

Implementation of Tiered Free Allocation in Phase IV of EU ETS: a joint non-paper by France and the United Kingdom

Introduction

- In November 2015 the Czech Republic, France, Slovakia and the UK published a non-paper on the principles of tiered free allocation. This set out how a tiered approach could ensure those sectors at greatest risk of carbon leakage receive the greatest share of free allocation against their benchmarks as possible, whilst providing adequate coverage to sectors at relatively lower risk of carbon leakage. Achieving this is important to ensure that a limited and declining supply of free allocation is focused on those sectors most at risk.
- The purpose of this joint France-UK non-paper is to provide greater information on the practical implementation of tiered free allocation in Phase IV of EU ETS (2021-30). It provides several potential scenarios and suggestions on how free allocation could be distributed between risk tiers. It is intended to respond to requests for greater detail and to provide the basis for discussion of how tiered free allocation could be implemented.

Background

- In a previous non-paper, four principles of tiered free allocation were suggested. Free allocation should:
 1. **Not decrease the share of allowances auctioned on the open market** – this is critical to drive cost-effective abatement and innovation and to ensure sufficient liquidity in the marketplace.
 2. **Recognise that the risk of carbon leakage varies greatly between industrial sectors** – the Phase III system treats all exposed industrial sectors as though they are all equally at risk; this is not borne out by the evidence.
 3. **Focus free allocation according to the evidence of carbon leakage risk facing each industrial sector** – this is critical to ensure support is targeted at those sectors in greatest need, while providing an appropriate level of support to sectors at relatively lower risk.
 4. **Minimise and if possible remove the need to rely on blunt mechanisms which apply to all industrial sectors** (for example the Cross-sectoral Correction Factor) – these do not take into account differing degrees of carbon leakage risk and unfairly expose some sectors to competitive disadvantage.

- According to the European Commission’s proposal, 6.3bn allowances will be available as free allocation for industry in EU ETS in the period 2021-2030. If too large a number of industrial sectors are guaranteed 100% free allocation, then there will be insufficient free allocation
- A tiered free allocation system should aim to meet the principles above. To do this, it should make the best use of the available supply of free allocation by focusing support on those sectors at greatest risk, while ensuring that lower-risk sectors continue to receive free allocation proportionate to their level of risk. The aim of tiered free allocation is to distribute the available supply of free allowances in a fairer manner; there is no intention to reduce the total amount available for industry.
- There is a limit on the total share of industrial emissions which can receive 100% free allocation, due to the limit on free allocation. There is also a limit on the total share of industrial emissions which can receive 100% free allocation while still providing adequate free allocation to sectors at relatively lower risk. The following scenarios show how tiering could work in practice and demonstrate the importance of striking the right balance between protecting different sectors.
- In all the below scenarios, sectors deemed at no risk of carbon leakage continue the declining trajectory to 0% free allocation by 2027. France and the UK consider this to be important in order to ensure that as much free allocation as possible is made available for sectors at risk of carbon leakage.
- Note that the thresholds, illustrative leakage risk levels and free allocation percentages for various sectors used in this analysis are based on historic emissions, trade intensity data, and take into account the change in scope in Phase III based on the semi-quantitative evaluation in the Commission’s impact assessment¹. As such the results presented here are indicative and subject to change pending more up-to-date information becoming available and further improvements to our approach (see Annex A for more details on assumptions).

¹ http://ec.europa.eu/clima/policies/ets/revision/docs/impact_assessment_en.pdf

- This analysis suggests that:
 - Subject to the set of assumptions chosen in the paper and keeping in mind the considerations discussed on uncertainty and the need for further analysis in the disclaimer below, the Commission’s legislative proposal carries a risk of triggering the Cross-sectoral Correction Factor, due to unfocused free allocation;
 - The scenario from the “targeted” option of the impact assessment, on the contrary, has a probability of underusing available free allocations while unnecessarily leaving some of the most exposed sectors outside the 100% tier;
 - If the high risk tier is too large, not enough allocation is left for sectors at relatively lower risk. Such a scenario is inadequate as it does not afford these intermediate sectors sufficient support against carbon leakage risk.
 - The last scenario gives evidence that it is possible to mitigate industries’ risk of carbon leakage according to their exposure, while staying within the 43% limit on free allocation.

