

Post-2020 reform of the EU Emissions Trading System

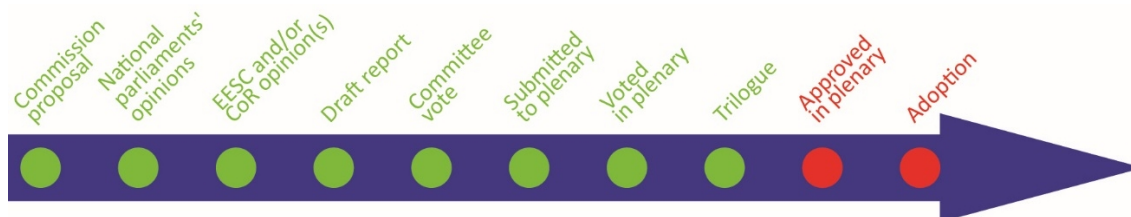
SUMMARY

In July 2015, the European Commission proposed a reform of the EU Emissions Trading System (ETS) for the period 2021-2030, following the guidance set by the October 2014 European Council. The proposed directive introduces a new limit on greenhouse gas (GHG) emissions in the ETS sector to achieve the EU climate targets for 2030, new rules for addressing carbon leakage, and provisions for funding innovation and modernisation in the energy sector. It encourages Member States to compensate for indirect carbon costs. In combination with the Market Stability Reserve agreed in May 2015, the proposed reform sets out the EU ETS rules for the period up to 2030, giving greater certainty to industry and to investors.

In the European Parliament, the ENVI Committee took the lead on the proposal, while it shared competence with the ITRE Committee on some aspects. After the European Parliament and the Council adopted their respective positions in February 2017, interinstitutional trilogue negotiations were concluded in November 2017.

Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments

<i>Committee responsible:</i>	Environment, Public Health and Food Safety (ENVI)	COM(2015) 337 of 15 July 2015
<i>Rapporteur:</i>	Julie Girling (ECR, UK)	<i>procedure ref.:</i> 2015/0148(COD)
<i>Next steps expected:</i>	Final first-reading vote in plenary	Ordinary legislative procedure



This briefing updates an earlier edition, of April 2017: [PE 599.398](#).

Introduction

In July 2015, the Commission presented a proposal for reforming the EU Emissions Trading System for the fourth phase (2021-2030), in line with the 2030 climate and energy targets endorsed by the European Council. The proposal lowers the amount of greenhouse gases that may be emitted each year, introduces new rules for protecting industries from 'carbon leakage', and establishes two funds for modernisation and innovation.

The proposal follows recent modifications to the functioning of the EU ETS: the decision to postpone the auctioning of allowances (backloading), and the introduction of a Market Stability Reserve that aims to better align demand for and supply of emission allowances. The proposed reform will provide certainty to industry and to investors by setting the rules for the EU ETS in the period up to 2030.

Context

The EU ETS is a key element of EU climate policy. In line with the internationally agreed objective of keeping global warming below 2 degrees Celsius, the EU has set targets for reducing its greenhouse gas (GHG) emissions and decarbonising the economy. The long-term objective for 2050, agreed by the European Council in 2009, is an 80-95 % reduction in GHG emissions compared to 1990. In the medium term, the EU aims to reduce GHG emissions by 20 % by 2020, and by 40 % by 2030.

The EU participates in international efforts to reduce GHG emissions under the UN Framework Convention on Climate Change (UNFCCC). The Kyoto Protocol commits developed nations to GHG emissions reductions, up to 2020. In December 2015, the Parties to the UNFCCC adopted the [Paris Agreement](#), a new legally binding climate agreement that applies to all countries and entered into force in November 2016. The EU's emissions reduction target for 2030 is part of the EU's Nationally Determined Contribution to the Paris Agreement.

Without international cooperation, regional efforts to combat climate change may lose effectiveness, because emission-intensive production may be relocated from regions with strong climate policies to regions with less ambitious policies, a phenomenon known as 'carbon leakage'. If investments are relocated, one speaks of 'investment leakage'.

Existing situation

The European Emissions Trading System (ETS) was established by the ETS Directive ([2003/87/EC](#)), amended by Directive [2009/29/EC](#) setting out rules for the third phase (2013-20).¹ It is a 'cap and trade' scheme, in which there is a fixed annual number (the cap) of emission allowances, which can be traded among GHG emitters. It covers emissions of CO₂, nitrous oxide (N₂O) and perfluorocarbons (PFCs), and applies to more than 11 000 power stations and industrial plants in the 28 EU Member States as well as Iceland, Liechtenstein and Norway, thereby accounting for around 45 % of GHG emissions in these 31 countries. Since 2012, it also applies to the aviation sector.

