Policy Brief

EU ETS Reform

Achieving the increased EU climate targets and the goals of the Paris Agreement requires strong incentives to be set for the economy to decarbonise. A significant part of the EU's carbon emissions is found in the industrial sectors. Consequently, a more robust regulatory framework is required to drive deep decarbonisation and put the EU on the path to a carbon neutral economy.

Although Sandbag welcomes the Commission's Fit for 55 Package, as it represents an improvement from the current regime, its proposal for an EU ETS reform is insufficient. Most concerningly, the Commission's proposal still revolves around the use of free allocation (FA), which creates obstacles to decarbonisation, innovation, and the very functioning of the carbon market. The ETS reform must accelerate those things instead of blocking them.

In its Fit-for-55 package, the Commission has proposed to mitigate the negative aspects of free allocation by:

- inserting conditionality criteria for the granting of emission allowances;
- creating a Carbon Border Adjustment Mechanism (CBAM) covering a handful of sectors;
- extending the ETS scope to more production processes, such as non-grey hydrogen (meaning more free allocation);
- extending the Innovation Fund's mandate to grant carbon contracts for difference;
- promising a reform of the benchmarks (which might also lead to more free allowances).

The EU ETS Reform is currently under review in the European Parliament, which can propose amendments until today, 16 February.

In this brief we address our main concerns with the Commission's proposals and outline policy suggestions for the Parliament to ensure the EU ETS is a strengthened tool which takes a more comprehensive approach to industrial decarbonisation. For reference, those are covered by a set of amendment proposals which we have presented to policymakers.

Ambition

Cap/LRF

The Commission's proposed one-off reduction of the cap (rebasing) is very small, at 78m tonnes if done in 2023 (119m if in 2024). This reduction only aligns the new trajectory with the 2020 cap, which is far above historical emissions. Consequently, the rebased cap will remain above historical emissions for another several years

Instead, we propose that **the cap should be rebased starting from the most recent emission levels** (the average 3 years before entry into force), so that the decarbonisation incentive of an ETS with a net-zero 2050 target is effective immediately. This way, for an entry into force in 2024, the rebasing amount would be calculated using the average 2021-23 emissions, with a new LRF starting point in 2022.

Based on Sandbag's 'baseline' scenario, with emissions averaging 1299m tCO2e over 2021-23, the corresponding rebasing number would be 233m tCO2e instead of 117m (compared to the 2024 cap if no rebasing was done) proposed by the Commission. The LRF (everything else equal) would be 3.3% instead of 4.2%.

ETS2

The Commission proposed a second ETS for transport and buildings whereby it is proposed to endow the second MSR with 600m allowances. However, this amounts to increasing the cap, and **for this ETS to be effective, its cap must be enforced.** If there was any issue related to the timing of EUA supply compared to demand, an article similar to Article 29a could be adapted to deal with those situations.

Resilience

MSR Decision

The Commission proposes setting the MSR thresholds at 400m and 833m. These thresholds were set to accommodate hedging by power utilities, but this argument was not valid as hedging only involves the futures market and does not require actual permits to exist at the time of transaction. It is even less so now that the power sector has largely decarbonised, and UK plants were removed from it. Therefore, we are calling for **the MSR thresholds to be reduced to zero and 100 million for low and high, respectively.**

It should be noted that Article 29a deals with the timing of supply vs. demand, allowing EUAs to be issued "in advance" of their compliance year. If there was an imbalance between net long and net short positions created by "long" hedging needs, Article 29a would be a much better tool to deal with it (with a few changes), adding the missing "short" positions, than keeping surplus in the system through the MSR thresholds.

Control of Supply of Allowances

In the current ETS Directive, a number of mechanisms contribute to increasing the supply of allowances beyond the yearly emissions cap, including unused allowances from previous years that have not been removed into the MSR; allowances that are not allocated for free which are kept available for the later years (Article 10 a (5)); 320 million allowances transferred from Phase III surplus into the New Entrants Reserve (NER); 25 million allowances carried over from Phase III can be claimed and sold by Greece. These reserves undermine the cap and their use should not allow emissions to repeatedly exceed the cap. **These remaining allowances shall only be used if the previous year's emissions did not exceed the cap.** This will address the allowances not allocated during the earlier years of the phase, which Sandbag estimates at 263m by 2023[1].