Illustrative scenarios for tiered free allocation

- The following scenarios show a range of options for how tiered free allocation could be approached. Throughout all the scenarios those sectors deemed to be at the highest risk of carbon leakage receive 100% free allocation up to the expected benchmark. Free allocation is kept to within 6.3bn allowances as consistent with the Commission’s decision on free allocation share.
- For each scenario the same assessment is made of each sector’s risk of carbon leakage using the results from the Commission’s 2014 assessment². The level of each risk threshold then determines the proportion of free allocation each sector receives.

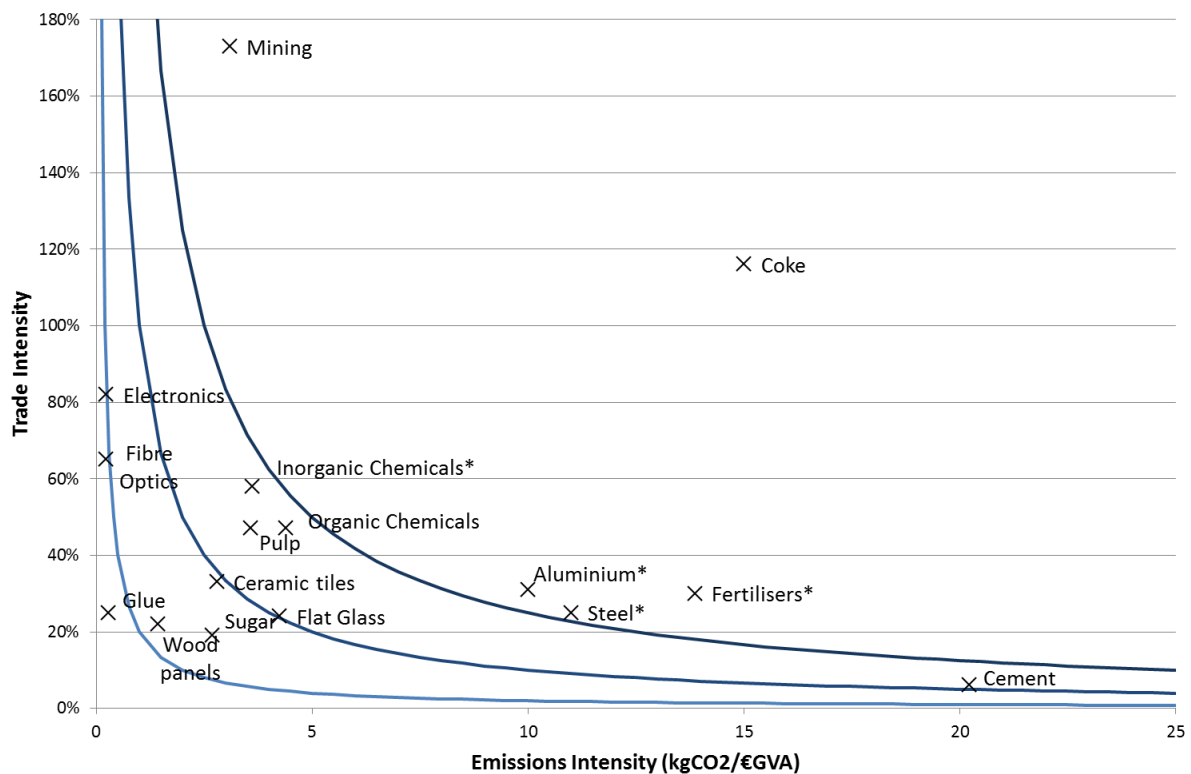
The numbers in this non-paper are indicative and subject to change pending further improvements in our approach and more up-to-date data being available. Using different assumptions would change the results of this analysis, for example the scale of the Cross-sectoral Correction Factor projected in different scenarios. The assumptions made for the main parameters used in this paper and listed in Annex A are not an indicator of the co-authors’ positions on these areas.

