

# Beyond the EU ETS:

STRENGTHENING EUROPE'S CARBON MARKET THROUGH NATIONAL ACTION

*Carbon Market Watch Policy Briefing, December 2017*



## Executive summary

In autumn 2017, the EU Member States and the European Parliament agreed on the revision of the EU Emissions Trading System (EU ETS), setting out the scheme's rules for the 2021-2030 period. The EU ETS aims to put a price on carbon by requiring installations across Europe to surrender allowances reflecting their level of CO<sub>2</sub> emissions. To date, it has failed to drive decarbonisation, and the latest reform is unlikely to remedy the issues which have plagued the system so far, such as low prices and excessive hand-out of free allowances. Putting the power and industry sectors on a low-carbon path therefore requires complementary policies at the EU and national levels.

Carbon pricing can support other policies, such as the cost-effective phase-out of fossil fuels, by making carbon intensive activities financially unattractive. The expected future EU ETS price will however not be high enough to encourage a low-carbon transition. It is therefore in the hands of individual countries to implement rising carbon floor prices that will phase out coal and encourage clean investments in line with the Paris climate goals. Prices of €65/tCO<sub>2</sub> by 2020 rising to €85/tCO<sub>2</sub> by 2030 are needed to have the desired effect<sup>1</sup>. To avoid that such measures result in more emissions elsewhere or in the future (the 'waterbed effect'), Member States will be allowed to unilaterally cancel allowances from the market, in line with plant closures.

In the industry sector, emissions are decreasing at an exceptionally slow pace. The EU needs to therefore urgently adopt and implement a zero-carbon industrial strategy in order to bring Europe's industry at the forefront of the global low-carbon transition. As part of the next EU ETS review, the Commission has an opportunity to replace the current provision of free allocation with a carbon border tax so that the system does not subsidise pollution but supports innovation by setting the right incentives. During this next review, the EU ETS itself must be strengthened as well by increasing the rate at which the cap is annually lowered to send a price signal to industry players and re-direct investment flows.

Finally, the EU ETS generates billions in auctioning revenues. Governments should invest these revenues in climate action in order to establish a virtuous cycle between climate ambition and investments in the clean economy. As a priority, these revenues should benefit communities and workers affected by the changeover to zero-carbon societies in order to encourage a transition that is fair for all.

## Key recommendations

- 1. Increase the rate at which the EU ETS cap is lowered annually (Linear Reduction Factor) in the context of the 2018 Facilitative Dialogue**
- 2. Set a rising carbon floor price at the national or regional level**
- 3. Cancel allowances at the national level in line with the closure of power plants**
- 4. Do not make use of Article 10c, and allow public scrutiny on decisions related to the Modernisation Fund**
- 5. Use auctioning revenues to support a just transition to zero-carbon societies**
- 6. Replace free allocation with a carbon border tax for sectors at high risk of carbon leakage and adopt a low-carbon industrial strategy**

## Introduction

In autumn 2017, the EU agreed on the 4th phase of its main tool to decarbonise the power and industry sectors: the EU Emissions Trading System (EU ETS). The EU ETS puts a price on carbon emissions by allocating allowances (EUAs) to over 11,000 installations across 31 countries. The new rules set the framework for the 2021-2030 period.

This revision attempts to correct mistakes which have undermined the system's previous phases, such as oversupply and free allocation of allowances, as well as low carbon prices. However, there is widespread agreement amongst stakeholders, that phase 4 is unlikely to deliver the decarbonisation needed to meet the Paris climate goals. For this reason, complementary policies are needed, at both Member State (MS) and EU levels, in order to support Europe's climate friendly transition. This policy briefing sets out forward-looking suggestions to do so, emphasising the role of countries in reinforcing Europe's key climate tool for power and industry.

## The EU ETS ambition and the Paris climate goals

Under phase 4, the total number of EUAs distributed each year will decrease at a rate of 2.2% per year, up from 1.74% during phase 3. This rate, referred to as the **Linear Reduction Factor** (LRF), is an important determinant of the number of allowances in the market that sets the level of climate ambition in the power and industry sectors.

However, the agreed ambition level would only lead to a decarbonised power and energy system by 2058 - which is not in line with the Paris Agreement objectives. According to research, an LRF of 2.8% would be needed to fully decarbonise industry by 2050, and an LRF of 4.2% to ensure decarbonisation by 2040<sup>2</sup>.

