

A Guide to European Climate Policy

Vol. 1 - EU's Emissions Trading System

climate change

decarbonisation

low carbon
transition

innovation



Emissions Trading
System

Introduction

The EU Emissions Trading System (EU ETS) is Europe's flagship tool to fight climate change and represents the largest carbon market in the world, covering over 11.000 installations across Europe. The EU ETS offers a great opportunity for the EU to not only reduce greenhouse gas emissions but also shift funding to low-carbon innovation and energy sector modernisation.

While the EU has long been a leader in taking action on climate change, the EU ETS suffers from credibility issues and is undergoing a much needed reform process. This comes at a time when the world leaders have agreed on the first ever universal climate deal - the Paris Agreement – which calls on national governments, businesses and the global public to do their part in minimizing the risks and impacts of climate change.

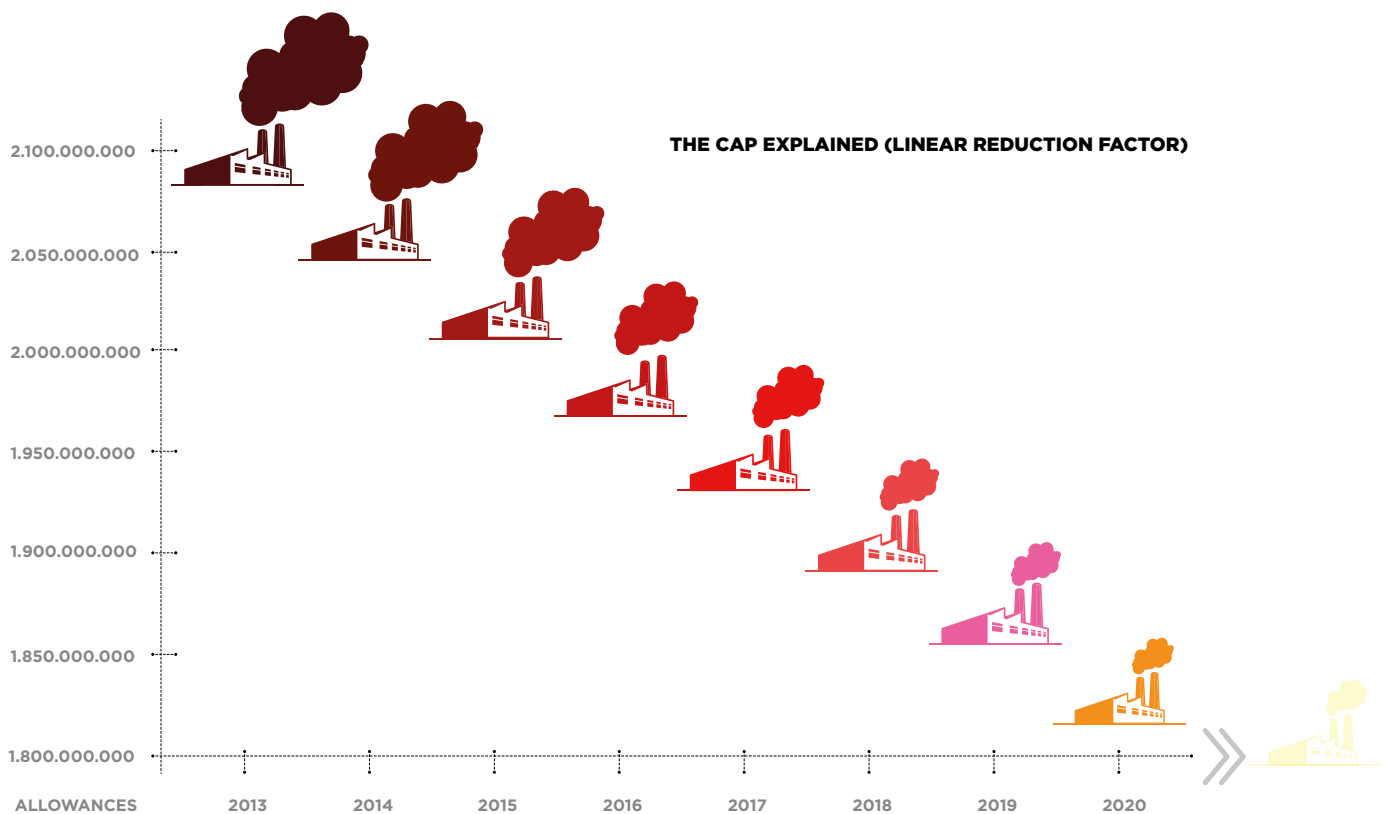
It is imperative that objectives agreed in Paris are embedded in the upcoming reform of EU's climate legislation, including reform of the EU ETS. This requires effective stakeholder engagement from all sides, including civil society. Increased public participation in the process will result in a higher level of environmental and social integrity in the system.