Revenue Use

Member States

Pursuant to the Commission's proposal, Member States may use 100% of their revenues from the sale of allowances to support climate action. However, that does not include circularity.

A lack of adequate professional practices often acts as a barrier when it comes to the scaling up of substitution of materials with high-carbon contents for lower-carbon materials. It is, therefore, necessary for the workforce to be trained to use the types of materials adapted to the transition to a low-carbon economy. However, education is not considered as part of climate action except in the context of workforce made redundant as a result of the closing down of polluting plants.

We are therefore proposing to insert support to circularity and to the training of workforce in anticipation of new professional practices, such as using low carbon materials and circularity measures.

[1] https://sandbag.be/index.php/2021/09/30/impact-of-eu-ets-reform-letting-industry-loose/

Innovation Fund

The Innovation Fund is one of the main sources of climate funding, yet it's restricted to innovative technologies, which suggests the Commission's belief that the main obstacle to decarbonisation is a lack of innovation. However, there are many technologies (or, simply put, "measures") with vast abatement potential that are ready, not particularly innovative but simply not economical, in need for support to be deployed. For instance, it is the case of the substitution of concrete with timber, or the reuse of steel products, in the construction sector. However, those measures which would require public funding (not least in education, e.g. to train builders to new materials), are not eligible for funding from the Innovation Fund by lack of innovation content, or to any other funding instrument.

In the same way as feed-in tariffs to (un-innovative) renewable energies helped decarbonising the power sector in the 2010s, support to the deployment of uneconomical, high-potential abatement measures should help decarbonising our economy. This would be more effective than a risky gamble on innovation, which the failed NER300 subsidy programme already demonstrated in that same decade. Feed-in tariffs are an example of programme run by individual Member States (MS) in an uncoordinated fashion (some MS have no tariffs at all), whereas coordination at EU level would sometimes be preferable. Similar programmes could be more efficiently applied to many types of subsidies, if coordinated and financed at EU level, including to support circularity, carbon-free mobility etc. Another example of lack of coordination is hydrogen, for which some MS plan large-scale transport infrastructure while others plan production near consumption sites.

Using free allocation benchmarks as reference to assess environmental performance is too weak a comparison.

- Those benchmarks were initially based on the 10% best installations, but some of them are just arbitrary (e.g. the heat benchmark is just based on natural gas heating),
- They are backward looking, only being based on a reference observed in 2007-08. Projects are selected by comparing their GHG emissions with this out-of-touch reference, which e.g. for hydrogen production represent 6.84 tCO2 per tonne of hydrogen produced, even though the 10% most efficient "grey hydrogen" plants in Europe only emit 4.09 tCO2.

Instead of aiming at a level only below the free allocation benchmarks, Innovation Fund activities should therefore aim at carbon neutrality. Accordingly, **we are calling for the Innovation Fund to be renamed the 'Carbon Neutrality Fund' and refocused on environmental impact rather than innovation.** It should retain the pre-existing innovation remit but also include:

- Projects with large-scale abatement potential regardless of their innovation content
- Measures not based on individual projects, to support circularity. These could include support to the retraining of workforce to using low-carbon types of materials.
- Programmes of support at EU level which could improve sector-based coordination in emission reductions.

Modernisation Fund

We are concerned that the problem with energy transition in CEE countries is not the lack of funding, but the lack of capacity to deal with the funds already granted. To foster a strategic and efficient absorption of the available financing from the Modernisation Fund, the Commission should provide more technical assistance to the potential beneficiaries as for developing high-quality projects, notably to municipalities and other local and regional authorities, which lack the necessary administrative and practical competences. This should be done before increasing the fund's size.

The share of allocation to a series of priority investments should be raised to 100%, to ensure that the list of priority investments is fully adhered to by the eligible Member States and to channel all the available funding to the most pressing climate needs. This would strengthen the accountability and transparency of using the funds, as spending would be fully reported and monitored. In particular,

Sandbag's research highlighted the need to develop heating and cooling from renewable sources, e.g. in Romania[2].