Taking stock of the post-Paris world means that the EU is now faced with the important task of verifying that the tools it has designed are leading it on the right path to keep global warming below 1.5°C. In 2018, a Facilitative Dialogue will take place among the parties to the United Nations Framework Convention on Climate Change (UNFCCC) to discuss the progress made towards the achievement of this target and explore opportunities to go further, faster. The Commission should seize this opportunity to reflect on the ambition required in the EU ETS in order for it to be in line with the Paris climate goals.

**Increase the Linear Reduction Factor in line with the Paris climate goals in the context of the EU ETS review following the 2018 UNFCCC Facilitative Dialogue**

## Carbon pricing in line with Paris objectives

At present, EUA prices hover around 7€/ton, and projections by nine forecasters show that, under phase 4, a price of 20€/ton can be expected on average over the 2021-2030 period<sup>3</sup>. This comes despite the measures introduced in the latest revision to cut the surplus, including the implementation of a Market Stability Reserve (MSR) which will progressively absorb excess allowances.

Despite their historical record of optimism, such price projections are far below the optimal prices recommended by leading economists. Recent research suggests that a price of US\$40–80/tCO<sub>2</sub> by 2020 and US\$50–100/tCO<sub>2</sub> by 2030 would be required to meet the Paris goals<sup>4</sup>.

One way of correcting the current suboptimal pricing of carbon through the EU ETS is to introduce price floors at Member State level. The UK is currently the only EU country to apply this mechanism, levying an extra fee of £18/tCO<sub>2</sub> in addition

to the existing allowance price<sup>5</sup>. As a result of this, and combined with other climate policies, the UK is now responsible for 60% of the EU-wide emissions reductions in the power sector and hosts eight of the 10 installations under the EU ETS with the steepest year-on-year emissions reductions<sup>6</sup>. This empirical experience is in line with scientific research. A new study by the ETH Zurich has found that low to medium price floor levels in the EU ETS, around €40–60/tCO<sub>2</sub>, could reduce the costs of achieving EU climate policy targets by 20-30% compared to the current policy trajectory<sup>7</sup>.

## A growing interest for carbon floor prices

Implementing a carbon floor price at the national or regional level would be an ideal measure to strengthen the EU ETS and provide the necessary incentives to phase out coal.

Carbon floor prices are already gaining momentum. The Netherlands recently announced that it would join the UK as the second EU country with a floor price, French President Macron has shown interest for a €30/tCO<sub>2</sub> floor price, and Scandinavian countries, together with some of their main utility companies, have declared their intention to set floor prices should the EU ETS revision fail to increase overall ambition. Moreover, the German government has acknowledged the need for complementary policies to reach national climate targets.

**Implement a rising carbon floor price at the national or regional levels, that is compatible with the Paris Agreement goals**

