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# Auction revenues in EU ETS Phase 3: a new public resource

**As from 1 January 2013, auctions will become the main mode for distributing $CO_2$ allowances within the EU ETS. By 2020, almost one billion EUAs will be sold every year and generate income for Member States. Although sales of Phase 3 allowances have begun, uncertainty still surrounds the total amount of allowances to be auctioned. In particular, benchmark free allocations, the potential review of the auction timetable and the exemption of international flights from the EU ETS will impact the final amounts auctioned and the EUA price. These factors will affect the final auction revenues of each Member States differently. Government authorities will need to take account of the variability of this new financial resource.**

## Background: $CO_2$ allowance auctions become the rule from 2013

### *A tool rarely used during Phases 1 and 2*

Member States had the option to sell up to 5% of their $CO_2$ emission cap during Phase 1 (2005-2007) of the EU ETS, and up to 10% during Phase 2 (2008-2012). The Member States made only marginal use of this option, with the notable exception of the United Kingdom and Germany during Phase 2 when both countries sold allowances at auction on a regular basis. On top of regular sell, several states chose to auction the unused allowances from their reserves to new Phase 2 entrants. Figure 1 summarises the amounts sold by Member States.

**Figure 1 – Amount of allowances sold by Member States during Phases 1 and 2 of the EU ETS (in millions)**

| | Denmark | Hungary | Austria | Germany | Greece | Ireland | Norway | Netherlands | Lithuania | United Kingdom | Czech Republic | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **EUA sold during Phase 1 ($MtCO_2$)** | 5.0 | 2.4 | - | - | - | 1.2 | - | - | 0.6 | - | - | 9.2 |
| **EUA sold during Phase 2* ($MtCO_2$)** | - | 2.5 | 1.6 | 209.0 | 14.8 | 1.0 | 25.3 | 15.0 | 2.6 | 122.8 | 1.0 | 395.6 |
| **Revenues from Phase 2* auctions (€ m)** | **-** | **15.8** | **10.7** | **2 964.8** | **144.3** | **8.2** | **359.6** | **173.1** | **19.0** | **1 531.3** | **7.6** | **5 234.3** |

*Source: CDC Climat Research, based on data from the European Commission and Fazekas (2008)*

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## *Making auctions the primary allowance allocation method in Phase 3*

Member States will auction all the allowances that are not allocated free of charge when Phase 3 of the EU ETS comes into effect.

### 100% of the electricity sector's allowances will be auctioned from 2013 onwards

The auctioning of $CO_2$ emission allowances will fully apply to the electricity sector as from 2013. However, a free transitional allocation scheme has been set up for power plants located in eight States that have made the request to the European Commission, namely Bulgaria, Cyprus, the Czech Republic, Estonia, Romania, Hungary, Poland, and Latvia. Only 30% of allowances will be auctioned in 2013 for these States, increasing to 100% by 2020.

### 15 to 20% of the airline and industrial sectors' allowances will be auctioned in 2013

Where the other industrial sectors are concerned, 20% of their benchmark allocations will be auctioned in 2013, while the remaining 80% will be allocated free of charge. The share of allowances put up for auction will gradually rise to 70% in 2020 and to 100% in 2027. However, for sectors concerned by a risk of carbon leakage[1], 100% of the benchmark allocation will be assigned free of charge throughout the period.

However, the process for defining free allocations has been modified compared with phase 2, since it has switched from a definition of the free allocation amount based on historical emissions, i.e. "grandfathering" to one based on benchmark $CO_2$ emissions drawn up on a per product basis, i.e. "benchmarking"[2]. This allows taking into account the carbon intensity of the production process.

Moreover the aviation sector, which was included in the scope of the EU ETS in 2012, will have to purchase 15% of its allowances (EUAAs) at auction between 2012 and 2020 and will continue to receive 82% of its allowances free of charge.

