEs.

Because EUAs represent legal compliance with the cap on emissions, there are no limits on how many EUAs an individual entity may own, nor are there position limits in the futures markets.

Prices are set by continuous futures trading on the exchanges, with the annual December contract acting as the benchmark. The daily auction and the daily settlement prices provide within-day reference levels for buyers and sellers.

In the last three or four years, the market has seen a significant increase in participation by financial entities such as investment funds. The introduction of the Market Stability Reserve at the end of 2017 sparked a trebling in EUA prices over the course of 2018, while 2020 saw prices add a further 33%.

In 2021, the price of EUAs has risen by nearly 66% as the gradual recovery from the COVID-19 pandemic and the launch of the European Union's “Fit for 55” climate package has led to a surge of buying interest from investors and industrials.

What's next for the EU ETS?

In late 2019 the incoming European Commission led by Ursula von der Leyen set out its program for a “Green Deal” for the EU; a root-and-branch reform of the

bloc's economy to set it on a sustainable and climate-friendly path.

As part of this, member states committed to achieving a collective goal of reaching net zero carbon by 2050 in line with the goals of the 2015 Paris Agreement, with an interim target of cutting emissions by 55% by 2030.

Earlier this year the Commission unveiled its “[Fit for 55](#)” package, which reforms the EU's entire energy sector in order to help achieve the 2030 goal.

Among the 17 separate draft regulations and directives, the Commission has proposed a further reform of the EU ETS, extending the market to cover emissions from the maritime sector, and adjusting the parameters of the Market Stability Reserve.

The EU ETS will also undergo a one-off adjustment to the overall cap on emissions to put it on track to achieve 55%, while the annual reduction in the cap will also be increased.

Impact investing in carbon allowances

The EU ETS represents part of the European Union's effort to meet the Paris Agreement goals, and is referenced in the bloc's [Nationally Determined Contribution](#). As a result, each EUA represents a contribution towards not just the EU's targets, but the overall global effort.

EUAs are also recognised by the [Paris Aligned Investment Initiative](#) as an eligible investment instrument: “Credits purchased by participants within regulated carbon markets that are designed to meet the net zero emissions goal can be used.”

So how can impact investors drive additional carbon reductions in the EU ETS?

The short answer is that by buying and holding EUAs, investors are preventing

those allowances from being used by industrial emitters for compliance. Holding EUAs “off the market” means that compliance buyers need to look elsewhere for allowances, thereby drawing down the available supply.

Simply buying futures contracts doesn't affect the physical supply of allowances, since futures contracts are not eligible for compliance with the EU ETS: only the emissions allowances that are delivered into futures contracts upon expiry.

The EU ETS is not an easy market to [enter](#). Companies or individuals must open a trading account with a national administrator, establish bona fides, and enter into trading agreements with counterparts or with an exchange. Costs of trading can also be high.

About SparkChange

SparkChange is a provider of specialist carbon investment products and data, enabling investors to achieve both financial returns and positive environmental impact.

The company was established by experts in environmental products and capital markets technologies to set a new standard in carbon investing.

Our mission is to revolutionise access to carbon. More investors with access means a bigger impact on the environment. That doesn't just change a world of investing. It can change the future of our planet.

For more information, please visit: www.sparkchange.io.

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