One EU allowance (EUA) gives its owner the right to emit one tonne of CO₂ or equivalent. In the 2013-2020 period, 57 % of the available allowances are sold in regular auctions, and 43 % are allocated to industry for free.² By 30 April of every year, each installation must report its emissions for the preceding year and surrender the corresponding number of EUAs or equivalent international emissions credits. Any unused allowances remain valid and can be used in subsequent years.

The system encourages companies to invest in emissions-reducing technology if the cost of reducing emissions is lower than the market price of emission allowances. If companies find that the cost of reducing emissions is higher than the carbon price, they can buy allowances to cover their emissions. Rational economic actors will thus find the lowest-cost ways to reduce overall emissions.

An EU-wide cap limits total GHG emissions for industrial installations which are subject to the ETS. In order to achieve, by 2020, a 20 % emissions reduction compared to 1990 levels, the cap is lowered by 1.74 percentage points per year, as laid down in the ETS Directive (2009/29/EC). A separate non-declining cap applies to the aviation sector until 2020 (5 % below the average annual emissions in the years 2004-2006).

Carbon leakage

The European Commission establishes a list of industries that are at risk of carbon leakage – the relocation of production to countries with less ambitious climate policies. The most efficient installations can receive up to 100 % of the required allowances for free. Criteria for inclusion in the carbon leakage list are emissions intensity and trade intensity, assuming a price of €30 per allowance. A new list is established every five years. The second [carbon leakage list](#), for the period 2015-2019, was adopted in October 2014.

A 2013 [study](#) for the European Commission found no evidence of past carbon leakage under the conditions of free allocation to industries on the carbon leakage list, and a low carbon price. Research by [CDC climat](#) found no carbon leakage in the primary aluminium industry, and concluded that energy prices play a much larger role than the cost of emissions.

Free allocation of allowances

In contrast to the power sector, manufacturing industries receive free allowances. In order to incentivise emissions reductions, the allocation depends on benchmarks set out in [Commission Decision 2011/278/EU](#) on the basis of the average emissions intensity of the 10 % most efficient installations. Sectors at risk of carbon leakage can get up to 100 % of their required allowances³ through free allocation. Other industries receive only part of the required allowances for free (80 % of their sector's benchmark in 2013, declining to 30 % in 2020). If not enough allowances are available for free allocation, the free allocation for all installations is reduced by a 'cross-sectoral correction factor'.⁴ As a result, no installation receives 100 % of the allowances for free, even if it is on the carbon-leakage list, and would have to buy allowances if it does not have reserves.

Recent developments

In response to an over-supply of allowances, the auctioning timetable for the 2013-2020 ETS phase was adapted to allow for the delayed auctioning ([backloading](#)) of some 900 million allowances that would have been auctioned in 2014-2016. In May 2015, Parliament and Council agreed on introducing a [Market Stability Reserve](#) (MSR) for the ETS, starting in 2019. The MSR aims to better align supply and demand of allowances by placing surplus allowances in a reserve, from which they can be released in case of shortage. The 900 million backloaded allowances will be placed directly in the MSR.

Complementary policies

Emissions from sectors not covered by the ETS, such as road transport, waste, agriculture and buildings, are subject to the Effort Sharing Decision ([406/2009/EC](#)) that sets national emission targets for the non-ETS sector⁵ The Renewable Energy Directive ([2009/28/EC](#)) seeks to ensure that by 2020 renewable energy such as biomass, wind, hydroelectric and solar power make up at least 20 % of the EU's total energy consumption. The Energy

Efficiency Directive ([2012/27/EU](#)) sets legally binding rules for end-users and energy suppliers, and requires Member States to establish indicative national energy efficiency targets for 2020. The Commission put forward legislative proposals intended to update the current legislative framework as part of the '[clean energy for all Europeans](#)' package presented on 30 November 2016.

Effectiveness with the ETS

A [European Commission study](#) and [academic research](#) indicate that the EU ETS has contributed to small but real emissions reductions and had limited but positive impact on investment decisions and innovation, although it appears that some industries have generated [windfall profits](#) by passing on the cost of free allowances to consumers.

