

# How changes to the EU ETS from 2020 will impact industry and transport

## Introduction

Regulators in Europe are embarking on the widest-ranging reform of the bloc's Emissions Trading System (EU ETS) since it was launched in 2005, which will result in many more industrial companies in Europe becoming exposed to emissions trading.

The bloc is targeting a total cut in greenhouse gas (GHG) emissions cuts of 40% below 1990 levels by 2030 as its contribution to global efforts to combat climate change. This compares to its 2020 reduction target of 20% below the 1990 benchmark.

The 2030 proposal requires a deeper abatement in carbon dioxide (CO<sub>2</sub>) pollution from those sectors of the economy covered by the EU ETS as well as sectors not included such as domestic or commercial. The carbon market will target a cut of 43% below 2005 levels, requiring an annual reduction of 2.2%, or about 48 million metric tons, in the number of EU Allowances (EUAs) available each year from 2021 to 2030. (Non-ETS sectors will face a 30% reduction target compared with 2005.)

## The changes

To implement these changes, the European Commission has tabled proposed alterations to the emissions trading system that will affect industrial sectors the most. In previous phases of the market producers of materials including steel, cement, oil products and chemicals were cushioned from the financial impact of reducing their carbon dioxide (CO<sub>2</sub>) emissions. The electricity sector has had no free allocation since 2013 and has had to buy all its permits at auctions or from the traded market.

From 2021, many incumbent firms will see significant reductions in the amount of free emissions permits handed out to their installations. According to the Commission's legislative proposal, tabled in July, the EU plans to reduce the number of industries given this protection to as few as 50 from the present 175.

This means many more companies across the bloc will receive fewer allowances than they need to comply with the EU ETS rules. As a result, many will need to become familiar with the trading aspect of the system. So far, they've received roughly as many allowances as they need to cover their business-as-usual emissions; all they've needed to do is surrender some or all of those permits after each year's emissions were verified.

A smaller allocation means they'll need to find the resources to buy permits, and develop a strategy to deal with their increased exposure to the market and to the risk of rising carbon prices.

The key impact of this is that the size of the traded market is likely to increase from 2020. With more industrial sectors facing a shortfall, there will be demand to buy permits as well as hedge future exposure to the price of carbon. Companies may choose to buy for immediate delivery, or may decide to buy futures for delivery at specific times.

This will result in more trading activity, greater liquidity in the market and also raises the possibility that price volatility will increase. This in turn may increase the need for firms to participate in the futures market as a way of diminishing the impact of swings in price on their bottom line.

Not only is the Commission planning to cut the number of plants receiving free permits, but it's also taken measures that effectively mean the price of carbon allowances will increase in the fourth phase.

In September, the EU passed an amendment to the ETS law that creates a special reserve to regulate the supply of permits. This Market Stability Reserve (MSR) will aim to ensure that at any given time there are no more than 833 million and no fewer than 400 million surplus permits available in the market, thereby ensuring relative stability of supply and giving enterprises a degree of certainty about carbon prices. At present the annual cap on pollution in the EU ETS is around 2 billion metric tons a year.

The EU ETS has suffered for much of its life from chronic oversupply of allowances. This glut stems

from the lack of strong data that was available to the regulators in the first two phases (2005-2007 and 2008-2012) that meant more EU Allowances were distributed than were needed, and from the impact of the global financial crisis, which sent industrial output plummeting and slashed demand for permits.

Analyst Trevor Sikorski of Energy Aspects estimates that in 2021 there will be a surplus of around 1.5 billion allowances in the market, and that the MSR will have to remove the maximum of 12% of the total volume of surplus permits each year through at least 2024. This may boost prices to as high as €50 a ton by 2030, according to Sikorski.

The Commission's current proposal does not envisage adding any new sectors to the market from 2021. As is the case with the current Phase 3, the plan for Phase 4 offers the option for small and medium-sized enterprises to opt out of the emissions-trading system as long as those companies are subject to equivalent domestic targets.

## Carbon leakage

The reduction in free allocation to industry reflects the expectation that the risk of carbon leakage - industry relocating from Europe to countries and regions where climate regulations are less onerous - may decline over the coming years as more and more countries impose a cost on carbon pollution.

