EU ETS revision expert meeting: Outlook of the correction factor in Phase 4

Summary

On 21 April 2016, the Commission hosted an expert meeting aiming to take stock of the analysis, examine the assumptions behind various forecasts and identify the most critical design parameters to avoid or minimise the need for a correction factor in phase 4 of the EU ETS. The meeting was followed online by over 800 individual viewers.[1]

The Commission made a technical introduction on the magnitude and application of the correction factor in phase 3. The correction factor is applied in a uniform manner across all installations receiving free allocation if the preliminary volume for free allocation exceeds the amount available for free allocation, which was the case during phase 3 of the EU ETS, leading to a correction factor of some 12% on average over the 8-year period (2013-2020).

1. Key assumptions and estimates of correction factor in phase 4

The first session of the expert meeting focused on factors outside the control of the co-legislators.

The independent market analysts presenting in the first and second panel concluded that in their central forecasts with regard to the Commission proposal no correction factor would apply. Both analysts in the first panel identified technological development and production trends in industrial sectors covered by the EU ETS as the two main assumptions underlying their forecasts. They pointed out that even if the assumptions are varied and there would be a correction factor in phase 4, it is highly unlikely that its magnitude would be similar to the correction factor during phase 3 (i.e. some 12% on average for the whole period).

These analytical results are more sensitive to the assumptions made about technological development in industrial sectors and their impact on the benchmark update, than to assumptions about industrial growth and their impact on the baseline production levels. The analysts further observe that industrial production levels reflect economic cycles and forecast overall modest growth in industrial sectors covered by the EU ETS. Furthermore, as it may be expected that industrial growth in Europe will continue to be driven more by value than by volume, industrial production growth will not necessarily translate into proportional growth in emissions, due to expected efficiency gains.

During the discussion, the meeting participants largely agreed on the key objective of the correction factor, to preserve environmental integrity of the EU ETS and safeguard the Member States' auctioning revenues. An industrial stakeholder pointed out that industrial production in 2008 was relatively high, agreeing that future growth in EU is likely to be driven more by value than volume. There was also recognition of lessons learned from Phase 3, i.e. that using artificially high production data to determine the level of free allocation can increase the risk of a correction factor. The participants agreed that growth rates differ across

[1] The presentations and recording of the meeting can be found here http://ec.europa.eu/clima/events/articles/0111_en.htm

sectors, and more analysis and data sharing could help deepen analytical insights and understanding of major policy choices discussed in co-decision. Industry representatives also pointed out that innovation and emission reductions are a continuous process, and that the best performers are likely to keep innovating and striving to reduce their emissions further.

2. Critical design parameters for free allocation

The second session of the expert meeting focused on factors that are under the control of co-legislators and subject to political decisions. One market analyst made a distinction between 'common sense policy decisions'[2] and politically driven decisions:

2.1. "Common sense" elements

These elements can be defined as non-controversial, yet essential elements, necessary to be maintained as per the Commission proposal to reduce the risk of the correction factor having to apply:

- **Retaining a stable carbon leakage list, without annual addition of sectors**. A stable list, either one for the full 10-year phase or two lists for two 5-year allocation periods, significantly decreases the risk of a correction factor since no allowances would need to be held back for potential additions to the list.

- **Retain left-over allowances to lower the correction factor over the 5-year cycle**. There is a possibility that the maximum amount of allowances available for free allocation might not be exhausted during the early years of the first 5-year cycle, leading to a buildup of left-over allowances[3]. Using these left-over allowances during the following years, as currently proposed, when the maximum number of allowances available for free allocation is insufficient to satisfy the demand for allocation reduces the risk of a correction factor.

- **Avoiding choice element between alternative baseline periods for production data**. Applying the same baseline period for all installations eliminates the discretionary choice and significantly reduces the risk of a correction factor, while simplifying the system.

- **Providing for the phase 4 New Entrants Reserve (NER) using unallocated allowances from phase 3**. Using phase 3 allowances to fund the NER in phase 4 reduces the risk of a correction factor having to apply.

2.2. Political choice elements

The options for the elements containing significant political choice were evaluated according to their impact on the likelihood of a correction factor, its magnitude, and the potential

[2] Common sense decisions are to be understood as design choices where experience from phase 3 shows that with relatively simple changes the need for a correction factor could be (substantially) lowered.
[3] Left-over allowances is to be understood as an outcome where due to the set of policy choices not the full amount of free allocation available for industry would in fact be handed out but some of these allowances would be left over.

amount of left-over allowances. The three political options were analysed independently, i.e. changing one parameter and keeping all others as in the Commission proposal:

- **Reflecting technological development of sectors in the benchmark update**. As concluded in the first session, there was analytical consensus that if the average rate of technological development for sectors is not fully and properly reflected[4] in the benchmark update, the risk of a correction factor significantly increases.

- **Baseline period for production levels.** The analysts concluded that with the Commission proposal of two 5-year allocation periods, or with shorter rolling average periods[5], a correction factor is not expected. However, the shorter the allocation period the lower the certainty and predictability concerning the level of free allocation, as the correction factor could no longer be determined for 5-year periods.