### The total amount of allowances that will be sold at auction is still unknown

According to the Directive, the amount of allowances to be auctioned corresponds to the difference between the $CO_2$ emission cap and the number of allowances allocated free of charge (in addition to the reserve for new entrants). The emission cap is already known: it amounts to around 2,040 million tonnes of $CO_2$ emissions in 2013, and then falls by 35 million tonnes of $CO_2$ emissions per year. The European Commission has yet to validate the National Implementation Measures (NIMs), which show the amount of free allowances allocated by installation and by country. On this occasion, the Commission may decide to apply a uniform cross-sector adjustment factor, in order to restrict the overall amount of allowances allocated free of charge. In this case, the amount of allowances allocated free of charge would automatically fall.

## *A new source of income for EU Member States*

### A breakdown of auction revenues by Member State based on historical emissions…

The Member States will reap the benefits of the allowance auctions, according to guidelines determined by the Directive:

- "88% (…) should be distributed amongst Member States according to their relative share of emissions in the Community scheme for 2005 or the average of the period from 2005 to 2007, whichever one is the highest".
- "10 % (…) of the total quantity should be distributed to the benefit of certain Member States for the purpose of solidarity and growth in the Community".

[1] The risk of carbon leakage is defined as the risk of seeing some of the production, and ultimately the associated emissions move offshore, outside the geographical scope of the EU ETS, because emissions are capped in the EU.
[2] The allocation of free benchmark allowances is determined based on an estimate of the average intensity of the emissions generated by the 10% most efficient installations, which serves as a benchmark for calculating the allowances allocated to all installations.

- "2% (…) should be distributed amongst Member States, the greenhouse gas emissions of which were, in 2005, at least 20 % below their emissions in the base year applicable to them under the Kyoto Protocol".

### …which are partly earmarked for climate policies

The use of the auction revenues is left almost entirely to the discretion of Member States. The directive on EU ETS mentions that 50% of the income should be dedicated to climate policies, although this provision is not legally binding.

Initial announcements by Member States regarding the use of the auction income reflect major differences. Although Germany is planning to allocate all this income directly to a climate & energy fund (EKF) that is responsible for funding climate policies, primarily measures to promote energy efficiency, the United Kingdom has disclosed its intention of allocating this carbon income to the national budget for legal reasons. France has chosen a middle way: according to the 2013 Budgetary Act, it is planning to allocate "up to €590 million per year[3]" from auction revenues to the National Housing Agency to finance in particular building thermal renovation.

## News: Recent proposals increase uncertainty regarding revenues for Member States

### *The announcements imply changes in the total amount auctioned…*

In November 2012, the European Commission made several announcements that could change the allowance supply level as soon as they are approved:

- A review of the Phase 3 auction timetable (backloading) was detailed on 12 November 2012. The European Commission is suggesting the provisional withdrawal of 900 $MtCO_2$ over three years (400 million in 2013, 300 million in 2014, and 200 million in 2015). This amount will be deducted from the volume of allowances to be sold at auction. However, the allowances carried forward will be reintroduced at the end of Phase 3 (300 million in 2019, and 600 million in 2020). Backloading could be the first of a series of other structural measures aimed at restricting the allowance supply[4].

- On 12 November, the European Commission announced that it was suspending the inclusion of non-European international flights ("Stop the Clock"[5] proposal) within the EU ETS for the 2012 compliance year. The aim of this temporary measure is to encourage countries to reach an international agreement to regulate the sector's $CO_2$ emissions at the General Meeting of the International Civil Aviation Organisation (ICAO) which is scheduled for the autumn of 2013. In the event that no agreement is reached, the EC has warned that the measures would once again apply automatically to all international flights in accordance with the provisions that were initially specified.

### *…and uncertainty regarding the resulting carbon price*

The carbon price fall, which has accelerated over the past few months, reflects the growing imbalance between allowances supply and demand. In an environment where verified emissions are decreasing as a result of the economic slowdown, the unusual supply levels due to the early auctioning of 120 million allowances and to the monetisation of 300 million Phase 3 allowances from the new entrants' reserve (NER300) have significantly boosted the allowance surplus on the market. These allowances come in addition to Phase 2 allowances already held by market operators that have not yet been used which could amount to 1.6 billion allowances according to our estimate at the end of Phase 2, almost one year's $CO_2$ emissions by EU ETS installations.