The World Bank's 2015 State and Trends in Carbon Pricing report, published in September,

suggests that the risk of leakage is "negligible because emission costs represent only a small fraction of production costs and/or other factors are more important determinants of a firm's production and location decisions."

The World Bank report identified 39 countries and 23 sub-national jurisdictions that put a price on CO<sub>2</sub> emissions, either through carbon markets or taxes. These include South Korea, seven Chinese cities and regions, Europe, California, Mexico and South Africa. As more and more countries adopt carbon pricing regimes, the opportunities for industry to relocate to jurisdictions where carbon costs are lower are likely to become fewer.

In the current phase of the EU carbon market, which lasts through 2020, industrial companies not exposed to carbon leakage received free-of-charge allowances equivalent to 80% of their normal emissions. This number drops each year to 2020, when it will be the equivalent of 30% of their emissions. Those industries deemed to be vulnerable to carbon leakage receive varying allocations, with the most efficient plants in each sector getting all the allowances they need, and less-efficient units receiving fewer, as an incentive to improve performance.

Under the proposed regulations for the fourth phase, starting in 2021, the largest industrial sectors will still qualify for free allocation, though the efficiency benchmarks on which the allocation is based will be tightened each year. The Commission has also proposed that the number of allowances auctioned over the phase should not decrease, thereby setting a limit "of about 6.3 billion" free permits that may be issued from 2021 to 2030.

Potential shortfalls in the number of free allowances available may be made up by transferring unused permits from the New Entrant Reserve, updating benchmarks and production data to ensure allocations match more closely the actual emissions and reducing the number of sectors protected from leakage.

## International carbon markets

The EU proposals do not envision the use of emissions credits from the flexible mechanisms of the UNFCCC - known as Certified Emission Reductions (CERs) and Emission Reduction Units (ERUs) - for compliance in the fourth phase of the market.

The European Union's quota of approximately 1.7 billion offsets for the period from 2008 to 2020 has been almost entirely filled, with room remaining between 2015 and 2020 for another approximately 100 million CERs to be surrendered for compliance.

All CERs issued in respect of reductions carried out before 2013 have become ineligible in the EU market, though countries included in Annex B of the Kyoto Protocol may use them for their own compliance with limits for the period 2008-2012,

the deadline for which falls in the middle of November.

Nonetheless, there remain opportunities for companies covered by the EU ETS to generate cash by acquiring CERs in the open market, and using these rather than EU permits for compliance with their EU ETS caps. This arbitrage currently generates about €7.50 a tonne for each CER used, the biggest profit the so-called CER-EUA swap has returned since late 2012.

## Aviation

Europe has also included air transport in its carbon market since 2012. The global civil aviation industry is governed by the International Civil Aviation Organisation (ICAO), which is charged by the United Nations with developing plans to cut emissions. However, concerned at the slow pace of progress within ICAO, the EU decided in 2008 to pass laws that regulated aircraft pollution under the EU ETS.

From 2012 therefore, emissions from all flights originating or ending in European Economic Area airspace were covered under the bloc's carbon market. This led to legal challenges from a number of non-EU operators and countries that eventually forced the Commission to back down.

Instead of regulating all flights that originated or ended within the EEA, the Commission suspended coverage of flights that began or ended outside the bloc. This suspension of extraterritorial regulation, known as "stop the clock", was extended from 2013 until the end of 2016 to give ICAO time to agree a global plan to reduce emissions.

For intra-EEA flights, however, emissions trading remains in place. Similarly to their industrial counterparts, air carriers must monitor, verify and report their emissions and surrender EU allowances covering their pollution each year. Airlines may use either EU Allowances from the wider market, or EU Aviation Allowances, which are distributed exclusively to aviation companies.

Within Europe, the cap on aviation pollution is set at 210 million tonnes, or 95% of average emissions from the sector over the years 2004-2006, while airlines receive free allowances corresponding to 83% of their reported emissions in 2010.

