

Positioning carbon capture and use (CCU) in MRR

CEFIC asks a structural recognition of avoidance of CO₂ in ETS

The valorisation of CCU in ETS

Context

The transition to a circular economy is a priority on the climate agenda of Europe. Circular economy requires new and innovative production techniques and products. In the current draft regulation there is an untapped potential of a common circular economy and CO₂ reducing target in ETS.

In the circular economy, the focus is on the prevention and reuse of raw materials and alternatives aimed at reducing environmental impact throughout the chain. Carbon Capture and Utilization ("CCU") is a technique in which oxidised carbon streams (CO, CO₂) are converted back into valuable applications. As a result, CO₂ is no longer an emitted GHG but forms an alternative carbon source or feedstock. It is a comparable technique with photosynthesis that reduces CO₂ to become biomass. By CCU, additional CO₂ emissions compared to the reference case can be permanently avoided. CCU is an important element in the innovation challenges for a low-carbon and circular economy and should therefore logically be valorised within ETS. This would encourage technology development and investment enabling CO₂ avoidance.

ETS: instrument for energy and process emission

Within the long-term vision of Europe, CCS (carbon capture and storage) has always been taken into account as a possible innovation route through exempting installations that capture and store the CO₂. CCS is therefore also recognized in ETS. However, it is necessary to focus also on new innovative applications, such as CCU, to meet the challenges of the future and to avoid structural emissions within the scope of ETS (energy and process emissions, not materials).

During the process of the reform of ETS, a possibility has been provided for innovation support for CCU projects within the framework of the innovation fund. This is a positive improvement, but a systematic structural recognition of the avoided CO₂ in recycled carbon energy sources still has to be built in. An effective instrument can best be created for CCU by avoiding penalisation of the avoided emissions in those fuels. At the moment, the carbon capture and use has no effect in terms of a reduced quantity of emission rights that have to be surrendered. In order to promote innovation, there should be coherent treatment for innovation in all EU legislations, including ETS.

The link between ETS and the circular economy: the Monitoring and reporting regulation¹

¹ Regulation 601/2012 of 21 June 2012 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council

The current revision of the Monitoring and reporting regulation for the next trading period (2021-2030) presents an opportunity to avoid penalization through ETS for implementation of innovations aligned with circular economy. Indeed, the new approach should incorporate benefits of permanent *avoidance* next to permanent *storage* in the EU legislation.

1. *Monitoring and Reporting regulation*

Circular economy	Current treatment in ETS	Structural approach in ETS
Recycled carbon energy sources avoid CO ₂ emissions	Biomass as energy source is considered to be carbon neutral (as much CO ₂ is taken up by the plant as is emitted during the combustion phase)	no emission rights to be surrendered for CO ₂ from biomass (emission factor=0)
	Recycled carbon fuels as energy source are considered as fossil fuels. Even CO ₂ captured from the atmosphere and reused as energy carrier would be treated equal to CO ₂ emitted into the atmosphere directly by combustion of fossil fuels.	Solution opportunity in the MRR: emission factor of alternative carbon source or feedstock must reflect the avoidance of CO ₂ . (Emission factor <1)

2. *ETS-Directive on Emission trading scheme*

Circular economy	Current treatment in ETS	Structural approach in ETS
Capture of carbon for reuse leads to avoidance of CO ₂ -emissions	Capturing CO ₂ at the chimney for storage (CCS) is recognised as avoided CO ₂ emissions	No issuance of emission rights needed for transferred and stored CO ₂
	CO ₂ that is captured at the chimney for reuse is not recognized as an avoided emission.	Solution to be provided in ETS directive revision in 2023: Common set of rules for capturing and avoiding CO₂-emissions

CEFIC asks a structural recognition of avoidance of CO₂ in ETS

In order to incorporate the important principle improving circularity and avoiding GHG emissions, the actual definition of ‘fossil carbon’ as source streams in the draft Monitoring and Reporting Regulation (MRR), that treats all streams but biomass as fossil, should be updated to reflect this environmental principle.

The MRR should recognise in the emission factor the avoided CO₂ emissions of alternative carbon sources and feedstock which are not fossil as source streams.

Capturing CO₂ which would otherwise have been emitted by ETS installations will gain importance the next trading period of ETS. Capturing CO₂ for storage can play an important role, as well as avoiding CO₂ emissions through utilisation as building block for products.

The next revision of the ETS directive should close the gap and encourage investment for these technologies.

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