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[3] See the draft 2013 French Budgetary Act at http://www.economie.gouv.fr/projet-loi-finances-pour-2013-projet-loi-programmation-finances-publiques-2012-2017

[4] http://ec.europa.eu/clima/policies/ets/reform/docs/com_2012_652_en.pdf

[5] http://ec.europa.eu/clima/news/articles/news_2012111202_en.htm

### The backloading effect will depend on the reaction of market participants…

In its impact assessment on the backloading option, the European Commission provides estimates of consequences of its proposal on price level. In a perfect market involving rational participants, this measure should not have a significant impact on the EUA price. However, a new short-term equilibrium between allowances supply and demand could lead to a temporary increase in the price at the beginning of Phase 3. According to our estimates, whereas we would need to wait until 2017 for annual demand to exceed offer in current circumstances, backloading allowances would result in an EUA shortfall as soon as 2013 which would last until 2018, when 'frozen' allowances would be reintroduced to the market[6].

Nevertheless, the magnitude of the price increase remains unknown due to the behaviour of market operators. The propensity of those who hold excess allowances to sell depends on price expectations or the post-2020 future of the EU ETS. Beyond the short-term price effect, market actors are likely to rapidly switch their focus to the adoption of post-2020 structural reforms and to the future of the allowances carried forward.

### …and is therefore a subject of debate among forecasters

The European Commission refers to estimates of EUA price evolution drawn up by several analysts. The standard deviation between the price forecasts reflects a high degree of uncertainty. Nonetheless, a consensus regarding the consequences of backloading appears to emerge. If the Commission takes no action, the price is unlikely to exceed €8 per $tCO_2$ by 2015, while the price could be held above that threshold on a long-term basis under a 900 $MtCO_2$ backloading scenario.

**Figure 1 – EUA price forecasts presented by the European Commission**

| No backloading | | | Backloading of 900 Mt | | Analysts |
|---|---|---|---|---|---|
| Minimum 2013-2015 price | Maximum 2013-2015 price | 2020 | Minimum 2013-2015 price | Maximum 2013-2015 price | |
| 4 | 5 | 12 | 10 | 12 | *Thomson Reuters Point Carbon* |
| 6.2 | 6.7 | 29.2 | 8.6 | 20 | *Bloomberg New Energy Finance* |
| 4.5 | 8.0 | - | 13.0 | 23.5 | *Tschach Solutions* |

*Note: as these forecasts were drawn up before the Commission's announcement, the 900 Mt scenarios do not necessarily reflect the exact timetable for the proposal.*

*Source: European Commission, impact assesment on the EU ETS auction timetable revision (2012)*

## Analysis: Auction revenue estimates for each Member State

### *In the short-term, if 900 $MtCO_2$ are backloaded, the number of allowances for sale at auctions would decrease for all EU States…*

According to our estimates, the total amount of EUA allowances to be auctioned in Phase 3 would amount to 7,199 $MtCO_2$. The backloading of 900 $MtCO_2$ would only affect the sales timetable.

[6] According to our estimates, the average allowance shortfall would be 66 $MtCO_2$ per year in Phase 3, with or without backloading. However, backloading could enable to advance temporally this shortfall that would increase to an average of 180 $MtCO_2$ per year from 2013 to 2018.

**Figure 3 – Estimate of the total amount of EUA allowances to be auctioned in Phase 3 by compliance year (in billions)**