² http://ec.europa.eu/clima/policies/ets/cap/leakage/docs/carbon_leakage_detailed_info_en.pdf

Scenario from the European Commission’s Impact Assessment on Carbon Leakage

The tiered free allocation system in the Commission’s impact assessment has a relatively high threshold for the highest risk tier; sectors with an emissions intensity*trade intensity of >2.5 receive 100% free allocation. In line with the co-authors’ position, free allocation to sectors at no risk continues to decline to 0%.

| | Threshold ³ | Number of sectors | Allocation against Benchmark |
|-------------|------------------------|-------------------|------------------------------|
| High Risk | ≥2.5 | 5 | 100% |
| Medium Risk | ≥1 to 2.5 | 7 | 80% |
| Low Risk | ≥0.2 to 1 | 40 | 60% |
| No Risk | 0 to 0.2 | 184 | 9% average ⁴ |



*These sectors have seen significant revisions to their emissions intensity due to scope changes

This scenario leaves 4% of free allowances unused and excludes some sectors considered very exposed to carbon leakage. A scenario which makes full use of allowances and offers full protection to more sectors should be considered.

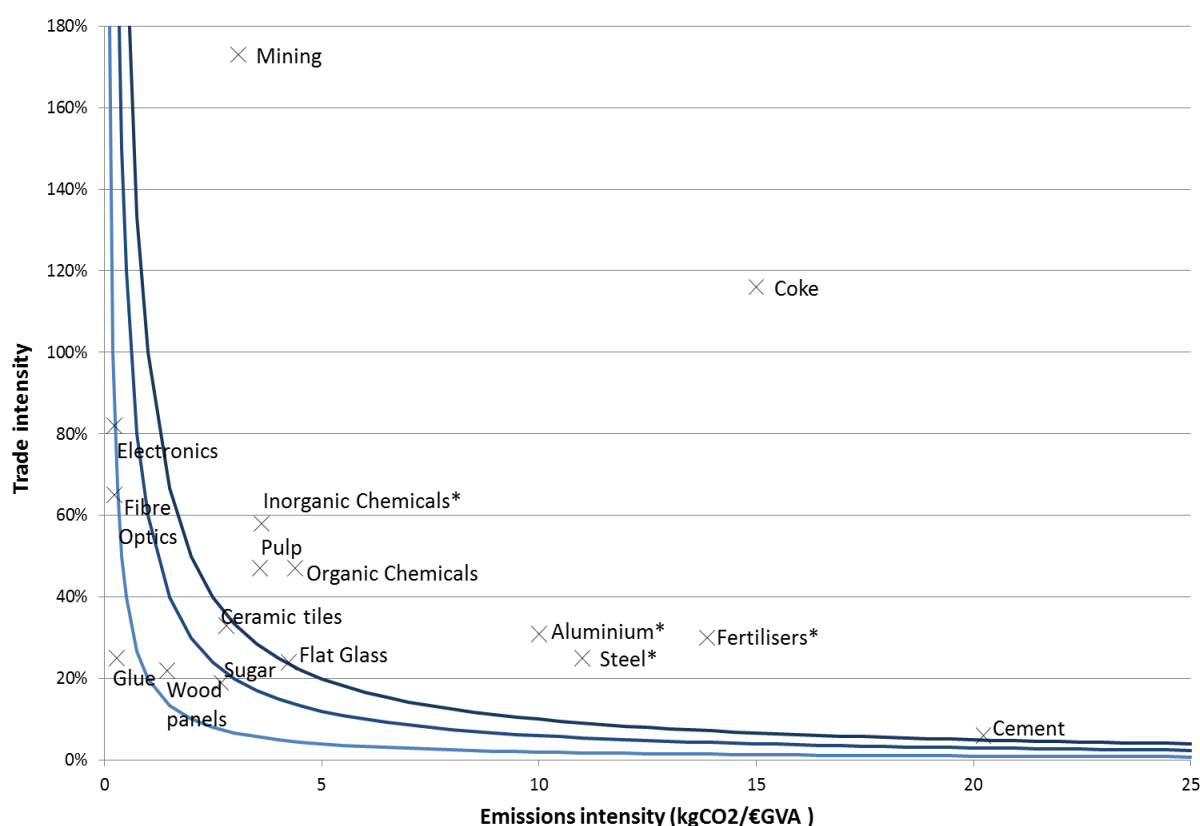
³ Expressed as emissions intensity*trade intensity