This guide to the EU ETS aims to build knowledge and understanding of the Europe's carbon market for civil society organizations who have little or no prior experience with EU climate policies. It provides introductory knowledge on how the EU ETS is designed and how it functions. Increased awareness should ultimately empower civil society to get involved in the ETS process.

1. What is the EU ETS?

The EU Emissions Trading System (EU ETS) is one of Europe’s main tools to combat climate change and reduce greenhouse gas (GHG) emissions cost-effectively. It is designed as a ‘cap and trade’ system, which means that it puts a limit (a ‘cap’) on the total volume of greenhouse gas (GHG) emissions that certain installations can emit. The EU ETS includes over 11.000 installations containing industrial plants, power stations and aircraft operators in 31 countries—all 28 EU member states plus Iceland, Norway, and Liechtenstein. Overall, the EU ETS covers around 40% of all EU’s GHG emissions.

The system follows the ‘polluter pays principle’, meaning that the costs of pollution should be borne by those who create it. The installations covered under the EU ETS receive or buy pollution permits, which are called European Union allowances (EUAs). For each allowance they can emit 1 tonne of CO₂. The overall cap is reduced each year, which means that less allowances are available and therefore emissions are reduced over time

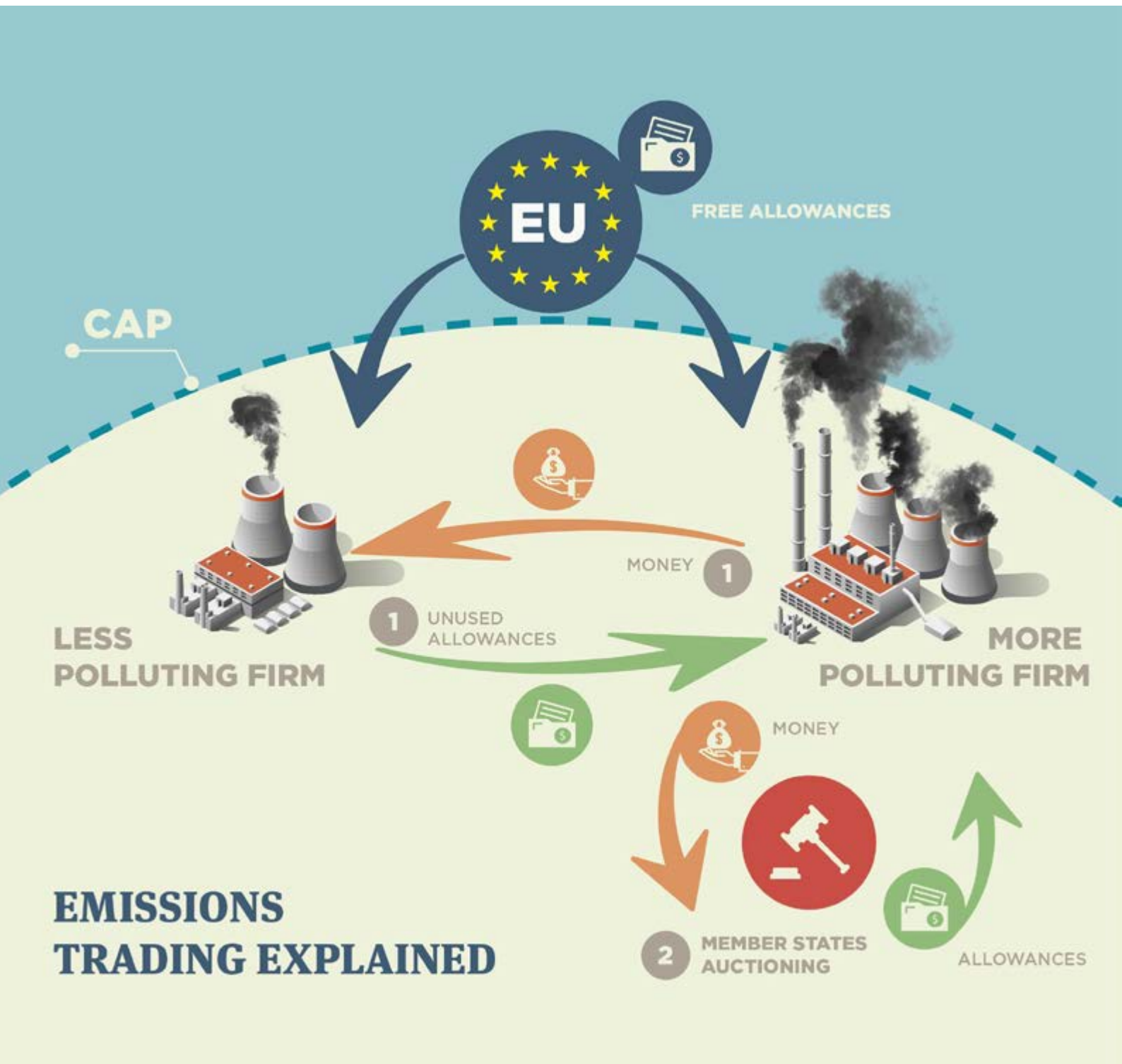


The Emissions Trading System allows covered installations to trade allowances between each other, so that the total emissions remain within the cap. For example, if the entity’s CO₂ emissions exceed the number of allowances it has, it can purchase allowances from other installations or from auctions. Vice versa, if the company has performed well in reducing emissions, it can save the spare allowances for future needs or sell them to another company. Every year a company must surrender enough allowances to cover all of its emissions, otherwise fines are imposed.

Until 2020, the EU ETS also allows installations to buy limited allowances from emission reductions generated through projects in third countries. These emission reduction units are issued through project based mechanisms under the Kyoto Protocol; the [Clean Development Mechanism \(CDM\)](#) and the [Joint Implementation \(JI\)](#).

The EU ETS was launched in 2005 and became the world's first and biggest international carbon market. Since then it has undergone many changes. The implementation of the EU ETS has been divided into trading periods (2005 - 2007, 2008 - 2012), with the current third period running from 2013-2020, and the fourth period starting in 2021.

The aim of the EU ETS is to put a price on each tonne of CO₂ and therefore incentivise emission reductions while making the polluters pay. However, the carbon price of less than €5 in 2016 is not high enough to promote investments in clean, low-carbon technologies (see more about carbon price in section 2). This is why the system is currently undergoing a reform.