## Cleaning up surplus from coal retirements

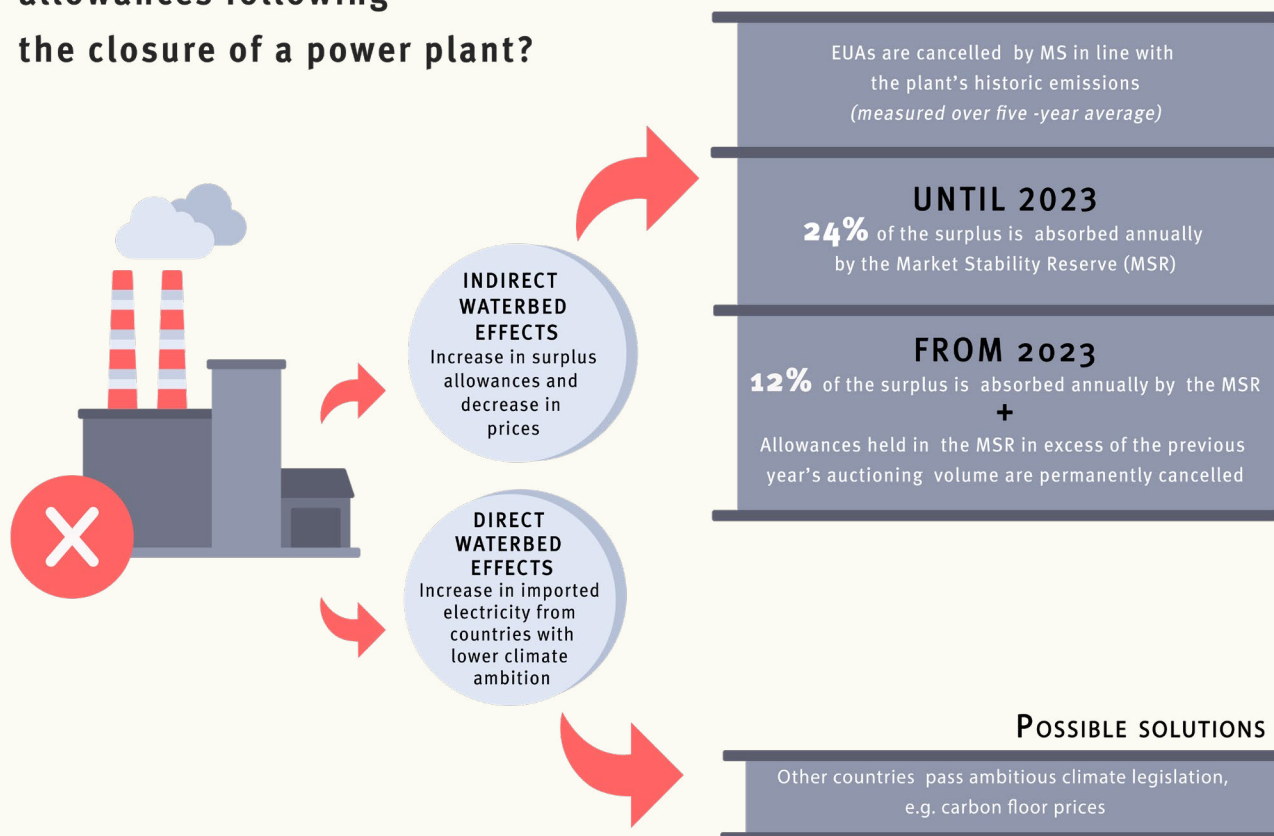
Phasing out coal from Europe's power generation is key to both mitigating climate change, and improving air quality. Many countries have already committed to this transition, including France (2022), the UK (2025), Italy (2025), Finland (2030) and the Netherlands (2030). Belgium, Estonia, Latvia, and Lithuania already completed their coal phase-out, and many other EU countries are considering it.

This transition to renewable energy could leave a large amount of idle emissions allowances from closed coal plants. Decision makers considering coal phase-outs have raised the problem of the so called "waterbed" effect, whereby the closure of a plant leads to an increase in emissions in another region due to the transfer of allowances. Under the latest revision, measures have therefore been adopted to avoid such waterbed effects in the future:

1. Member States are allowed to reduce their auctioning volumes in accordance with the number of allowances rendered idle from the closure of power plants. Doing so would avoid a further increase in the oversupply of allowances and would fully offset the indirect waterbed effects.
2. The rate at which surplus allowances will be absorbed in the Market Stability Reserve will be doubled from 12% to 24% until 2023, meaning that idle allowances are taken from the market at a faster rate.
3. Surplus allowances held in the reserve which exceed the total amount of allowances auctioned in the previous year will be permanently deleted, starting in 2023. This means that surplus allowances following the closure of power plants cannot be used to increase emissions in the future.

## What happens to ETS allowances following the closure of a power plant?

SOLUTIONS UNDER THE LATEST ETS REFORM



### Stronger together

The phase 4 revision includes for the first time the possibility for countries to cancel allowances unilaterally, to account for the closure of coal-fired power plants for example. This could have an impact on the carbon price as well as on government revenues. By forming regional alliances, countries can coordinate their actions so that the cumulative cancellation of permits puts an upwards pressure on prices. This would help ensure that government revenues remain the same, or increase, despite a decrease in the quantity of allowances auctioned.