- **Carbon leakage groups**. The analysts concluded that while the approach with 2 carbon leakage groups would not lead to a correction factor, introducing a more targeted approach or other variations of tiering discussed in Parliament and Council would very likely result in a significant number of left-over allowances.

In the discussion, some participants supported a full data collection for updating the benchmarks and reflecting technological changes. The analysts explained the significant constraints to model the impact of such an update method on the need for a correction factor due to the increased level of uncertainty. It was pointed out that very short baseline periods lead to very high administrative costs, and in particular in a growing economy, variations of dynamic allocation can increase the risk of a correction factor. On carbon leakage tiering, the discussion revolved around the left-over allowances which may result from such an approach, its link to cost pass through and its suitability to adequately address the risk of carbon leakage.

[4] Such a situation could e.g. arise if benchmarks are updated only once for the 10 year period and based only on verified data up to 2017. In such a case, not taking into account technological progress from 2018 onwards would increase pressure on the correction factor.

[5] The rolling activity baseline chosen in this scenario is the average of the production activity of two years (t-3 and t-2).

Technical annex

1. Detailed insights from panel 1

Thomson Reuters' central scenario is based on 0.5% industrial growth in ETS sectors during the years 2016-2022 with differing rates of technological progress reflected in the benchmark update. With an average benchmark update of 0.75% per year across all sectors and the central projection of an average 0.5% industrial growth in the ETS sectors, the analysts see a correction factor of 5% on average in the period 2021-2030, in practice applying in the second part of the period (2026-2030). The calculations take into account that left-over allowances are kept for later years to lower the correction factor. With an average benchmark update of 0.5% per year across all sectors and the central projection of average 0.5% industrial growth, the analysts see a correction factor of 9% on average in the period 2021-2030. Thomson Reuters highlighted that accounting for cost pass-through rates would better reflect the carbon leakage risk.

The lead discussant I4CE largely confirms these findings, although their scenarios combine two growth assumptions (high 1.4% and low 0%) with two benchmark update assumptions (1.5% and 0.5%), leading to a range for the average correction factor in phase 4 between 0% and 12%. [6]

Analyst	Industrial growth in EU ETS sectors (% per year)	Average benchmark update (% per year)	Average correction factor 2021-2030
Thomson Reuters central projection	0.5%	1%	0%
Thomson Reuters other projections	0.5%	0.75%	5%
	0.5%	0.5%	9%
I4CE	1.4%	0.5%	12%
	0%	1.5%	0%

[6] For more details, see Thomson Reuters presentation here http://ec.europa.eu/clima/events/articles/0111_en.htm

2. Detailed insights from panel 2

2.1. Benchmark update

ICIS/Tschach Solutions forecast that no update of the benchmarks would trigger a significant correction factor; an update with 0.5% per year on average would lead to a very low average correction factor throughout the period, de facto only being triggered in 2029-2030 for the period 2026-2030 and a benchmark update with an average 1.5% per year would lead to about one billion left-over allowances.

2.2. Baseline period for production levels.

If the Commission proposal is combined with an average benchmark update of 1%, this would lead to about 500 million left-over allowances. However, introducing the rolling average periods would increase the uncertainty in the system as they would require calculation of the correction factor only for one or two years ahead, thus decreasing the predictability and time horizon of the carbon market. Such an approach combined with a benchmark update of 1% on average, would lead to about 200 million left-over allowances. A discretionary choice of baseline period as allowed in phase 3 would lead to a significant correction factor.

2.3. Carbon leakage groups

ICIS/Tschach Solutions concluded that while the current phase 3 carbon leakage list and the Commission proposal both would not lead to a correction factor, the targeted approach or other variations of tiering would very likely lead to significant left-over allowances of about one billion allowances.

The table below is based on the ICIS/Tschach Solutions presentation and shows the impact of changing individual design elements compared to the Commission proposal – only the element in each row is changed, and its impact on the correction factor and leftover allowances is shown.

Element	**Average correction factor 2021-2030**	**Cumulative left-over allowances in 2030 (million allowances)**
1% average benchmark update	0%	515.2
0.5% average benchmark update	1.5%	0
1.5% average benchmark update	0%	1126.8
Keeping phase 3 benchmarks unchanged	10%	0
NER from phase 4	0%	140

Annual additions to carbon leakage list[7]	4.9%	94.5
Choice of baseline activity levels/Very high production levels	7.5%	0
Rolling baseline activity levels (average of 2 years)	0%	338
Keeping phase 3 carbon leakage list unchanged	0%	359.9
'Targeted' carbon leakage list (Commission impact assessment)	0%	1541.3

[7] If additions to the carbon leakage list would be possible as in phase 3, allowances must be held in a reserve to allow for the possibility that all sectors could be added to the list later in the phase. This means the total allocation volume used for determining the correction factor assumes that all sectors are on the carbon leakage list. Consequently, allocation volumes are artificially higher to build that reserve. As no additions to the list over the period are assumed in this scenario, this reserve is not used and still available in the end of the period. As the allocation volumes are artificially higher, a correction factor is triggered.