EMISSIONS TRADING EXPLAINED

How pollution permits are allocated

There are two methods of allocating emission allowances: auctioning and free allocations. The default method is auctioning, but allowances can also be given to companies for free, depending on the sector. In 2013, over 40% of the allowances were auctioned.

The allowances that are not given for free are distributed to member states according to different criteria, including on the basis of the country's wealth and emissions. Member states auction these allowances to companies that do not have enough allowances to cover their emissions.

Auctioning means that companies must buy their pollution permits at an auction open to buyers from all countries participating in the EU ETS. Most governments use a common 'platform' for their auctions, except for Germany, Poland and the UK which have their own auction platforms.

While the vast majority of emission allowances was previously given away for free by governments, this approach has been criticised for not providing sufficient incentives for companies. Currently, free allowances are only given out to industrial sectors. Power companies already need to buy all allowances from auctioning (with some exemptions, see section 4).

The aim is to phase out free allocation and to gradually shift to full auctioning in the future. Auctioning is the most transparent method of allocating allowances. It rewards efficiency, incentivises climate-friendly investments, and makes polluters pay.

Emission trends under the EU ETS

In the first two trading periods (2005-2012) the emissions from installations covered by the EU ETS were lower than the established cap every year, except in 2008. In 2014, the emissions from EU installations were lower than ever, even below the 2020 target set for the EU ETS. The projections by member states show that the EU ETS emissions will keep decreasing up to 2030.

Given that companies are emitting under the set cap, there is little demand for purchasing pollution permits and consequently an oversupply of allowances in the market. This has been further intensified by the option of buying relatively cheap international carbon credits from the CDM. For these reasons, the system currently fails its goal to make the polluter pay.

In 2015, the surplus of allowances in the EU's carbon market had accumulated to 2.1 billion tonnes of CO₂-equivalent and this surplus is projected to increase further to 2.6 billion carbon permits by 2020. This is more than the total tonnes of CO₂ emitted in all the EU ETS sectors in a year.

Without further measures to tighten the cap and deal with surplus allowances, the imbalance between supply of and demand for carbon permits will continue to exist. This risks depressing the carbon price for at least another decade and discouraging the transition to a low-carbon economy in the power, industry and aviation sectors.

