Decarbonisation of the chemical sector

As part of the European Green Deal, the Commission proposed in September 2020 to raise the 2030 GHG emission reduction target, including emissions and removals, to at least 55% compared to 1990. After looking into actions required across all sectors, including increased energy efficiency and renewable energy, the Commission will now begin the process of making detailed legislative proposals by June 2021 to implement and achieve the increased ambition, including revising and possibly expanding the EU Emissions Trading System (EU ETS) which will enter its phase 4 in 2021 (until 2030).

Indirect ETS compensation

The Commission adopted in September 2020 the revised ***ETS-related State aid Guidelines*** *in the context of the system for GHG emission allowance trading post-2021. They will enter into force on 1 January 2021 with the start of the new ETS trading period, replacing the previous Guidelines adopted in 2012.*

Some chemicals sub-sectors have repeatedly expressed concerns about losing eligibility for State aid *and presented their arguments as part of the public consultation held between 14 January and 10 March 2020.* ***Petrochemicals*** *(NACE 20.14), which are at the origin of many important value chains and account for over 25% of total EU chemicals sales, and* ***fertilisers*** *(NACE 20.15), which account for about 5% of EU chemicals sales, are the most prominent among them. Both these sub-sectors have lost eligibility as a result of the revision. The consultation nevertheless allowed for slight favourable adjustments as concerns eligibility for some industrial gases (part of NACE 20.11) and for the manufacture of some plastics in primary forms (part of NACE 20.16).*

The result of the revision reflects ***a difficult compromise between addressing the risk of carbon leakage, on the one hand, and minimising competition distortions*** *and maintaining the incentives for a cost-effective decarbonisation of the chemicals industry.*

For the two main sub-sectors that will lose eligibility, adverse consequences cannot be ruled out:

- ***EU petrochemicals may be expected to further lose international competitiveness*** *especially vis-à-vis the US and the Middle East (both of which benefit from advantaged feedstock and energy);*
- *For* ***fertilisers,*** *although electricity is not the main cost element, it nevertheless* ***impinges on international competitiveness****. This comes against the background of a high trade intensity (31.8%) and of competition coming mainly from countries with no effective carbon reduction schemes and - as is the case notably of Russia - practicing an* ***unfair and discriminatory system of pricing for natural gas*** *(the major feedstock for the production of nitrogen fertilisers).*

Carbon Border Adjustment Mechanism (CBAM)

The European Green Deal proposes the introduction of a Carbon Border Adjustment Mechanism (CBAM) for selected sectors by 2021, if differences in levels of ambition worldwide persist. This would be ***an alternative*** *to the measures addressing the risk of carbon leakage in the EU Emissions Trading System.*

The intention to introduce a CBAM was ***reconfirmed as part of the recovery plan*** *for Europe and in September during the* ***State of the Union address*** *by President von der Leyen at the European Parliament Plenary.* ***CBAM and a proposal for CBAM as own resource is part of the 'Fit for 55' package****. According to the Commission's Work Programme 2021, the impact assessment and a legislative proposal are to be finalised in* ***Q2 2021****. A public consultation was launched in July (and ran until 28 October 2020). This will provide evidence for designing the options and assessing the impacts.*

Commission services are currently working on a variety of options for CBAM. Main issues:

- ***Choice of instrument*** *(e.g. carbon border tax on imports, the inclusion of importers in the EU's Emissions Trading System or the surrender by importers of notional Emissions Trading System allowances).*
- ***WTO-compatibility*** *and avoiding CBAM being seen as a measure to increase the EU's international competitiveness.*
- *The precise articulation of* ***CBAM and EU ETS*** *measures.*

The CBAM could raise between ***EUR 5 and EUR 14 billion per year*** *depending on the number of sectors covered and the design of the measure. This includes the additional revenue from auctioning due to the* ***abolition of free allocations*** *under the EU Emissions Trading System.*

The EU Hydrogen Strategy

The EU Hydrogen Strategy presents a way forward in transforming the potential of hydrogen into concrete benefit for society and industry. The priority for the EU is to ***develop renewable hydrogen, produced using mainly wind and solar energy****, even if other types of hydrogen will be used over a transition period. Renewable hydrogen is the most compatible option with the EU's climate neutrality and zero pollution goal in the long term and coherent with the concept of an integrated energy system. The* ***Hydrogen strategy*** *sets ambitious targets of production of 10 mln tonnes of renewable hydrogen and capacity of 40GW of electrolysers by 2030. The industrial users of hydrogen are important for the* ***creation of renewable hydrogen markets****.*

As part of the Commission's ***recovery plan****, funding instruments of Next Generation EU, including the Strategic European Investment Window of the* ***InvestEU*** *programme and the* ***ETS Innovation Fund****, will enhance the funding support and help bridge the investment gap for renewables generated by the COVID-19 crisis.*

The ***Energy System Integration Strategy*** *(8 July 2020) highlights the essential role of renewable and low-carbon fuels, including hydrogen, in hard-to-decarbonise sectors and in particular in a number of industrial processes and transport modes, such as aviation and maritime.*

The ***European Clean Hydrogen Alliance*** *was launched the same day as the Commission's Hydrogen Strategy. The key objective of the Alliance is an* ***investment agenda supporting an ambitious deployment of hydrogen technologies until 2030****. In the next few months, the Alliance will present a pipeline of potential projects that could deliver the objectives of the EU Hydrogen Strategy.* ***Early engagement of industries is important for delivery of a solid project pipeline.*** *The Declaration of the Alliance, signed by all organisations that join the Alliance, outlines the basic principles, being a focus on climate neutrality and renewable hydrogen, and the fundamental principles of openness, partnership, inclusiveness, diversity and transparency. There will be an exchange of letters between the Commission and the organisations that will have an active role in the organisation of the Alliance, confirming the mutual understanding of the principles and working methods. These organisations are: ACEA, CEFIC, ENTSO-G, European Heating Industry, SolarPower Europe, WindEurope and Hydrogen Europe. The letters have already been sent to the mentioned organisations.*