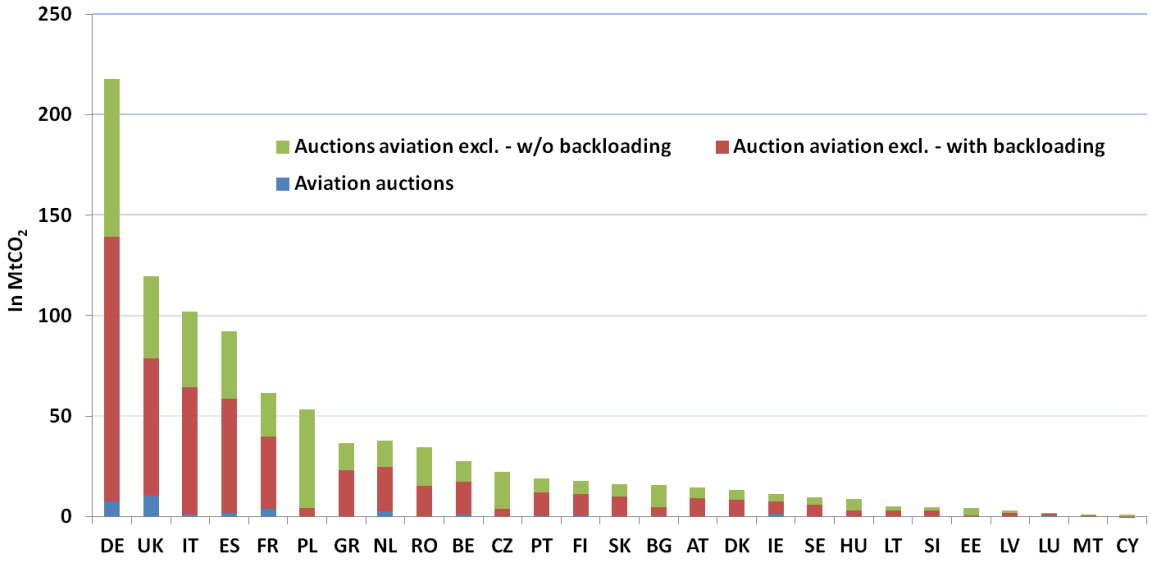
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|---|---|---|
| **Emission cap** | 2,039 | 2,002 | 1,964 | 1,927 | 1,889 | 1,852 | 1,815 | 1,777 | **15,265** |
| - **Estimated benchmark allocation** | 866 | 853 | 842 | 831 | 820 | 813 | 803 | 795 | **6,622** |
| - **New entrants reserve (5%)** | 102 | 100 | 98 | 96 | 94 | 93 | 91 | 89 | **763** |
| - **Transitional free allocation (8 countries)** | 152 | 130 | 115 | 98 | 81 | 63 | 42 | 0 | **680** |
| **= Remainder to be sold at auction (with no backloading)** | 920 | 919 | 910 | 902 | 893 | 884 | 878 | 893 | **7,199** |
| **= Remainder to be sold at auction (after backloading)** | 520 | 619 | 710 | 902 | 893 | 884 | 1,178 | 1,493 | **7,199** |

*Note: we have assumed a cross-sectoral adjustment factor of 3% for the allocation of free allowances for each benchmark over the entire period.*

*Source: CDC Climat Research, and Sartor and Lecourt (2013)*

In the backloading scenario, the number of allowances to be auctioned in 2013 will be proportionally reduced by almost 44% among Member States and would decrease from 920 $MtCO_2$ to 520 $MtCO_2$. As an example, Germany would be likely to sell 132 $MtCO_2$ (compared with the 210 $MtCO_2$ initially planned), while France would be likely to sell 36 $MtCO_2$ (compared with the 57 $MtCO_2$ initially planned). The impact of this measure will nonetheless be relatively more significant for the States that allocate free allowances to the electricity sector, as shown in Figure 4.

**Figure 4 – Estimate of the amount of allowances to be auctioned by each State in 2013 (in millions of allowances)**




*Source: CDC Climat Research*

Indeed, the transitional free allocation is deducted from the scheduled auction amount and will not be affected by backloading. The decrease will therefore automatically exceed the 35% decrease observed in other Member States for these countries. Poland and Cyprus could actually see the amount of allowances to be auctioned reduced to zero in 2013. The provisional auction timetable for the coming months, as published by the EEX and ICE auction platforms, is based on a low estimate of the amounts of allowances for sale. These platforms factor in the transitional allocation and the early auctions that have already taken

place, but do not include any potential backloading[7]. It will therefore probably be altered depending on the EC's future announcements.

