

COMMISSION DELEGATED REGULATION (EU) .../... of XXX supplementing Directive 2003/87/EC of the European Parliament and of the Council as regards the requirements for considering that greenhouse gases have become permanently chemically bound in a product

Preliminary remarks

The target of the European Climate Law is to reduce net greenhouse gas (GHG) emissions by 55% by 2030, compared to 1990 levels. Carbon Capture and utilisation (CCU) is one of the ways to achieve this goal. The question of what is recognised as "utilisation" is important for the practical implementation of CCU. The Commission has now presented a draft of a Commission Delegated Regulation (CDR) to clarify this issue, which will set the conditions under which these GHG emissions can be considered as permanently chemically bound in a product so that they do not enter the atmosphere under normal use and under any normal end-of-life activity^{1,2}.

Feedback

Accord to the draft CDR, only inorganic products are accepted as products that have the required permanent chemical bond. This concept is very narrowly defined in the draft CDR in order to ensure that the carbon remains firmly bound in products for centuries. The decisive sentence in Article 3, 1. (b) of the draft reads: "Products that during normal use, including any normal activity taking place after the end of the life of the product, may be exposed to high temperature combustion, such as during waste incineration, shall not qualify as permanently chemically bound." This sentence exempts all products made from organic substances. As a logical consequence, the annex to the draft only lists inorganic products (carbonates).

1. In our view it would be important to include not only products, but also processes such as cycles. For example, many waste incineration plants plan to recapture the CO₂ after incineration and make it available to industry for the manufacture of new organic products. This would result in cycles that could also be permanent.

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[https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14135-Emissions-trading-system-ETS-permanent-emissions-storage-through-carbon-capture-and-utilisation_en#:~:text=PDF%20%2D%207%20pages\)-,Download%C2%A0,-Annex%20%2D%20Ares\(2024](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14135-Emissions-trading-system-ETS-permanent-emissions-storage-through-carbon-capture-and-utilisation_en#:~:text=PDF%20%2D%207%20pages)-,Download%C2%A0,-Annex%20%2D%20Ares(2024)

² [https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14135-Emissions-trading-system-ETS-permanent-emissions-storage-through-carbon-capture-and-utilisation_en#:~:text=PDF%20%2D%202%20pages\)-,Download%C2%A0,-Feedback%20\(3\)](https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/14135-Emissions-trading-system-ETS-permanent-emissions-storage-through-carbon-capture-and-utilisation_en#:~:text=PDF%20%2D%202%20pages)-,Download%C2%A0,-Feedback%20(3))

2. Material and chemical recycling also lead to cycles that can be permanent under the given legal, technical and economic conditions. The problem with this draft is that it does not qualify the concept of the circular economy, which the Commission has always upheld elsewhere, as permanent. This would indirectly prove right the voices that disqualify the circular economy as nothing more than a useful narrative.
3. The proposed regulation will cause particular collateral damage: The chemical industry's raw materials transition – perhaps the most important climate protection project of all – would lose the opportunity to be implemented by means of CCU and would therefore fail. This is also problematic because independent satellite measurements have shown that far more greenhouse gases are emitted during the extraction of crude oil and natural gas than was previously known³.
4. Chemical industry's raw materials transition in detail:
 - a) The defossilisation of the chemical industry can be based on three options: increased use of biomass, recycling, and the increased use of regeneratively produced base chemicals. The use of biomass is undisputed in this context. What is controversial regarding this draft is the recognition of recycling and the recognition of regeneratively produced basic chemicals.
 - b) The German Chemical Industry Association (VCI) and the Association of German Engineers (VDI)⁴ recently published their thoughts on the raw materials transition, emphasising the importance of plastics recycling for the raw materials transition. The three different scenarios were analysed: 1) focus on maximum direct electricity use, 2) focus on hydrogen and PtX fuels and raw materials, and 3) focus on secondary raw materials (plastic waste and biomass). As a result, scenario 3 would have a maximum CO₂ requirement of half that of the other two scenarios and would only require two thirds of the investment required for the raw materials transition. The authors of the study therefore propose developing the existing recycling quotas into substitution quotas, which VCI/VDI also call 'closed-loop quotas'.
 - c) Recycling of plastics e.g. can only make the necessary contribution to the raw materials transition if it replaces virgin plastic as closed loop recycling. The new EU packaging regulation⁵ with its substitution quotas from 2030 points in the right direction here.

³ <https://www.edf.org/media/satellite-data-reveals-extreme-methane-emissions-permian-oil-gas-operations-shows-highest>

⁴ Verband der Chemischen Industrie e. V. (VCI) & Verein Deutscher Ingenieure e. V. (VDI): Wie die Transformation der Chemie gelingen kann. Abschlussbericht 2023 <https://www.vci.de/vci/downloads-vci/publikation/broschueren-und-faltblaetter/final-c4c-broschure-langfassung.pdf>

⁵ Council of the European Union (2024): Letter to the Chair of the European Parliament Committee on the Environment, Public Health and Food Safety (ENVI). Subject: OUTCOME OF PROCEEDINGS. Proposal for a

5. However, we believe that chemical recycling will play a decisive role in the raw materials transition in the chemical industry. It remains to be seen which chemical recycling processes will become established on an industrial scale. The plastics industry, parts of the scientific community and the recycling sector are optimistic about the future of chemical recycling. But there are also technical challenges that need to be overcome.
6. According to the draft CDR, basic chemicals produced from CO₂ and renewable energy (via hydrogen) would also not be recognized as CCU, because the CO₂ would ultimately become products which can be burnt. This is correct today and is also what happens in most cases. However, climate protection requires a further development of the practice at this point, i.e. the raw material turnaround in the chemical industry. If these organic products are no longer needed, they should either be recycled or incinerated in plants where the CO₂ is captured and converted back into basic chemicals. This is what the raw materials transition would look like in the future. The draft CDR should include this future practice and promote its introduction, instead of making it impossible (because not recognized as CCU).
7. The question remains, in view of the many technical and economic uncertainties that are still open today, whether these cycles are permanent (over centuries) or just a crazy idea in studies. And geological carbonates are the only permanent deposits. This hits deep, because climate protection in the EU and globally will only succeed if these cycles are established. And only if these cycles are permanent, chemical industry's raw materials transition will be permanent and sustainable.

Proposals for a solution

We therefore propose that cycles for organic products should also be recognized as CCUs if they are designed to be permanent. This would be another sentence in Article 3 of the draft CDR, but with far-reaching, positive consequences.

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REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on packaging and packaging waste, amending Regulation (EU) 2019/1020 and Directive (EU) 2019/904, and repealing Directive 94/62/EC.
<https://data.consilium.europa.eu/doc/document/ST-7859-2024-INIT/en/pdf>