By the end of the second phase, the ETS had accumulated a surplus of more than 2 billion allowances. The main reason for this surplus was falling demand during the economic crisis, combined with an inflexible supply of allowances.⁶ Due to this oversupply, the EUA price fell to levels that do not incentivise low-carbon investments or the switching from coal to less polluting gas for electricity generation. Analysts expect the surplus to persist until the mid-2020s.

The [European Court of Auditors](#) found weaknesses in the management of the ETS by the European Commission and Member States, and issued recommendations for improving market regulation and oversight.

The Commission's [carbon market report 2015](#) of November 2015 concludes that the EU ETS has created a functioning market infrastructure and a liquid market, with a robust system architecture. It is confident that the EU ETS will regain importance in the coming years, due to backloading and the introduction of the MSR.

The CEPS Carbon Market Forum's [2016 state of the EU ETS report](#) assesses the EU ETS on four criteria, and finds that it functions reasonably well as a market and delivers on emission reduction targets, but does not drive medium-to-long-term change and suffers from an erosion of trust.

The changes the proposal would bring

The Commission proposal concerns phase 4 of the ETS (2021-2030). It consists of three main elements:

1. more ambitious linear reduction factor for GHG emissions,
2. new rules for free allocation and carbon leakage,
3. provisions for funding innovation and modernisation.

New linear reduction factor for GHG emissions

The proposed directive would raise the linear reduction factor of the ETS cap from 1.74 % per year to 2.2 % per year from 2021, in order to achieve a 43 % reduction in GHG emissions in the ETS sector by 2030, compared to 2005 levels. The increased reduction factor should lead to additional emission cuts of 556 million tonnes CO₂e during the next decade. Together with emission reductions of 30 % in the non-ETS sector, this should enable the EU to achieve its target of reducing emissions by 40 % by 2030, compared to 1990 levels.

In phase 4, 57 % of the emission allowances would be auctioned, the same proportion as in phase 3. The proposal leaves it up to Member States how to spend the auction revenues, but says at least half of the revenues should be used for climate action, decarbonisation and compensation of indirect emission costs.

Member States would continue to have the option to exempt small installations from the ETS if they make an equivalent contribution to cut emissions.

Free allocation and benchmarks

As in phase 3, industry would receive free allowances. Installations on the carbon-leakage list would receive up to 100 % of the required allowances for free, others would get up to 30 %. Free allocation would be decided for a period of five years, compared to eight years at present. The free allocation for an installation would be increased in case of increased production. Currently, this is only possible when production capacity is added.

Free allocation would be decided on the basis of benchmarks, based on the 10 % most efficient installations. The benchmarks would be updated twice during phase 4 (for the periods 2021-2025 and 2026-2030), in order to take account of technological advances. The benchmarks would be tightened by 1 % per year by default, in order to account for expected emission reductions through technological progress. For industries with lower potential for reducing emissions, the benchmarks would be reduced by only 0.5 % per year, and for industries with more potential by 1.5 %. According to the Commission, these changes reduce the chance that a correction factor would need to be applied.

The Commission proposes to move 250 million unallocated allowances from the MSR to a 'new entrants' reserve' that can provide free allocation for new market entrants and growing companies.

Provisions for carbon leakage

The new criteria for establishing the carbon-leakage list would be a combination of emissions intensity and trade intensity. As a result, around 50 industrial sectors would be on the carbon-leakage list, down from 177 at present.⁷ Analysts estimate that sectors on the carbon leakage list would still account for over 90 % of EU industrial emissions, down from 97 % currently.

Compensation for indirect costs

Indirect costs for electricity consumers arise when the cost for electricity producers' emissions is passed on to consumers through electricity prices. Member States are encouraged to compensate such indirect costs for sectors exposed to carbon leakage, subject to state aid rules. However, there would be no obligation and no harmonisation, and thus the legal situation would remain unchanged.

Innovation Fund

Similar to the existing NER 300⁸ fund, the new Innovation Fund would provide financial support for projects in the areas of renewable energy sources and carbon capture and storage. In addition, industrial demonstration projects for low-carbon innovation can be supported. Up to 60 % of project costs can be funded. The fund would be financed by the sale of 400 million allowances, which could raise up to €10 billion, according to the Commission. In addition, 50 million unallocated allowances from phase 3 would be taken from the MSR, in order to enable the fund to start before 2021.