⁴ Average, declining from 30% to 0% in 2027

Scenario with Large High Risk Tier

This scenario considers the possibility of a more generous high risk tier, set at >1.0. In line with the co-authors' preferred position, sectors at no risk of carbon leakage have free allocation declining to 0% by 2027.

| | Threshold | Number of sectors | Allocation against Benchmark |
|-------------|-------------------|-------------------|------------------------------|
| High Risk | ≥ 1 | 12 | 100% |
| Medium Risk | ≥ 0.6 to 1 | 11 | 30% |
| Low Risk | ≥ 0.2 to 0.6 | 29 | 9% average |
| No Risk | 0 to 0.2 | 184 | 9% average ⁵ |



*These sectors have seen significant revisions to their emissions intensity due to scope changes

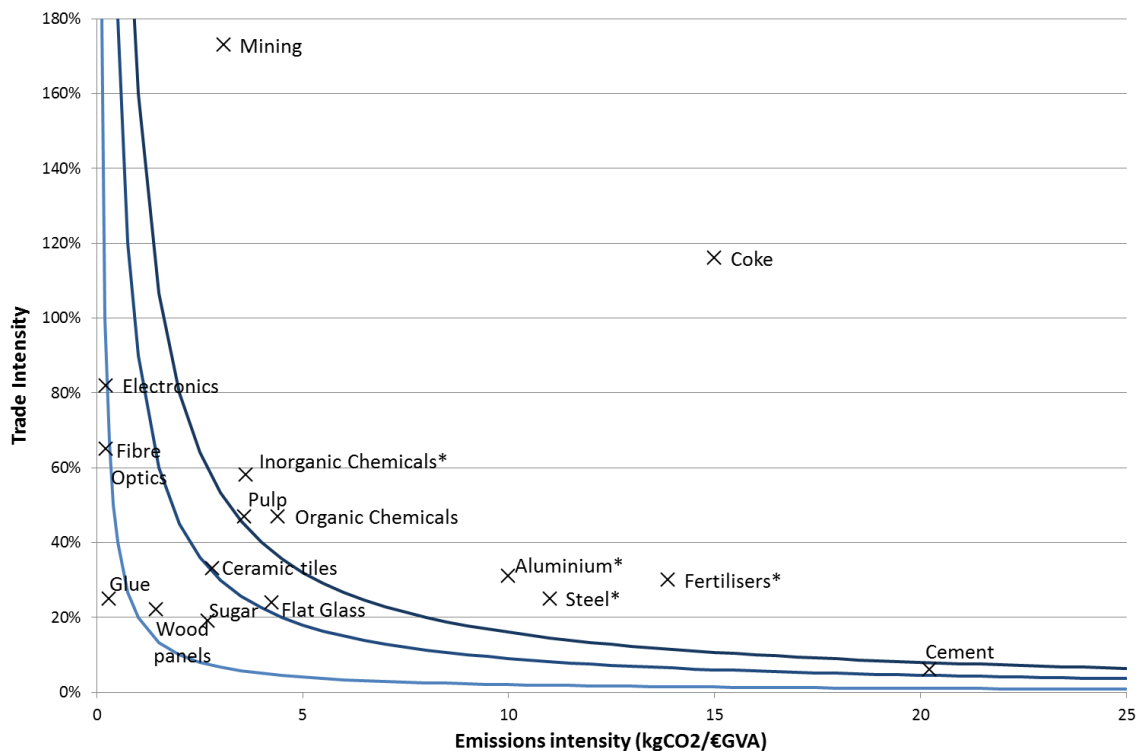
In this scenario, the highest risk tier is extended to cover 12 sectors. This scenario is not considered acceptable, because sectors outside of the highest risk tier receive very low levels of free allocation which may expose them to a risk of carbon leakage. All available free allocation is used in this scenario. A more progressive scenario could be considered to take into account the moderate risk of intermediate sectors.