Incentives

The ETS should not only ensure there is fair competition between different technologies producing the same product types, but also between products fulfilling the same function and avoid competitive distortion between ways of achieving emission reductions, whether from improved processes or from reduced production thanks to circularity measures. To date, the EU ETS has continually failed to incentivise circular economy efforts that reduce consumption.

Therefore, in order to accelerate the industrial transformation that results in greater greenhouse gas reductions, the EU ETS needs to reform its current free allocation approach to make it the exception rather than the norm.

Conditionality of Free Allocation of Emission Allowances

The Commission's proposed approach of conditioning free allocation to investment is missing the point that carbon leakage is not related to the behaviour of individual plants or companies. For example, many industrial plants have not managed to significantly reduce their emissions since joining the EU ETS in 2005, having reached the maximum level of efficiency for the type of process or product manufactured. The most effective resource allocation might not be investment into those plants, whereas the most affordable low-carbon solutions might come from substitute products, circularity or very different types of plants. The proposal to subject free allocation to investment or efficiency audit is therefore of limited value.

As a carbon leakage protection measure, **free allocation should not be used as a carrot-and-stick.** For those plants that are *actually* at risk (the list of which should be re-assessed periodically), the existence of substitute products, demand-side or circularity measures, or possibility to be covered by a CBAM, would make free allocation inappropriate to incentivise emission reductions. Therefore, we propose the following strengthened conditions on free allocation:

- **Condition 1: carbon leakage risk**

The carbon leakage list should be revised more often. By adopting in 2019 a carbon leakage list for the 2021-2030 period, the Commission broke with the previous practice of more regular updates. Such a long period does not allow either to assess carbon leakage risk based on recent data ("*the three most recent calendar years available"* as per the methodology set in the directive). Setting aside changes brought by the CBAM, a carbon leakage list that covers over 90% of the ETS emissions, with no possibility of revision before 2030, will hinder the decarbonisation efforts needed to achieve the EU's increased climate ambitions.

Qualitative assessments carried out by the Commission to add to the carbon leakage list's sectors and subsectors that do not meet the carbon leakage indicator criterion may reveal that sectors and subsectors meeting this criterion are nevertheless not exposed to a high carbon leakage risk. This is due, for instance, to factors not considered by the current methodology (direction of trade, distance).

We propose to limit the validity of the carbon leakage list to three years in order to base the assessment of carbon leakage risk on recent and actual data. Since the ability to pass through costs is a major determinant of carbon leakage risk, we propose to explicitly add it to the list of criteria considered for qualitative assessments, to make it possible to carry out qualitative assessments even in relation to sectors and subsectors presumed at risk of carbon leakage under the generic carbon leakage indicator. Further, the scope of persons authorised to apply to the Commission for such an assessment should be broadened beyond the concerned sectors and subsectors themselves, in order to make the carbon leakage list reversible and possibly remove from it sectors and subsectors that no longer fulfil the conditions.

[2] https://sandbag.be/index.php/2021/03/25/harnessing-eu-funds-for-romanias-energy-transition/

- **Condition 2: lack of identified substitute products or circularity measure**

The damage caused by keeping free allocation for specific goods is related to the price elasticity of those goods:

- Some goods have a low elasticity, which means that a price increase in those goods would not trigger any significant change in consumption patterns, because the goods are essential and have no substitutes. For those, the damage of keeping free allocation is more limited. An example is fuels for passenger vehicles, for which the carbon price would not incentivise alternative transport.

- Some goods have a lower elasticity, which means that an increase in price would trigger changes in consumption patterns, such as substitutions with other goods, recycling or demand reduction. For those, free allocation would obstruct all these changes and be a major obstacle to decarbonisation and should be abolished. An example is clinker, for which a multitude of substitute products exist (clinker-free cements, timber products…) at affordable costs, and circularity and demand reduction options also exist.