### *…although the auction revenues would increase for countries that do not provide any transitional allocations to the electricity sector*

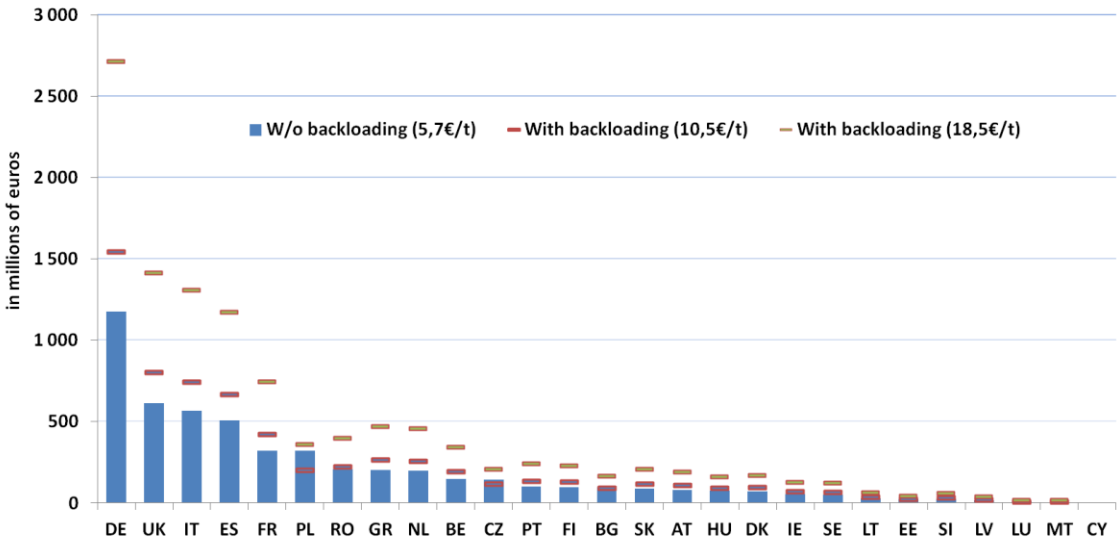
Given the uncertainty surrounding the amount of allowances to be auctioned and the $CO_2$ price level, it is hard to provide a reliable estimate of future income between now and 2020. However, it is possible to draw up several estimates in order to quantify the implications of backloading for Member States.

Three scenarios are assessed here:

- Scenario 1: no backloading, 2013-2015 EUA price = average analysts' EUA price forecast (€5.70 per $tCO_2$);
- Scenario 2: with backloading, 2013-2015 EUA price = average minimum analysts' EUA price forecast (€10.50 per $tCO_2$);
- Scenario 3: with backloading, 2013-2015 EUA price = average maximum analysts' EUA price forecast (€18.50 per $tCO_2$).

Figure 5 shows the estimates for all EU Member States. As an example, France would get an income of some €322 million per year from the EUA auctions over the period between 2013 and 2015 under Scenario 1, an income of some €422 million per year under Scenario 2, and an income of some €742 million per year under Scenario 3.

**Figure 5 – Estimated annual income from the 2013-2015 auctions for each country, according to the three scenarios (in € million)**




*Source: CDC Climat Research*

Given the auction revenue's high sensitivity to the assumed future EUA price, it is worth looking at what the price level in the backloading scenario should be in order to offset the reduction in the number of allowances put up for auction in 2013.

- In the case of the 22 Member States where the electricity sector does not benefit from the free transitional allocation, the EUA price would have to increase by at 60% at least in order for their 2013 carbon income not to fall, if we assume that the backloading measure is adopted. Taking Scenario 1 as reference, the EUA price would therefore need to be above 9 euros.

[7] http://ec.europa.eu/clima/news/articles/news_2012121102_en.htm

- For the 8 Member States where the electricity sector benefits from a free transitional allocation, the EUA price would need to increase further in order for the carbon income over the period between 2013 and 2015 to remain identical, namely by: 71% for Lithuania, 130% for Romania, 228% for Bulgaria, 209% for Hungary, 473% for the Czech Republic, 520% for Estonia, and 1,107% for Poland!