⁵ Average, declining from 30% to 0% in 2027

Scenario with Balanced High Risk Tier

This scenario addresses the issues in the previous scenario by reducing the size of the highest risk tier by raising the threshold to >1.6. In line with the co-authors' preferred position, sectors at no risk of carbon leakage continue their trajectory towards 0% free allocation in 2027.

| | Threshold | Number of sectors | Allocation against Benchmark |
|--------------------|-------------|-------------------|------------------------------|
| High Risk | ≥1.6 | 9 | 100% |
| Medium Risk | ≥0.9 to 1.6 | 5 | 75% |
| Low Risk | ≥0.2 to 0.9 | 38 | 50% |
| No Risk | 0 to 0.2 | 184 | 9% average ⁶ |



*These sectors have seen significant revisions to their emissions intensity due to scope changes

In this scenario 9 high risk sectors continue to receive 100% free allocation against their benchmarks for the duration of the Phase. While fewer sectors can be placed in the highest risk tier, more allocation is made available for sectors in lower risk tiers. In this scenario, all available free allocation is used.

This scenario gives evidence that it is possible to provide protection against carbon leakage risk via free allocation according to their exposure while meeting the industry limit on free allocation.

⁶ Average, declining from 30% to 0% in 2027

Next Steps

- The above scenarios are indicative and based on available data from the Commissions' previous assessment of carbon leakage risk, and the authors' best understanding of how a tiered free allocation mechanism would be implemented. The Commission's proposed experts' meeting on carbon leakage in the second quarter of this year is a welcome step to clarify details on carbon leakage. The indicative results presented here may change as more information becomes available.
- Further debate in Council and Parliament on the design of a tiered free allocation system is welcome. France and the UK are eager to work with other interested Member States, MEPs, industry and civil society organisations in taking this forward.

Annex A – Assumptions

In the above analysis, the following key assumptions have been made:

- The emissions intensity criterion is derived from carbon costs using the Commission's 2013 Impact Assessment. The auctioning factor is removed for direct costs, and the resultant figure converted into kgCO₂e/€GVA.
- All benchmarks have been reduced by 7.5% between 2021 and 2025, and 10% between 2026 and 2030, on 2008 levels (i.e. 0.5% per annum), reflecting a conservative estimate of total industrial decarbonisation potential.
- Preliminary free allocation levels are held steady at 2013 levels, the most recent year for which full data from the European Union Transaction Log is available.
- These assumptions have been made with a view to using the most open and transparent methodology, using only publically available data. However, there are also limitations to using this data as it does not accurately represent the expected outcome in 2021. For example the carbon leakage risk assessment for sectors is likely to change due to updated carbon and trade intensity data. These scenarios should therefore be seen as illustrative, rather than an accurate representation of free allocation in Phase IV.