We have opened ***a call for applications for thematic roundtables*** *which could meet for the first time on* ***25 November*** *before the* ***EU Hydrogen Forum on 26-27 November****.*

Low carbon industries Alliance

The new ***Industrial strategy*** *announced a future industrial alliance on low-carbon industries. The Alliance would be tasked with delivering* ***large projects to deploy breakthrough technologies in the EU****. The Alliance would bring together energy-intensive industries, among these the chemical sector and other stakeholders committed to working towards climate-neutrality and circularity by 2050. DG GROW is working with*

the European industry associations to develop the framework for the Alliance and to secure commitments from companies to participate

Main messages

- Chemicals are the building blocks of low-carbon, zero pollution, energy- and resource-efficient technologies, materials and products. A sustainable, competitive and innovative chemicals production capacity is a pre-requisite of a deep transformation and decarbonisation of the industrial ecosystems.
- Switching to using **renewable hydrogen** in chemical production processes would be a decisive step in decarbonising the sector and achieving climate neutrality and the zero pollution goal. The chemicals sector is one of the focus sectors already in the first phase of the decarbonisation of the existing hydrogen production (2020-2024).
- The Commission welcomes BASF and CEFIC to the European Clean Hydrogen Alliance. We would also like to thank CEFIC for taking up responsibilities within the Alliance and the thematic roundtable for industrial applications.
- While the Commission sees important benefits in expanding the use of the EU Emissions Trading System, it will look into **how to set up transitional arrangements or a pilot period before seeing any expansion**. As the existing EU ETS has shown, the development of a new market requires setting up functioning monitoring, reporting and verification systems.
- The **possible impact** of a strengthened cap on the availability of free allocation for industry and risks of carbon leakage **will be properly assessed**.
- The EU stands ready to support the chemical industry's efforts towards decarbonisation, including through support to development and improving market readiness and uptake of promising technologies:
  - For instance, **Horizon Europe** working in synergy with the **Innovation Fund** under the EU ETS and the **InvestEU Fund** will become important enabling tools in this direction.
  - CEFIC's members should therefore be encouraged to **engage with the relevant national authorities** to be able to benefit from the funding available under the **Recovery and Resilience Facility**.
  - The chemical industry is one of the key energy-intensive industries that we wish to involve in the **Alliance on Low-carbon Industries.**
- The EU will continue to address the risk of carbon leakage for industrial sectors highly exposed to such risk:
  - Free allocation and indirect cost compensation under the ETS will continue in phase 4 of the ETS.
  - The Commission is looking at introducing a **carbon border adjustment mechanism** (CBAM) in certain sectors as an alternative to the current measures to address carbon leakage. The Commission will table a proposal by **June 2021**. We are currently working on a variety of options (e.g. which sectors, social, economic and environmental impacts of the instrument, administrative and compliance costs, feasibility, WTO-compatibility).

Defensives

EU industry is not in a position to absorb the additional costs and negative competitiveness impacts of a higher climate ambition.

- The use of cost-effective instruments is one of the guiding principles of Europe's climate policy as illustrated by the central role played by the EU Emissions Trading System. In many sectors, the cost of decarbonisation has declined substantially, making this transition feasible, at manageable costs.
- Industrial sectors are already exploring viable technologies for climate-neutral production. Most of them have developed roadmaps that show a transition is possible.

What is the impact of the proposed increased climate ambition on the free allocation for industry?

- Depending on the risk of carbon leakage, industrial sectors may receive free emission allowances up to 100% of the relevant benchmark value. The benchmark values are currently being revised and **many will be reduced by the maximum foreseen in the ETS Directive, which is -24 %.** This is due to significant reductions in greenhouse gas emissions that were reported by the concerned industry sectors.

How is the ETS strengthening expected to impact carbon prices?

- The price of ETS allowances is **determined by the market** and depends on many other factors such as the overall design of the system, market expectations and behaviour. Changes in the design of the system (such as the envisaged strengthening of the emissions cap) can be expected to affect the carbon price.
- The envisaged strengthening of the ETS is expected to **create the necessary long-term carbon price signal** and drive further decarbonisation. Higher ETS prices mean more resources for Member States to use wisely to support decarbonisation efforts.
- The regime of free allocation for industry, which so far has proven to be an effective way to address the risk of carbon leakage, will continue. Any **possible impact** of the strengthening of the EU ETS on the availability of allowances for free allocation will be **duly assessed in the context of the impact assessment** in view of the legislative proposal of June next year.

Why can a Carbon Border Adjustment Mechanism not be combined with free allocation?

- Combining CBAM and free allocation would lead to windfall profits for the EU producers. If importers would be required to buy allowances while domestic firms would get part of their allowances for free, it could be conceived as **unfair competition**. Hence, it would be WTO-incompatible.

How will you select sectors to which CBAM may apply?

- In our impact assessment, we will focus on **sectors where there is a greater risk of carbon leakage.** We will pay attention to the feasibility and legality of the measure as well as its economic, social and environmental impacts.

Are there risks of relocation for downstream industries?

- It is too early to talk about the potential impact on particular sectors and respective downstream industries. This will largely depend on both **the final design of the measure and the specific products** to which it would apply. These aspects are part of the Commission's ongoing impact assessment.

Meeting with [redacted] BASF and [redacted] CEFIC, [redacted]
Online, 5 November 2020, 10h30-11h15

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