2. Power sector in the EU ETS

The operators in the power sector no longer receive free allowances for electricity generation. Since 2013, they must buy all their CO₂ allowances at auction (with some exemptions, see section 4). In theory, this should provide an incentive for the power sector to decarbonize by shifting to energy efficiency and sustainable renewable energy sources. However, the current price that power companies have to pay per tonne of emitted CO₂ is less than €5. This is far too low to make polluting companies cut emissions or transition to the use of renewable energy. In order to persuade investors to invest in the transition, the carbon price would need to be €40 per tonne and then rise to around €100 in 2030, and €250 euro in 2050.¹

The low carbon price threatens Europe's longer term climate objectives by sustaining outdated and carbon-intensive infrastructure. It also hasn't stopped countries from building more than 50 dirty coal-fired power plants currently under development across EU member states. Once built, these new coal plants will emit high amounts of CO₂ for decades to come.

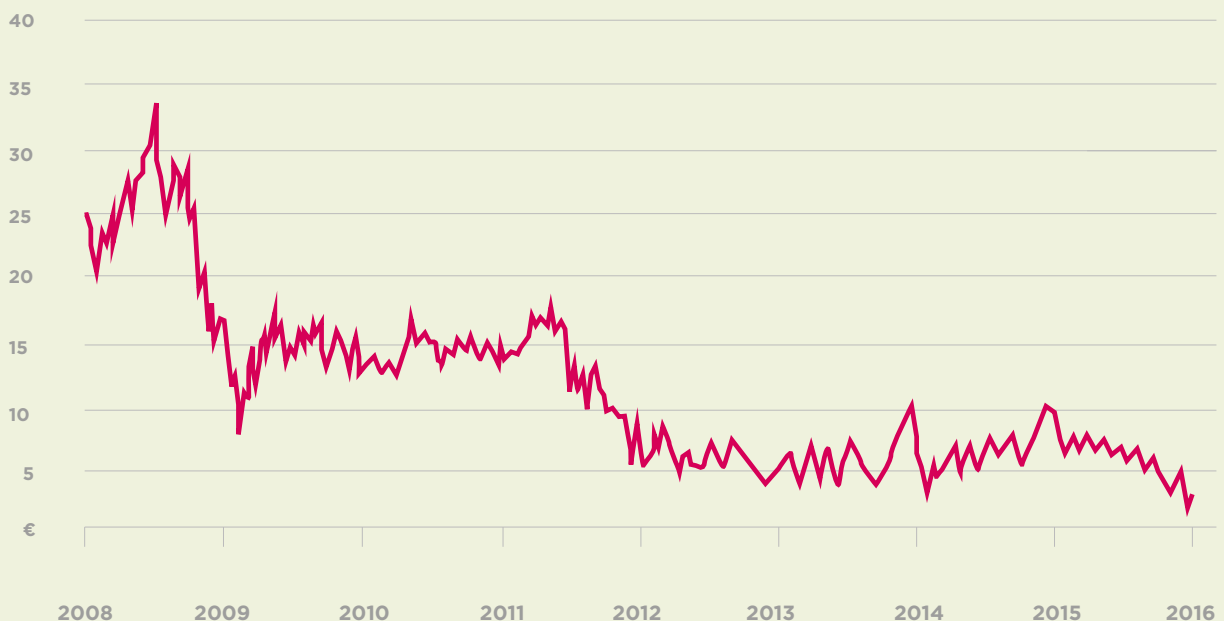
The trouble with the carbon price

Several factors have contributed to the low carbon price:

- The inflow of international carbon credits has caused an oversupply of pollution permits in the system.
- The economic crisis reduced industrial production and electricity consumption and therefore overall emissions in Europe. This led to reduced demand for buying pollution permits.
- Even without economic crisis, the yearly emission limits (the cap) were set higher than the amount companies emit on a 'business-as-usual' basis. This allowed companies covered by the EU ETS to even increase their emissions.

These factors led to a price collapse from €30 in 2008 to below €5 in 2016.

EU ALLOWANCE PRICE DEVELOPMENT



3. Industry sector in the EU ETS

While the power sector has to buy allowances from auction, the industry sector's transition to auctioning is taking place step by step.

Setting a price on CO₂ emissions has raised concerns that the imposed costs on pollution might make certain industrial sectors in the EU less equipped to compete with industries in countries with less stringent climate policies. The fear was that these installations might consequently move their production to other countries in order to lower their production costs. To prevent this so called 'carbon leakage', the EU ETS provides free allowances to sectors that are at risk of moving their production elsewhere. Those industries that are supposedly at risk of carbon leakage receive 100% of the pollution permits for free. In 2016, 164 sectors such as the cement, steel, and chemicals sectors, representing more than 95% of industrial emissions, are given 100% free pollution permits.