### *Uncertainty regarding the amount of allowances auctioned for the aviation sector*

The "Stop the Clock" proposal concerns only non-European international flights. These flights account for around two-thirds of the allowances issued (Alberola and Solier, 2012). While waiting for the aviation cap to be reviewed, only 8 million allowances could therefore be sold at auction between now and April 2013, in order to ensure that the 2012 allowances are compliant.

As from 2013, the number of allowances for sale ought to be significantly higher, as the portion of allowances put up for auction would increase from 12% to 15% of the emission cap. Therefore, without extending the measure, over 30 $MtCO_2$ could be sold at auction every year, of which 75% would be divided between the United Kingdom (10.2 million allowances to be put up for auction), Germany (7.7 million), France (4.0 million) and the Netherlands (2.5 million).

As it stands, the exemption for international flights is only for the 2012 compliance year and its future is very uncertain. In the event that an international agreement is reached within the ICAO in autumn 2013, non-European flights are likely to be permanently exempted from the EU ETS. In the event that the ICAO negotiations fail, a new postponement remains a possibility.

## Conclusion: the income from $CO_2$ auctions is a resource that Member States must learn to manage

The appearance of auction revenues will ultimately boost the EU ETS' standing as a political instrument for fighting climate change since a new source for financing Member States' policies is being added to the incentive to reduce industrial sectors' $CO_2$ emissions.

However, Member States will need to learn to handle the highly variable nature of this financial resource. Indeed, volatility of the carbon price and institutional uncertainty at the European level are likely to make implementing projects where the financing is based solely on this mechanism difficult.

Several examples deserve to be mentioned in this respect. For instance, Poland is planning to adopt an innovative *ex post* resource allocation system, where funds are spent after one year increasing certainty on their volume. In parallel, France set a maximum amount of income that may be allocated to the ANAH has been included in the draft 2013 Finance Act; although nothing apparently guarantees the agency against an unforeseen fall in income.

## Timetable

- **January-February 2013:** the European Commission adopts the free allowance allocations (NIMs) and announces its decision regarding the uniform cross-sector adjustment factor.
- **Mid-2013:** Member States vote on the European Commission's backloading proposal, if the review of the ETS Directive enabling the Commission to propose a revised timetable for auctions is adopted in the 1st quarter.
- **Autumn 2013:** the General Meeting of the International Civil Aviation Organisation (ICAO) is expected to bring out the extension or cancellation of the exemption of international flights from the EU ETS.

## To find out more…


- Alberola E. and Solier B., "Including international aviation in the European union emissions trading scheme: a first step towards a global scheme?", Climate Report N° 34, CDC Climat Research, 2012.
- European Commission, Directive 2009/29/EC, amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.
- European Commission, Decision of December 24, 2009 setting out the list of sectors and sub-sectors exposed to a risk of carbon leakage, 2009.
  http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:001:0010:0018:FR:PDF
- European Commission, Proposals for reforming the EU ETS and impact assessment, 2012
  http://ec.europa.eu/clima/policies/ets/reform/
- Fazekas D., "Auction design, implementation and results of the European Union Emissions Trading Scheme", Working Paper, 2008.
- Sartor O., Lecourt S., and Pallière C., "Free allocations in EU ETS Phase 3: The impact of emissions performance benchmarking for carbon intensive industry", Working Paper, CDC Climat Research and Paris Dauphine University Chair of Climate Economics (forthcoming).