Whether ICAO will agree a global action plan on emissions by 2016 remains open to speculation. The organisation is said to favour an offsetting system that would allow airlines to buy carbon offsets representing emissions reduced elsewhere, to offset their own pollution.

The EU has retained the option to "re-start the clock" and regulate emissions for flights that begin or end outside European airspace, though this will most likely trigger renewed opposition and protests from affected operators.

The Commission's proposals for the period after 2020 do not touch on the aviation sector, with the legislative document saying only that "adjustments to [...] aviation activities should take effect [...] after [...] the ICAO Assembly in 2016."

None of this is to say that civil aviation has not begun to take action: far from it. Numerous airlines have begun to monitor their GHG emissions, and several are already offering carbon-neutral travel options. Furthermore, the International Air Transport Association has launched a carbon offsetting program template for member airlines that offers a standardised, quality-assured system.

ICAO and the Air Transport Action Group (ATAG) have signed an agreement that commits the industry to meet a goal of cutting emissions 50% from 2005 levels by 2050. Since 2009, more than 130 airports worldwide have joined Airport Carbon Accreditation, an industry-wide standard for carbon management.

These actions demonstrate that the aviation sector is keen to "hit the ground running" if and when ICAO decides to implement a market-based measure to help slow the growth of climate pollution. By investing in their own reduction measures, and generating offsets from aviation emission reductions, companies can ensure that investment remains within the sector.

Carbon offset standards organisations have begun to develop methodologies that allow airlines to implement carbon-cutting measures and account for their results. The Verified Carbon Standard, for example, has developed a methodology that accounts for the emissions avoided by washing jet engines to improve their fuel efficiency.

## Maritime

The International Maritime Organisation, which like ICAO is charged by the UNFCCC with reducing global emissions from its sector, has resisted calls for a binding reduction target.

The organisation's current secretary-general, Koji Sekimizu, wrote in an editorial article in September that "specific measures aimed at reducing shipping's overall contribution of CO2 emissions, such as an overall cap [...] would artificially limit the ability of shipping to meet the demand created by the world economy, or would unbalance the level playing field that the shipping industry needs for efficient operation."

Instead, IMO wants to continue to regulate airborne emissions from ships through its own International Convention for the Prevention of Pollution from Ships, which cover 95.4% of global shipping tonnage, Sekimizu wrote.

Notwithstanding IMO's position, the European Union has said it targets a 40% reduction in greenhouse gas pollution from shipping by 2050 compared with 2005 levels, and is keen to see the maritime industry adopt so-called "market-based measures" to help achieve this goal.

To that end, the Commission adopted a regulation under which it will from 2018 start to monitor emissions from all vessels of more than 5,000 gross tons carrying out voyages that begin or end in EU and EEA territorial waters. As with airlines, ships will need to monitor, verify and report their emissions.

Europe believes that the monitoring and reporting of emissions alone will reduce GHG emissions from ships by as much as 2% compared to a business-as-

usual scenario, at a cost of around €1.2 billion a year by 2030.

The bloc has not explicitly stated that this monitoring regulation is a precursor to including shipping within its emissions trading system, but the monitoring and reporting of pollution is a prerequisite for carbon markets and the bloc may encounter resistance from IMO.

As with the aviation sector, the shipping industry is not waiting for regulations to begin developing ways to reduce emissions. Carbon offset standards groups have started to develop methodologies to account for emissions reductions in the shipping sector. For example, the Gold Standard last year unveiled a system to calculate emissions saved by applying special coatings to hulls that reduce the drag created by fouling.

## Summary

The explicit aim of the EU's proposals for Phase 4 of the EU ETS is to reduce the oversupply of permits that has dogged the market since 2008 and to boost the price of permits so that a meaningful price signal can direct investment in low-carbon industry. With more industrial installations facing a shortage of allowances, this will create more opportunities as well as greater interest in the market structures.

And those sectors that do not yet fall within the scope of carbon markets are not waiting to be caught up in the blizzard of new rules and requirements: many are taking bold voluntary steps to preempt the impact of new regulations and limits on their carbon emissions, which will enable them to meet the challenge of market-based mechanisms head-on.

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