

Biomass-derived chemistry multiple contributions to restoring sustainable carbon cycles

The recent release of the Communication on Sustainable Carbon Cycles is a chance for biomass-derived chemistry to stress its multi-faceted contribution to the EU climate ambition.

Background

In December 2021, the EU Commission released a Communication on “Sustainable Carbon Cycles” that ambitions to explore and enhance technology-based and nature-based solutions to make the EU economy climate resilient by 2050 through the reduction of the reliance on fossil carbon, the removal of carbon from the atmosphere and the valorisation of alternative sources of carbon.

Biomass-derived chemistry as a role model

Carbon is essential for life and is an essential “resource” for the chemical industry in general, which, therefore, can play a pivotal role in establishing or restoring sustainable carbon cycles in Europe. In that sense, our industry believes that we should rather envision the “de-fossilisation” of the economy instead of its “de-carbonisation”.

Biomass-derived chemistry has the potential to contribute to the goals of the European Union in several ways:

- By using and valorising biogenic carbon that has been removed and stored into biomass via photosynthesis. Coupled with CCU or CCS, biogenic feedstocks have the potential to be a carbon sink.
- By producing and placing on the market products wholly or partly derived from biomass that prolong the carbon removal and storage effect (in line with the LULUCF Regulation

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provisions). In addition, in a circular economy context, such storage benefit can be prolonged thanks to recycling.

- By replacing products that may have detrimental effect on the carbon “budget” of the EU and release more carbon dioxide in the atmosphere.
- Indirectly, by encouraging sustainable and economically viable management of agricultural and forest ecosystems to deliver at the same time additional feedstocks for the bioeconomy, as well as other ecosystem benefits, such as clean water and biodiversity, increased carbon storage in ecosystems, without distracting/compromising food or feed production.

Implementing suitable actions

BioChem Europe and its members very much support and share the objectives of the Communication and the overarching ambition to achieve a net-zero emissions and less fossil dependent economy by 2050. We are convinced that biomass-derived chemistry can be a critical actor in achieving these goals.

We particularly welcome the aspirational target promoting the use of non-fossil carbon in the chemical and plastics industry up to at least 20% by 2030 and see it as one of way to boost the market uptake for bio-based products in general and chemicals in particular, in line with the 2018 Bioeconomy Strategy and its action plan. We would therefore very much like to be involved in the relevant stakeholders’ fora that will be associated to the formulation of the ways and means to achieve such aspirational targets.

For this to happen, the producers of bio-based products recommend:

- To design the “carbon farming” initiative in a balanced way that doesn’t refrain farmers and foresters from producing and supplying domestically grown sustainable biomass to bio-based products manufacturers.
- To align actions related to sustainable carbon cycles with the provisions of the draft LULUCF Regulation Article 9 and the possible extension of the list of long-lived carbon-storing products to be accounted for.

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- To consider a revision of the carbon accounting in the Product Environmental Footprint (PEF) methodology (beyond the construction sector) to give proper credit to the biogenic carbon uptake in biomass.

BioChem Europe is a sector group of the European Chemical Industry Council (CEPIC) that envisions a future where:

- responsibly produced chemicals derived from sustainably sourced biomass respond to society's growing appetite for circular products that have limited or even positive impacts on the environment and climate
- the related need to increase and support the efficient utilization of biomass is recognized
- boosting research and innovation is seen as critical for these developments

The biomass-derived chemicals producers, members of BioChem Europe, intend to play their part and forge partnerships to achieve the European ambition to become climate-neutral by 2050.

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