Support for modernisation of energy systems

The proposal introduces the Modernisation Fund, a new fund for modernisation of energy systems in lower-income Member States.⁹ It would be financed by the auction of some 310 million allowances.

In addition, the proposal would prolong the possibility for lower-income Member States to give free allowances to their electricity producers for modernisation of the energy sector. Modernisation projects above €10 million would be selected at national level

through a competitive bidding process, and lower-value projects on the basis of objective and transparent criteria.

Parliamentary analysis

An [initial appraisal](#) of the Commission's impact assessment prepared by the Ex-Ante Impact Assessment Unit (DG EPRS) notes that the impact assessment offers a balanced presentation of the different options, but little original analysis.

An [implementation appraisal of the EU ETS](#) performed by the Policy Performance Appraisal Unit (DG EPRS) concludes that the EU is on track to meet its target of 20 % reduction in greenhouse gas emissions by 2020, due to a number of factors including the ETS, whose effectiveness has been affected by a surplus of allowances and weaknesses in implementation. A study on [energy efficiency and the ETS](#) (DG IPOL, 2013) concluded that there are only limited interactions between the ETS and the Energy Efficiency Directive, which concerns mostly non-ETS sectors.

Legislative process

In Parliament, the Committee on Environment, Public Health and Food Safety (ENVI) has exclusive competence for the proposal as a whole, except for the provisions on carbon leakage and the innovation and modernisation funds, where competence is shared with the Committee on Industry, Research and Energy (ITRE). The ENVI Committee held a [hearing](#) on 18 February 2016 to discuss the ETS reform with experts, industry stakeholders and NGOs. The ITRE Committee adopted its [opinion](#) on 13 October 2016, and the ENVI Committee (rapporteur: Ian Duncan, ECR, UK; since replaced by Julie Girling, ECR, UK) adopted its [report](#) on 15 December 2016.

On 15 February 2017, the European Parliament adopted its [first-reading position](#) in a plenary vote. It would maintain the linear reduction factor at 2.2 %, as in the Commission's proposal, but keep it under review, 'with a view to increasing it to 2.4 % by 2024 at the earliest'. [Decision \(EU\) 2015/1814](#) would be amended to double the intake rate of surplus allowances in the MSR from 12 % to 24 % during the first four years, starting in 2019. In addition, 800 million allowances from the MSR should be cancelled on 1 January 2021. In cases of closures of power plants, Member States would be able to retire a corresponding volume of allowances. In order to avoid the application of the cross-sectoral correction factor, up to 5 % of the allowances could be allocated to industry for free instead of being auctioned. The rules for excluding small installations from the ETS are extended to cover installations operated by small and medium-sized enterprises (SMEs) emitting less than 50 000 tonnes CO₂e. All revenue from the auctioning of allowances would have to be used for climate action, decarbonisation and compensation of indirect emission costs. Companies that are at risk of carbon leakage as a result of indirect emission costs passed through electricity prices would be compensated with revenues from auctioning 3 % of the allowances. The resources of the Innovation Fund would be increased to 600 million emission allowances. A 'Just Transition Fund' would be established to assist workers affected by the transition towards a low-carbon economy, through measures like training, support for job-seeking and business creation. It would be funded from 2 % of the auction revenues. The rules concerning which countries may use the Modernisation Fund are amended to include countries whose 2014 per capita GDP is below 60 % of the EU average.¹⁰ To ensure EU climate policy is aligned with the Paris Agreement on climate change, the resolution requires the Commission to assess the

adequacy of the ETS to meeting the goals of the Paris Agreement after the 2018 facilitative dialogue, and after each of the five-yearly global stocktakes.

The resolution also contains provisions for emission allowances for aviation and maritime transport. In the absence of a comparable system agreed by the International Maritime Organization, maritime emissions from ships within, arriving at or departing from EU ports should fall under the EU ETS from 2023. A maritime climate fund (financed from one fifth of the auction revenues from maritime shipping) would be created to offset maritime transport CO₂ emissions, improve energy efficiency and encourage investment in technologies for reducing CO₂ emissions from the sector. Aviation emissions should be tackled by gradually decreasing the allocation of allowances to the aviation sector, starting in 2021 with 10 % fewer allowances than the 2014-2016 average. More aviation allowances would be auctioned, and auctioning revenue would be spent on climate action in the EU and third countries. The global market-based measure agreed by the International Civil Aviation Organization would be taken into account.