Manufacturing industry that is not at risk of carbon leakage received 80% of its allowances free of charge in 2013. This is set to decrease annually to 30% in 2020, with a view to ending free allocation in the future. The rest of allowances are auctioned.

Pitfalls of giving industry too many free pollution permits

- **The EU ETS does not incentivise industry to decarbonize and invest in innovation due to the over-generous hand out** of free emission allowances. A wide range of technological options to reduce emissions in these carbon-intensive sectors remains therefore unexploited. European industry is hence at risk of falling behind in deploying low-carbon technologies compared to their competitors abroad. For example, Europe is lagging behind the more efficient cement sector in Asia (particularly in India and China) and performs worse in the steel sector than the global average.
- **EU governments lose out on public funds.** Free allocation reduces the share of allowances that member states can sell in auctioning and raise revenues from. This means that these governments lose out on public funds, and European taxpayers are picking up the bill. As a result of free allocation, less money is available for investments in the climate friendly transition of the European economy. In the 2008-2014 period, governments gave out 11 billion free pollution permits and thereby missed out on at least €137 billion in auctioning revenues. This implies a substantial transfer of money from taxpayers to industry.
- **Industry makes profit at the expense of taxpayers.** Free allocation of CO₂ permits has resulted in significant windfall profits for corporations. Windfall profits occur when industrial companies receive too many free emission allowances that can be sold for a profit in the market, from using international offsets and from making consumers pay for non-existent carbon costs. Energy-intensive companies made over €24 billion from the EU ETS during 2008-2014. Most profits were made in Germany, the United Kingdom, Spain, France and Italy.
- **Loss of green jobs.** Clean tech firms could move overseas because Europe fails to set out ambitious climate change policies that would increase the demand for their low-carbon products and solutions. As companies move, so do opportunities for green jobs.

CLAIM

Quote by ArcelorMittal:

*"EU energy and climate policy is punishing the steel sector..."**



<http://carbonmarketwatch.org/myth-buster/>

Stop subsidising pollution
Phase-out free ETS allowances



* FT (20/01/2014), "Rewrite energy policy and re-industrialise Europe"
** ArcelorMittal's Annual Reports 2010-2014, gains from selling excess carbon permits

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The EU ETS should play a key role in promoting the decarbonisation of the industry sector. However, there are several problems with the current system. For instance, the assumed carbon price for establishing which sectors are assumed to be at risk of carbon leakage (compiled in the so-called ‘carbon leakage list’) was around €30 per tonne. With the current low carbon price the industry has hardly any costs for polluting. As a result, the EU ETS gives heavy industry little incentive to reduce emissions. Worse, the EU ETS rules over-subsidise industry pollution by allocating industrial companies more pollution permits than they need, which they then sell for revenues in the market, making billions in profit.

Thus, under the current rules, companies are not encouraged to invest in energy efficiency and innovation which in turn means that the manufacturing industry does not seize on the opportunity to reduce their climate impact. This ultimately puts EU industry at risk of losing competitive edge in the global low-carbon economy.

Did you know?

Europe’s second largest steel producer Tata Steel has made over **£700 million windfall profits in the UK** from the EU ETS, by selling excess pollution permits it was given for free.

According to their own annual reports, the steel company ArcelorMittal has made more than **€400 million** from the EU ETS in the last 5 years, while the cement company Lafarge has made €485 million between 2010 and 2014.

Overall, industry across Europe earned **€24 billion** between 2008 and 2014, by receiving more pollution permits under the EU ETS than they needed and by making consumers pay for free permits. This is more than 10 times the amount the EU spent on innovation under the EU ETS.

4. Climate finance

In order for the EU to embark on low-carbon transition, policies must be accompanied by adequate funding mechanisms.

To mobilise additional sources of finance, EU leaders have decided to establish a number of new funding mechanisms to support low-carbon innovation and the modernisation of the energy sector. While some of the mechanisms are already in place, others will be established as part of the revision of the EU ETS for the period after 2020.

Government revenues from selling pollution permits

Auctioning CO₂ emission allowances creates a source of revenue for governments. In **2013** and **2014**, the allowances sold by member states generated revenues of € 6.8 billion. The EU ETS encourages governments to use at least 50% of their revenues or the equivalent financial value to fund measures to address climate change in the EU and third countries. However, under the current rules, it is up to the member states to determine how they use the revenues. They must only report on their use of revenues to the European Commission **and** specify what percentage they have used for domestic and international climate measures.