- **Condition 3: unsuitability of alternatives to free allocation (incl. CBAM)**

Rather than free allocation, other kinds of carbon leakage protections should be prioritised, ensuring free allocation is kept as very last resort. Other protections may include a CBAM but also product requirements. For example, hydrogen production could easily be protected against carbon leakage by means of a product requirement, so that any new domestic production (and imports) is compliant with a certified standard. Regulations such as FuelEU or REDII could ensure that existing plants quickly switch from 'grey' to 'green' production (with some free allocation in the meantime, except for the fertilisers sector as it joins the CBAM).

Reform of the Benchmarks

The benchmarks must be reviewed within 6 months from the entry into force of the Directive (rather than before the period from 2026 to 2030). Further, guidance to the review must account for other available measures not based on the production of goods, such as assessing if the goods could be substituted, and the circular use of materials to increase resource efficiency.

CBAM

To be perfectly clear, we strongly agree with the Commission's statement that the CBAM should be "an alternative to the measures that address the risk of carbon leakage in the EU's Emissions Trading System"[3], such as free allocation.

The implementation schedule of a CBAM for a particular sector should depend on three factors: 1) actual risk of carbon leakage (a function of exposure to international trade and carbon costs); 2) the carbon content of products manufactured by international competitors, and 3) the readiness of EU manufacturers to transition to lower carbon production.

As free allocation is phased out, the ability of a CBAM to protect EU installations against competition impacts depends on the cost difference between the phased-out free allowances for EU plants and the CBAM fee paid by importers of similar products: competition impacts will only be negative if imported products have significantly lower carbon content than EU-made products because they will pay less CBAM than EU plants pay for their carbon.

For products with little or no risk of such imports, competition impacts will either be small or even positive, so the CBAM can be implemented immediately. For sectors with low carbon competitors that can quickly transition to lower carbon production, implementation can be fast although not immediate. Only the sectors

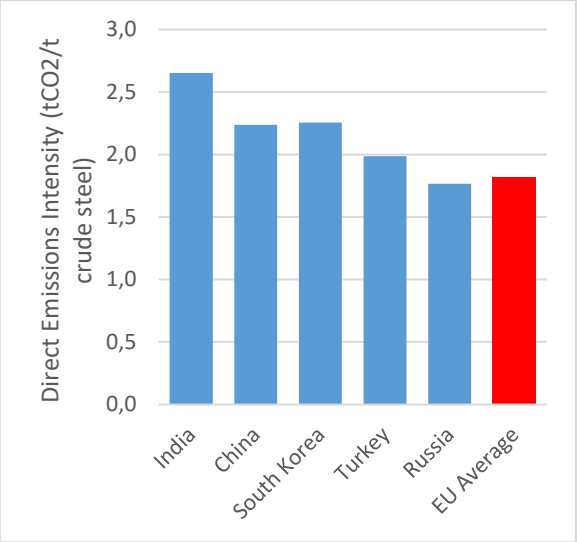
[3] Communication on the European Green Deal, European Commission, December 2019

with high risk of carbon leakage, low carbon competitors, and low readiness may require a higher implementation time.

For **flat steel products**, typically made via the primary production route (blast furnaces), the EU's average direct emissions intensity is lower than the majority of its largest steel trade partners. As such, the EU is unlikely to lose a significant share of trade in the steel sector and EU producers should be able to pass through most of the additional costs due to the EU ETS. It should be noted that some countries produce flat steel products from slightly less emitting direct reduced iron (DRI) but none has the capacity to massively penetrate the EU market.

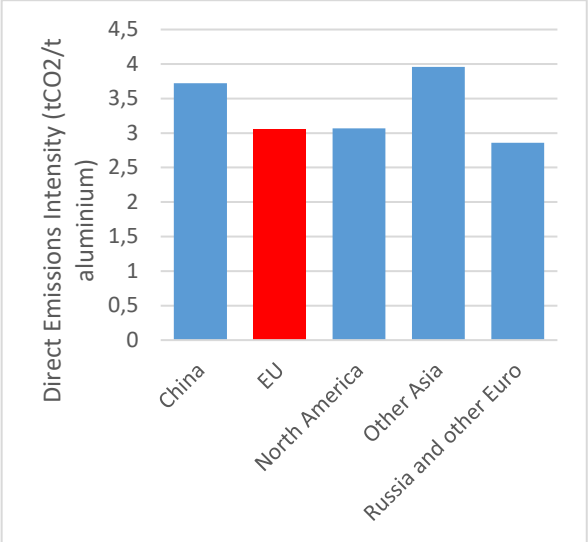
In the Aluminium sector, the EU, again has a competitive emissions intensity, with only Russia having a slightly lower direct emissions intensity. Data used is from the International Aluminium Institute Life Cycle Inventory Summary by Region and Unit Process.