## Appendix

**Figure 6 – Estimate of the amount of EUAs to be auctioned by each State without backloading (in $MtCO_2$)**

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| **Austria** | 14.6 | 14.3 | 14.0 | 13.6 | 13.3 | 12.9 | 12.5 | 12.2 |
| **Belgium** | 26.6 | 26.0 | 25.4 | 24.8 | 24.2 | 23.5 | 22.9 | 22.2 |
| **Bulgaria** | 15.7 | 17 | 18.3 | 19.6 | 20.8 | 22.0 | 23.2 | 24.4 |
| **Cyprus** | 0.2 | 0.5 | 0.7 | 1.0 | 1.2 | 1.5 | 1.8 | 2.3 |
| **Czech Republic** | 22.2 | 25.0 | 27.8 | 30.5 | 33.2 | 35.7 | 38.4 | 41.0 |
| **Germany** | 210.1 | 205.6 | 200.9 | 196.1 | 191.1 | 185.7 | 180.5 | 175.1 |
| **Denmark** | 13.1 | 12.9 | 12.6 | 12.3 | 12.0 | 11.6 | 11.3 | 11.0 |
| **Estonia** | 4.2 | 4.8 | 5.3 | 5.9 | 6.4 | 6.9 | 7.4 | 7.9 |
| **Spain** | 90.6 | 88.6 | 86.6 | 84.5 | 82.4 | 80.1 | 77.8 | 75.5 |
| **Finland** | 17.5 | 17.2 | 16.8 | 16.4 | 16.0 | 15.5 | 15.1 | 14.6 |
| **France** | 57.4 | 56.2 | 54.9 | 53.6 | 52.3 | 50.8 | 49.4 | 47.9 |
| **United Kingdom** | 109.5 | 107.1 | 104.7 | 102.1 | 99.6 | 96.7 | 94.0 | 91.2 |
| **Greece** | 36.4 | 35.6 | 34.8 | 34.0 | 33.1 | 32.2 | 31.3 | 30.3 |
| **Hungary** | 8.7 | 15.4 | 15.0 | 14.7 | 14.3 | 13.9 | 13.5 | 13.1 |
| **Ireland** | 9.8 | 9.6 | 9.4 | 9.2 | 8.9 | 8.7 | 8.4 | 8.2 |
| **Italy** | 101.1 | 98.9 | 96.7 | 94.4 | 92.0 | 89.3 | 86.9 | 84.3 |
| **Lithuania** | 5.1 | 5.0 | 5.0 | 4.9 | 4.8 | 4.7 | 4.7 | 4.7 |
| **Luxembourg** | 1.3 | 1.2 | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.1 |
| **Latvia** | 2.8 | 2.7 | 2.7 | 2.6 | 2.6 | 2.5 | 2.4 | 2.3 |
| **Malta** | 1.1 | 1.0 | 1.0 | 1.0 | 1.0 | 0.9 | 0.9 | 0.9 |
| **Netherlands** | 35.2 | 34.4 | 33.6 | 32.8 | 32.0 | 31.1 | 30.2 | 29.3 |
| **Poland** | 53.4 | 56.1 | 58.8 | 62.5 | 67.1 | 72.6 | 80.5 | 109.4 |
| **Portugal** | 18.4 | 18.0 | 17.6 | 17.2 | 16.8 | 16.3 | 15.8 | 15.4 |
| **Romania** | 34.6 | 36.0 | 37.4 | 38.8 | 40.1 | 41.3 | 42.5 | 43.7 |
| **Sweden** | 9.3 | 9.1 | 8.9 | 8.7 | 8.5 | 8.3 | 8.0 | 7.8 |
| **Slovenia** | 4.6 | 4.5 | 4.4 | 4.3 | 4.2 | 4.1 | 4.0 | 3.9 |
| **Slovakia** | 16.1 | 15.8 | 15.4 | 15.0 | 14.7 | 14.2 | 13.8 | 13.4 |
| **Total** | **919.9** | **918.8** | **910.0** | **901.6** | **893.5** | **884.0** | **878.4** | **893.1** |

*Note: These numbers only concern the EUAs to be auctioned, once the transitional allocation (of around 152 $MtCO_2$ in 2013) has been taken out.*

*Source: CDC Climat Research*

**Figure 7 – Estimate of the amount of (EUA) allowances to be auctioned by each State with backloading, in accordance with the terms of the communication of 12.11.12 (in $MtCO_2$)**