**Cancel allowances at the national level to match the coal phase-out of the power sector, preferably through regional cooperation**

### Fossil fuels subsidies

To support the energy transition of lower income countries, the EU ETS revision has set up the “Modernisation Fund” and prolonged the “Article 10c” provision. The former is an instrument to channel the revenues from auctioning 2% of the total number of allowances towards the transformation of the energy sector in target countries. The latter allows some governments to hand out free allowances to power companies instead of auctioning them, conditional on the equivalent amount being invested in modernising the energy system.

Due to a lack of robust criteria, transparency and public participation, Article 10c has been used to subsidise fossil fuels in the past, by focusing investments on retrofitting and building new coal power plants<sup>8</sup>.

During phase 4, a total of 868 million allowances, valued at €17.4 billion<sup>9</sup>, will be handed out to power companies through the Article 10c provision<sup>10</sup>. This distorts the energy market by supporting fossil fuel plants, and reduces government revenues. The Modernisation Fund will be financed through auctioning approximately 310 million allowances with a total estimated value of €6.2 billion<sup>11</sup>. Following the recent phase 4 agreement, the Modernisation Fund is largely precluded from financing coal projects.

- **Do not make use of the Article 10c provision and use the higher government revenues to support a just transition**
- **Use the Modernisation Fund to finance renewable energy and deep renovation projects in the building sector, and allow proper public participation in the selection of projects**

## **ETS funding for a just transition**

Countries obtain significant financial revenues from the EU ETS through the auctioning of emission allowances. These revenues can be used to support a just transition to zero-carbon societies. Currently, there are large disparities in the allocation of the EU ETS revenues by national governments<sup>12</sup>, which are expected to reach €160 billion over the entire phase 4, with an at least 54% auctioning share of permits. Using this money to tackle energy poverty, retrain workers, and support coal-dependent communities would strengthen the social dimension of the low-carbon transition.

**Use EU ETS revenues to support coal-reliant communities, finance retraining programmes and to tackle energy poverty**

## **Stalled emissions reductions and continued industry pollution support**

The EU ETS is currently Europe's flagship policy to decarbonise the industry sectors, but it fails to encourage their low-carbon transition. On the contrary, heavy industry was able to make over €25 billion in windfall profits over the 2008-2015 period<sup>13</sup>, while their emissions reductions stagnated. It is clear that current trends are not compatible with the Paris Agreement.

In 2016, industrial emissions fell by only 0.2%, and they have shrunk by a mere 1% since 2012. According to the European Environment Agency (EEA), this trend is likely to continue over the next 15 years<sup>14</sup> as industry will be handed pollution subsidies to the count of over €136 billion during the 2021-2030 period through the free allocation of allowances<sup>15</sup>. This is over 15 times higher than the amount set aside for the Innovation Fund, set up to support clean technology R&D and financed from the auctioning revenues of at least 450 million allowances. Additional policies will hence be needed to bring the industrial sector in line with Europe's existing climate targets.

The latest EU carbon market revision fails to end the excessive protective measures. Up to 46% of the total allowances will continue to be allocated for free to industry during phase 4.

Free allocation is a derogation to the default method of auctioning allowances. Under the reform, industry sectors on the carbon leakage list will continue to receive 100% free allocation. Industries that are considered to be at low or no risk of carbon leakage will receive 30% of their allowances for free, and this percentage will decrease to 0% in the 2026-2030 period.

The carbon leakage list currently covers a large number of sectors, despite little empirical evidence on the existence

of actual competitive distortions<sup>16</sup>. In addition, the carbon leakage hypothesis rests on the assumption that other large economies have a lower climate ambition, which is becoming increasingly doubtful in light of the implementation of the Paris Agreement. By generating billions in windfall profits for industry, free allocation distorts markets and subsidises the most carbon intensive companies. This sends the wrong signal to existing players and potential new entrants alike, and supports the status quo. The limited number of sectors which truly are at risk of leakage can be covered by alternative measures, such as a carbon border tax which has the advantage of both raising public revenues and providing the right incentives for clean production. Under the next revision, the Commission has the possibility to consider replacing free allocation with alternative measures such as border tax adjustments.