In the Council, Environment Ministers held a [policy debate](#) on the proposal on 20 June 2016. On 19 December 2016, the Environment Council [discussed](#) the EU ETS reform on the basis of a [progress report](#) from the Council's General Secretariat.

On 28 February 2017, the Environment Council adopted a [general approach](#) on the ETS reform. It would maintain the higher intake rate for the MSR until the end of 2023, one year longer than proposed by Parliament. Starting in 2024, if the total number of allowances in the MSR exceeds total auction volume of the previous year, the difference would be cancelled. In order to avoid the use of the cross-sectoral correction factor, up to 2 % of the allowances could be allocated to industry for free instead of being auctioned.

Interinstitutional trilogue negotiations between the Parliament, the Council and the Commission started in April and were concluded on 8 November 2017. The main elements of the [trilogue agreement](#) are:

- the linear reduction factor will be 2.2 % from 2021, as proposed by the Commission;
- each year from 2019 to 2023, 24 % of the cumulative surplus of allowances will go to the Market Stability Reserve; from 2023 the allowances held in the reserve above the total number auctioned during the previous year will be cancelled;
- conditional lowering of the auction share by 3 % of the total quantity if needed, to avoid applying the cross-sectoral correction factor (this is between the 5 % proposed by Parliament and 2 % proposed by Council);
- Member States may voluntarily cancel allowances to offset national climate and energy policies that lead to a reduction of their electricity generation capacity;
- the modernisation fund will not be used to finance coal-fired generation (as demanded by Parliament), with the exception of plants used for district heating in the two poorest Member States (Bulgaria and Romania), provided that they offset by using an equivalent amount of free allocation for the modernisation of the energy sector for investments not involving solid fossil fuels.

The agreed text was endorsed by [Coreper](#) on 22 November, and was voted in the ENVI committee on 28 November. A vote in plenary thereafter would allow formal adoption early in 2018.

References

[Enhancing cost-effective emission reductions and low carbon investments](#), European Parliament, Legislative Observatory (OEIL).

[Initial Appraisal of a European Commission Impact Assessment: EU Emissions Trading System \(EU-ETS\): cost-effective emission reductions and low-carbon investments](#), Samuele Dossi, EPRS, September 2015.

[Implementation Appraisal: Climate Action. Greenhouse Gas Emissions and the EU Emissions Trading System](#), Gertrud Malmersjo and Jessica Porcelli, EPRS, September 2015.

[Study on the impacts on low carbon actions and investments of the installations falling under the EU Emissions Trading System \(EU ETS\)](#), European Commission, February 2015.

Endnotes

¹ After an introductory phase (2005-07), the second phase (2008-12) of the ETS was characterised by the allocation of allowances to industry by Member States, and the possibility to make use of international carbon credits. In the third phase (2013-20), more of the allowances are auctioned, the ETS covers more emissions, and a central registry and common auction platform is introduced to increase transparency and prevent fraud. Moreover, the use of international credits has been restricted.

² Allowances for electricity producers are subject to auctioning (with the exception of free allocation for the modernisation of the power sector in some Member States), whereas industry receives a proportion of the required allowances for free.

³ The free allocation is based on historical production data. The amount of free allocation depends on the benchmark; less efficient installations receive only as many allowances as the 10 % most efficient installations would need for the same amount of production.

⁴ A cross-sectoral correction factor was first used in 2013, reducing free allocation by 6 %. The factor will rise to 18 % by 2020.

⁵ In July 2016, the Commission presented a legislative [proposal](#) for an Effort Sharing Regulation for the period 2021–2030 that is now under consideration in Council and Parliament.

⁶ Other factors contributing to the surplus were national allocations of free allowances, cheap international emissions reductions credits and emissions-reducing effects of complementary policies.

⁷ The new carbon leakage list is expected to include sectors such as steel, aluminium, chemicals, paper, fertilisers, lime and glass.

⁸ The NER 300 fund is financed from the sale of 300 million allowances from the New Entrants Reserve (NER).

⁹ Member States whose GDP per capita in 2013 was lower than 60 % of the EU average. These are Bulgaria, Czech Republic, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland, Romania and Slovakia.

¹⁰ This amendment makes it possible for Greece to use the Modernisation Fund, in addition to the 10 countries whose 2013 GDP per capita is less than 60 % of the EU average.

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