Steel from blast furnace



Source: https://www.globalefficiencyintel.com/us-steel-industry-benchmarking-energy-co2-intensities

Aluminium

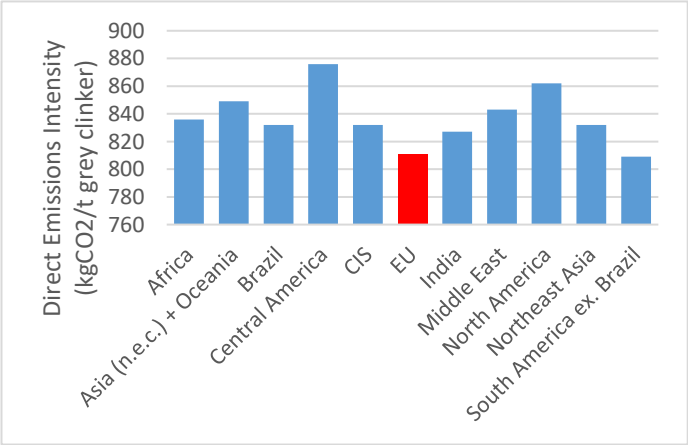


Source: International Aluminium Institute Life Cycle Inventory Summary by Region and Unit Process

Cement

It is a similar situation in the cement sector, where on average the EU has the second lowest emissions intensity for producing grey clinker, the main polluting component of cement. This is based on 2019 data from the Global Cement and Concrete Association.

Source: Global Cement and Concrete Association
https://gccassociation.org/gnr/geo/GNR-Indicator_59cAG-geo.html



Important assumptions for the data in these graphs are that all the country or region values are average values. So, whilst the EU as a whole has one of the lowest emissions intensities, specific countries within the EU have higher emissions intensities which will be less competitive.

Scope

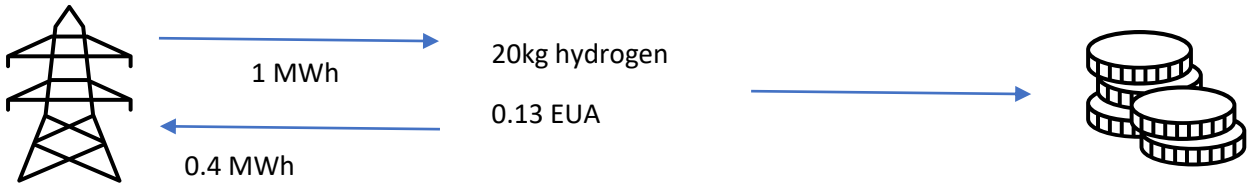
Hydrogen

The Commission's proposal opens the door to granting free allowances to all types of hydrogen production facilities, and although it would improve the competitiveness of low-carbon hydrogen, it is not an appropriate means to protect against carbon leakage, as shown below. Instead, a combination of product requirement for green/low carbon hydrogen, constraints (e.g. FuelEU, REDII) for the refining sector, and CBAM for fertilisers would fulfil that role more effectively while driving decarbonisation.

The problem with extending the EU ETS to more hydrogen production plants stems from the fact that hydrogen is usually an energy vector rather than an actual product, and this would create at least three problems:

Energy-to-waste projects

Firstly, there are uses of hydrogen for which issuing free emission allowances would be damaging for the climate. With the proposed design, projects could be subsidised for wasting electricity. For instance, a project converting grid electricity into hydrogen then back into electricity (through a CCGT plant) could earn 0.22 EUA (worth about 20 euros) for each MWh lost through conversions.



This subsidy would compound with state-aid compensation for indirect carbon costs (due to the heavy use of electricity), which the project would likely qualify for.