**Phase out free allocation from the EU ETS in the context of the next ETS review and replace it with a carbon border tax for sectors at high risk of carbon leakage**

	Phase 3 (2013-2020)	Phase 4 (2021-2030)
<b>Linear Reduction Factor</b>	The total number of allowances issued decreases by 1.74%/year	The total number of allowances issued decreases by 2.2%/year
<b>Market Stability Reserve</b>	The MSR will start absorbing 12% of the surplus allowances per year from 2019 onwards	Until 2023: 24% of excess allowances will be absorbed per year  After 2023: 12% of excess allowances will be absorbed per year and allowances held in the MSR above the number of allowances auctioned the preceding year will be permanently cancelled
<b>Cancellation of allowances by Member States</b>	No provision for MS to cancel allowances unilaterally	MS can cancel allowances in line with the amount of emissions reduced from closing power plants by reducing their auctioning volumes
<b>Free allocation share</b>	43% of allowances are allocated for free	43% of allowances will be allocated for free. An additional three percentage points can be added to this share if needed for free allocation. If these extra allowances are not fully needed for free allocation, the Modernisation Fund is increased by 0.5 percentage points and the Innovation Fund by 50 million allowances
<b>Modernisation Fund</b>	-	Financed by auctioning 2% of the total allowances (taken from MS auctioning share). Coal investments are explicitly banned, except for district heating in Bulgaria and Romania
<b>Innovation Fund</b>	Power sector innovation is financed from auctioning 300 million allowances (under the “NER 300” programme)	Power sector and industry innovation will be financed from auctioning 450 million allowances (325 million will be taken from the free allocation share, 75 million from MS auctioning share, and 50 million from phase 3 surplus)
<b>Article 10c provision</b>	10 countries can hand-out 40% of allowances reserved for the power sector for free, provided that equivalent investments are made in modernising their energy network	10 countries can hand out 60% of allowances reserved for the power sector for free, provided that equivalent investments are made in modernising their energy network

#### References:

1. J. Stiglitz and N. Stern (2017), Report of the High-Level Commission on Carbon Prices
2. Carbon Market Watch (2016), “The EU ETS: the Linear Reduction Factor and the Auctioning share”, [see here](#)
3. See table of price forecasts in Carbon Pulse, July 12th 2017, [here](#)
4. J. Stiglitz and N. Stern (2017), Report of the High-Level Commission on Carbon Prices
5. UK Parliament (2016), briefing paper number CBPO5927
6. Milan Elkerbout (2017), “Impact of the EU ETS across member states and sectors”, Centre for European policy studies
7. J. Abrell, S. Rausch and H. Yonezawa (2017), “Higher price, lower costs? Minimum prices in the EU emissions trading scheme”, CER-ETH Working Paper 16/243
8. Carbon Market Watch & CEE Bankwatch (2016), “Fossil fuel subsidies from Europe’s carbon markets”, [see here](#)
9. A projected price of €20/tCO<sub>2</sub> over the 2021-2030 period is assumed throughout this briefing. This is the time-average of the median price projected by nine analysts ([see here](#)).
10. Sandbag (2017), “Is the ETS becoming a tool for coal investments?”, [see here](#)
11. A projected price of €20/tCO<sub>2</sub> over the 2021-2030 period is assumed throughout this briefing. The total amount of allowances in phase 4 equals 15.5 billion of which at least 2% will be made available for the Modernisation Fund.
12. MAXIMISER project (2016)
13. Carbon Market Watch (2016), Industry windfall profits from Europe’s carbon market 2008-2015, [see here](#)
14. European Environment Agency data (2015)
15. We assume a 46% free allocation share (i.e. the default 43%+3 percentage points which are expected to be added to avoid triggering the CSCF, [see here](#)). We also take into account the 325 Mt which are to be transferred from the free allocation share to the Innovation Fund.
16. A. Dechezleprêtre, C. Gennaioli, R. Martin, M. Muûls, T. Stoerk (2015), “Searching for carbon leaks in multinational companies”, LSE Grantham Institute Working paper 165



#### Contacts:

Femke de Jong, EU Policy Director

[femke.dejong@carbonmarketwatch.org](mailto:femke.dejong@carbonmarketwatch.org)

Gilles Dufrasne, Policy Researcher

[gilles.dufasne@carbonmarketwatch.org](mailto:gilles.dufasne@carbonmarketwatch.org)



This project action has received funding from the European Commission through a LIFE grant. The content of this section reflects only the author's view. The Commission is not responsible for any use that may be made of the information it contains.