Annex B – Comparative Table

| Sectors receiving more than 10Mt allocation in Phase IV | Emissions intensity * trade intensity | Commission proposal | | | IA tiered approach | | Large High Risk Tier | | Balanced High Risk Tier | |
|---|---------------------------------------|---------------------|------------|---------------------------|--------------------|-------------|----------------------|-------------|-------------------------|-------------|
| | | % FA | After CSCF | Share of FA (before CSCF) | % FA | Share of FA | % FA | Share of FA | % FA | Share of FA |
| Coke | 17,45 | 100% | 83% | 0,8% | 100% | 0,8% | 100% | 0,8% | 100% | 0,8% |
| Fertilisers | >4* | 100% | 83% | 5,7% | 100% | 5,7% | 100% | 5,7% | 100% | 5,7% |
| Mines | 5,34 | 100% | 83% | 0,2% | 100% | 0,2% | 100% | 0,2% | 100% | 0,2% |
| Steel | >2,5* | 100% | 83% | 30,0% | 100% | 30,0% | 100% | 30,0% | 100% | 30,0% |
| Aluminium | >2,5* | 100% | 83% | 1,8% | 100% | 1,8% | 100% | 1,8% | 100% | 1,8% |
| Organic chemicals | 2,08 | 100% | 83% | 9,2% | 80% | 7,3% | 100% | 9,2% | 100% | 9,2% |
| Refineries | 1,98 | 100% | 83% | 17,3% | 80% | 13,8% | 100% | 17,3% | 100% | 17,3% |
| Inorganic chemicals | >2* | 100% | 83% | 2,2% | 80% | 1,8% | 100% | 2,2% | 100% | 2,2% |
| Pulp | 1,68 | 100% | 83% | 0,5% | 80% | 0,4% | 100% | 0,5% | 100% | 0,5% |
| Cement | 1,27 | 100% | 83% | 21,6% | 80% | 17,3% | 100% | 21,6% | 75% | 16,2% |
| Paper | 1,17 | 100% | 83% | 4,5% | 80% | 3,6% | 100% | 4,5% | 75% | 3,4% |
| Flat glass | 1,02 | 100% | 83% | 0,9% | 80% | 0,7% | 100% | 0,9% | 75% | 0,7% |
| Lime and plaster | 0,97 | 100% | 83% | 4,2% | 60% | 2,5% | 30% | 1,3% | 75% | 3,2% |
| Ceramic tiles and flags | 0,93 | 100% | 83% | 0,9% | 60% | 0,5% | 30% | 0,3% | 75% | 0,6% |
| Refractory products | 0,87 | 100% | 83% | 0,2% | 60% | 0,1% | 30% | 0,1% | 50% | 0,1% |
| Hollow glass | 0,78 | 100% | 83% | 1,4% | 60% | 0,8% | 30% | 0,4% | 50% | 0,7% |
| Man-made fibres | 0,72 | 100% | 83% | 0,2% | 60% | 0,1% | 30% | 0,1% | 50% | 0,1% |
| Lead, zinc, and tin | 0,71 | 100% | 83% | 0,2% | 60% | 0,1% | 30% | 0,1% | 50% | 0,1% |
| Extraction of crude petroleum | 0,53 | 100% | 83% | 2,9% | 60% | 1,7% | 9% | 0,3% | 50% | 1,4% |
| Sugar | 0,52 | 100% | 83% | 1,0% | 60% | 0,6% | 9% | 0,1% | 50% | 0,5% |
| Copper | 0,48 | 100% | 83% | 0,3% | 60% | 0,2% | 9% | 0,0% | 50% | 0,2% |
| Oils and fats | 0,43 | 100% | 83% | 0,3% | 60% | 0,2% | 9% | 0,0% | 50% | 0,1% |
| Starches | 0,43 | 100% | 83% | 0,5% | 60% | 0,3% | 9% | 0,0% | 50% | 0,3% |
| Plastics in primary forms | 0,42 | 100% | 83% | 0,7% | 60% | 0,4% | 9% | 0,1% | 50% | 0,3% |
| Dyes and pigments | 0,41 | 100% | 83% | 0,3% | 60% | 0,2% | 9% | 0,0% | 50% | 0,1% |
| Veneer sheets and wood-based panels | 0,31 | 100% | 83% | 1,2% | 60% | 0,7% | 9% | 0,1% | 50% | 0,6% |
| Other sectors above 0.2 | | 100% | 83% | 1,2% | 60% | 0,7% | 9% | 0,2% | 50% | 0,6% |
| Industrial gases | 0,17 | 30% | 25% | 0,4% | 9% | 0,1% | 9% | 0,1% | 9% | 0,1% |
| Bricks, tiles, etc | 0,17 | 30% | 25% | 0,4% | 9% | 0,1% | 9% | 0,1% | 9% | 0,1% |
| District heating | 0,00 | 30% | 25% | 4,5% | 9% | 1,4% | 9% | 1,4% | 9% | 1,4% |
| Other sectors | | 30% | 25% | 5,2% | 9% | 2,0% | 9% | 2,0% | 9% | 2,0% |
| Total | | | | 121% | | 96% | | 101% | | 100% |
| Remaining allowances | | | | -21% | | 4% | | -1% | | <1% |

The above table list sectors in order of emissions intensity*trade intensity, and compares how sectors are treated in the Commission's legislative proposal for Phase IV, as well as the three scenarios outlined in this non-paper.

* In the Phase III carbon leakage Impact Assessment, Aluminium and Steel have emissions intensity*trade intensity figures of 1.39 and 2.33 respectively. Based on scope changes to include non-CO₂ greenhouse gases, these are now both >2.5. Inorganic chemicals and fertilisers have undergone similar scope changes, with new figures of >2 and >4 respectively (compared to 1.72 and 4.07 previously).

Sectors and sub-sectors which may be subject to a qualitative assessment of their carbon leakage risk are not specifically taken into account in these estimations.