Losing control of EUA supply

Secondly, the inclusion of new hydrogen manufacturing facilities (with potentially little or no environmental benefits) in the EU ETS means that the free EUAs they will receive will be sourced from the New Entrant Reserve instead of from the 43% share of standard free EUAs, i.e. on top of the cap. Such "reserves" undermine the cap and make it possible to emit more than what should be allowed to reach the -55% emission reduction target.

Our research suggests that the increased renewable hydrogen production needed by the Hydrogen Strategy could increase free allocation by 84m EUAs over 2026-2030. This does not account for "blue" or other types of hydrogen, which would increase the supply further.

The threshold problem

Thirdly, another problem is the capacity threshold. According to the Commission's proposal, only facilities with capacity to produce 25 tonnes of hydrogen per day would be eligible to free allocation. For electrolysers running on intermittent renewable electricity, this would only concern facilities of 100MW electrolysing capacity or more, none of which are in operation or under construction.

Lowering the threshold would not address the problem that smaller facilities are at a disadvantage compared to bigger ones. Also, the lower the threshold, the more facilities will fall under the ETS, with all the **bureaucracy** it creates.

Waste Incinerators

Incinerators are the main source of emissions for products made from fossil fuels such as plastic products. Data[4] indicate that on average the production of one tonne of plastic emits 2.5tCO2 and results in an embedded carbon content of another 2.7tCO2, released at incineration. Covering incinerators under the EU ETS would put a price on those latter emissions and therefore internalise most of the externalities linked to the emissions from plastic products. This would make both EU-made and imported plastic products more costly and less competitive and would incentivise substitutions with products of lower carbon content.

Therefore, the inclusion of municipal waste incineration installations should be covered by the EU-ETS as soon as possible. Simultaneously, the Commission should put in place the necessary legislation to avoid and address the risk of diverted waste streams towards landfills and waste exports to third countries.

The inclusion of incinerators would cover most emissions from plastic products, of which the EU ETS only covers a small part. Putting a price on emissions from incineration would increase the cost of both EU-made and imported plastic products, making the ETS fraction of them relatively small**.** This would make it easier to abolish free allocation for such products.

Summary of Policy Suggestions

To summarise, we propose the following policy suggestions for the EU ETS reform:

- **CAP/LRF** - rebase the cap starting from the most recent emission levels (the average 3 years before entry into force, e.g. 2021-23); calculate the rebasing amount , with a new LRF starting point in 2022.
- **ETS2** – no MSR with initial endowment.
- **MSR Decision** – reduce the MSR thresholds to zero and 100 million for low and high, respectively.
- **Control of supply of allowances** – only allow the release of allowance from MSR and NER if the previous year's emissions did not exceed the cap.
- **Member States** – allow to use ETS money to support circularity and skill formation to adjust professional practices to circularity and the use of low-carbon materials.
- **Innovation Fund** – Rename and refocus on environmental impact rather than innovation: 1) For projects, restrict eligibility to deep decarbonisation and drop the obligation for innovation; 2) Open up to measures not based on individual projects, to support circularity, and programmes of support at EU level.
- **Modernisation Fund** – improve channels of spending the funds before increasing the size; increase to 100% the share of priority investments.
- **Free allocation** - avoid wherever possible and only usedif 1) there is a reassessed carbon leakage risk, 2) there is a lack of identified substitute products or circularity measures, 3) alternatives to free allocation (incl. CBAM) are unsuitable.
- **Reform of the benchmarks** - The benchmarks must be reviewed sooner than is proposed (before the period from 2026 to 2030) as there could be several aspects to review once it is in force and leaving it any later will risk loopholes making their way into the system, thus weakening the effectiveness of this measure. Further, the review must account for other available measures, such as assessing if the product could be substituted, and the circular use of materials to increase resource efficiency.
- **CBAM** – immediately phase-in products for which either the carbon content of products manufactured by large international competitors is not significantly lower than in the EU, base the speed of phasing in on the readiness of EU manufacturers to transition to lower carbon production, with longstop date 2028.
- **Scope** – do not extend to all hydrogen production; include municipal waste incineration installations as of 2024.

[4] Material Economics (2018). The circular economy – A powerful force for climate mitigation.