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|
| **Austria** | 9.2 | 10.2 | 11.2 | 13.6 | 13.3 | 12.9 | 16.6 | 20.4 |
| **Belgium** | 16.7 | 18.6 | 20.5 | 24.8 | 24.2 | 23.5 | 30.3 | 37.1 |
| **Bulgaria** | 4.8 | 8.8 | 12.8 | 19.6 | 20.8 | 22.0 | 31.4 | 40.8 |
| **Cyprus** | -0.8* | -0.3* | 0.2 | 1.0 | 1.2 | 1.5 | 2.6 | 3.8 |
| **Czech Republic** | 3.9 | 11.2 | 18.6 | 30.5 | 33.2 | 35.7 | 52.1 | 68.5 |
| **Germany** | 131.7 | 146.7 | 161.7 | 196.1 | 191.1 | 185.7 | 239.3 | 292.8 |
| **Denmark** | 8.2 | 9.2 | 10.1 | 12.3 | 12.0 | 11.6 | 15.0 | 18.3 |
| **Estonia** | 0.7 | 2.1 | 3.6 | 5.9 | 6.4 | 6.9 | 10.1 | 13.3 |
| **Spain** | 56.8 | 63.3 | 69.7 | 84.5 | 82.4 | 80.1 | 103.2 | 126.2 |
| **Finland** | 11.0 | 12.3 | 13.5 | 16.4 | 16.0 | 15.5 | 20.0 | 24.4 |
| **France** | 36.0 | 40.1 | 44.2 | 53.6 | 52.3 | 50.8 | 65.4 | 80.1 |
| **United Kingdom** | 68.6 | 76.4 | 84.2 | 102.1 | 99.6 | 96.7 | 124.7 | 152.5 |
| **Greece** | 22.8 | 25.4 | 28.0 | 34.0 | 33.1 | 32.2 | 41.5 | 50.7 |
| **Hungary** | 2.8 | 11.0 | 12.1 | 14.7 | 14.3 | 13.9 | 17.9 | 21.9 |
| **Ireland** | 6.2 | 6.9 | 7.6 | 9.2 | 8.9 | 8.7 | 11.2 | 13.7 |
| **Italy** | 63.3 | 70.6 | 77.8 | 94.3 | 91.9 | 89.3 | 115.2 | 140.8 |
| **Lithuania** | 3.0 | 3.4 | 3.9 | 4.9 | 4.8 | 4.7 | 6.3 | 7.9 |
| **Luxembourg** | 0.8 | 0.9 | 1.0 | 1.2 | 1.1 | 1.1 | 1.4 | 1.8 |
| **Latvia** | 1.8 | 2.0 | 2.2 | 2.6 | 2.6 | 2.5 | 3.2 | 3.9 |
| **Malta** | 0.7 | 0.7 | 0.8 | 1.0 | 1.0 | 0.9 | 1.2 | 1.5 |
| **Netherlands** | 22.0 | 24.6 | 27.1 | 32.8 | 32.0 | 31.1 | 40.1 | 49.0 |
| **Poland** | 4.4 | 19.4 | 34.3 | 62.5 | 67.1 | 72.6 | 117.3 | 182.9 |
| **Portugal** | 11.6 | 12.9 | 14.2 | 17.2 | 16.8 | 16.3 | 21.0 | 25.7 |
| **Romania** | 15.0 | 21.4 | 27.6 | 38.8 | 40.1 | 41.3 | 57.2 | 73.1 |
| **Sweden** | 5.9 | 6.5 | 7.2 | 8.7 | 8.5 | 8.3 | 10.7 | 13.0 |
| **Slovenia** | 2.9 | 3.2 | 3.6 | 4.3 | 4.2 | 4.1 | 5.3 | 6.5 |
| **Slovakia** | 10.1 | 11.3 | 12.4 | 15.0 | 14.7 | 14.2 | 18.4 | 22.5 |
| **Total** | **520.0** | **618.8** | **710.0** | **901.6** | **893.5** | **884.0** | **1178.4** | **1493.1** |

*Note: These numbers only concern the EUAs to be auctioned, once the transitional allocation has been taken out, in accordance with the backloading timetable proposed by the Commission. *These negative volumes appear because in the event of backloading the amounts to be auctioned for Cyprus will be lower than the amount allocated to the country's electricity generating companies via the transitional allocation. They are expected to be balanced by following years' allowances.*

*Source: CDC Climat Research*

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