Given the broad interpretation of how these revenues 'should' be used, this provision is sometimes misused. Some governments refuse to earmark the funds and others use some or all of the revenue for general government expenditure. That means that the revenues are not necessarily channelled towards climate friendly investments.

There are however good precedents for other member states to follow. For example, in Germany all revenues are transferred to the Energy and Climate Fund, which provides financial support through national and international programmes related to climate change mitigation and environmental protection.

Investments in innovation in energy and industry sectors

Not all revenues from auctioning go to member states. Revenues from 300 million auctioned allowances are set aside to support cutting-edge innovations in renewable energy technology and carbon capture and storage across Europe. This funding programme, called NER300, was launched in 2010 and is managed by the European Commission. The European Investment Bank also plays an important role; it is involved in the evaluation of project proposals, manages revenues and disburses funds during project implementation.

Through NER300 the Commission has awarded more than €2 billion for more than 40 innovative projects. This was estimated to have leveraged additional funding of over €2.8 billion from private sources.

From 2021, the NER300 will be replaced by the so-called Innovation Fund, which is estimated to channel up to €10 billion to breakthrough innovative projects in the energy and industry sectors in Europe.

Did you know?

- In the current EU ETS phase, **82% of the Polish investments** through Article 10c focus on fossil fuel capacity modernisation, including investments in Bełchatów, the second largest fossil-fuel power station in the world, **46% of Czech investments** are planned to support coal-fired installations, and **69% of Romanian investments** are planned to provide support for new fossil fuel energy production, predominantly natural gas, local and imported hard coal, and lignite.
- EU's currently operational coal-fired power plants were responsible for about **22,900 premature deaths** in 2013, 11,800 new cases of chronic bronchitis and 21,000 hospital admissions.
- The health impacts of coal in the EU cost between **€32.4 and €62.3 billion in 2013**
- The countries with coal plants responsible for most premature deaths and the burden of disease in 2013 were **Poland** (caused 5,800 premature deaths across the EU), followed by **Germany, the United Kingdom, Romania Bulgaria, Spain and the Czech Republic**.

Modernisation of the power sector in low-income member states

Many of the newer EU member states are highly dependent on fossil fuels, particularly coal for their electricity generation. With the aim to support the modernisation of these countries' energy systems and their shift to sustainable climate friendly technologies, the EU ETS envisioned two mechanisms: a derogation to hand out free allowances to low-income member states and the establishment of a modernisation fund.

Handing out free allowances to power sector in low-income member states

Under the EU ETS, the power sector does not receive allowances for free but is required to purchase them through auctions. However, Central and Eastern European member states called to be exempt from this practice, in order to prevent increases in electricity prices as their energy sector is still very much reliant on high-carbon energy sources such as coal. The EU ETS therefore provides a special provision for these countries, the so-called Article 10c, which allows low-income member states to give free pollution permits to their power installations. The condition is that the power installations invest at least the equivalent monetary value of the free allowances in the modernisation of their energy systems and diversifying their energy mix.

In the 3rd trading period (2013-2020), ten member states were eligible to make use of this provision and eight countries are using it.³ In total, €12 billion worth of allowances will be given out for free to the power sectors in these countries between 2013-2030.

Unfortunately, the experiences show that the money provided through this provision has largely been misused because of weak criteria on what kind of investments are eligible to receive money. Consequently, power installations in Poland, Czech Republic and Romania, which can get 85% of the €12 billion worth of pollution permits, plan to use the investments to modernise existing fossil fuel capacity, invest in new fossil fuel energy production, such as hard coal and lignite, or increase future coal consumption in these countries.

In the current EU ETS phase, applying this provision has not helped low-income member states reduce their dependency on fossil fuels and has instead allowed coal power plants to pollute for free. If not revised and phased-out, it can delay the modernisation of the electricity sector in low-income member states while prolonging the lifespan of coal facilities



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- 1 Ce delft (2016) investment challenges of a transition to a low-carbon economy in europe, available [here](#).
- 2 Carbon Market Watch (2016) Industry windfall profits from Europe's carbon market, available [here](#).
- 3 The eight countries are: Poland, Romania, Czech Republic, Estonia, Hungary, Lithuania, Bulgaria, Cyprus. Latvia and Malta decided not to make use of the provision.



For more information see:
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