

August 2023

INDUSTRIAL CARBON MANAGEMENT STRATEGY

CEMBUREAU recommendations

Carbon Capture, Utilisation and Storage (CCUS) is critical to decarbonise cement production¹ and significant investments are currently ongoing in the sector². In this respect, CEMBUREAU fully supports an EU industrial Carbon Management Strategy to accelerate investments and deliver CO₂ savings as soon as possible.

A coherent EU carbon management infrastructure should be developed as soon as possible.

- CCUS investments require a supportive policy framework and a pan-European development of CO₂ transport and storage infrastructure. A significant amount of projects will be deployed in the coming years and it is important to develop such infrastructure at pace.
- The EU CO₂ storage capacity should be increased. This necessitates action at both EU and national level to identify storage sites and deliver the necessary licences in a timely manner. The CO₂ injection capacity of the draft Net Zero Industry Act is a welcomed step and should be complemented by 2040 and 2050 storage targets.
- A strong focus should be put on CO₂ transport, with the support of Member States. This requires coordinated planning, work on common gas/CO₂ specifications and a recognition of all CO₂ transport modes.
- Clear regulations for CO₂ infrastructure (both CO₂ storage and transportation networks) are urgently needed. Our sector requires fair access and market access conditions (e.g. third-party access) mirroring those existing in the energy sector. The issue is particularly urgent as the first capture projects are becoming rapidly a reality.
- Innovation Funding should “turbo charge” CCUS projects through decisive measures, such as the front-loading of EU ETS Innovation Funding and specific calls for the cement/CBAM sectors, a widescale adoption of carbon contracts for difference, and a simplification of state aid rules.
- Permitting procedures should be accelerated. Permitting is rapidly becoming a major obstacle for investments and procedures at national level should be facilitated.

¹ Please see CEMBUREAU's [Carbon Neutrality Roadmap](#)

² Based on current investment plans, CEMBUREAU estimates that more than 15 CCS cement projects will be operational by 2030, requiring an annual injection capacity of 12-15 million tons of CO₂. The first CCUS project in the cement industry will be operational as early as 2024. In parallel, the sector is also exploring CCU opportunities, with several projects being developed.

Process emissions from industries should be fully recognised and prioritised

- The cement sector works extremely hard on all decarbonisation levers, but inevitably faces unavoidable process emissions as part of its production process. These emissions arise from the calcination of limestone which is inherent to the chemical process of manufacturing cement. Part of the process emissions are, in turn, naturally captured back by concrete during its lifetime, through an opposite chemical reaction called natural recarbonation³.
- Process emissions are by definition unavoidable and also occur for products like cement, which – unlike fossil fuels or fossil energy – cannot be replaced by less CO₂-intensive products in the vast majority of their use.
- It is important that the specificities of process emissions is fully recognised – these will inherently happen in a number of industrial sectors, regardless of the energy used. So far, the EU framework does not distinguish ‘fossil’ CO₂ emissions from ‘process’ emissions and seem to artificially consider that all industrial emissions as ‘fossil’.
- A clear hierarchy should be established as, in the case of carbon use, CO₂ captured from process emissions will actually allow to cut reliance on fossil fuels in many applications.

The overall framework for CCU and CO₂ utilisation should urgently be reviewed

- CCU remains vital for many EU cement kilns which are landlocked and not located next to CO₂ storage sites. Through CCU, the cement sector can provide a significant stream of concentrated CO₂ for use in various sectors of the economy, allowing to decarbonise and cut the EU’s reliance on fossil fuels. These benefits seem sometimes overlooked by policy-makers who seem to rely on the availability of biogenic CO₂ and direct air capture in the short and medium term. CEMBUREAU does not deny that such CO₂ sources will play a key role to reach carbon neutrality and develop negative emissions, but they remain very scarce at present. CEMBUREAU has commissioned its own study on the topic⁴, which finds that there will be a need for between 250 million tonnes and 450 million tonnes of CO₂ by 2050 for a variety of industrial applications (fuels; chemicals; food and beverages; metal fabrication; others). CO₂ sourced from accessible biogenic sources is estimated between 21 and 63 million tonnes by 2050. On its side, the EU Commission estimates CO₂ from Direct Air Capture (DAC) to reach 5 million tonnes by 2030 and has no estimate for 2050.
- The current EU framework endangers ongoing and planned CCU investments. For instance, the decision to no longer consider CO₂ emissions put to use in Renewable Fuels of Non-Biological Origin (RFNBO) as being avoided from 2041 is not justified and should urgently be reviewed⁵. These rules result in cutting off a CO₂ supply without assessment of the availability of CO₂ from biogenic sources and DAC to respond into the CO₂ industrial needs. We are of the strong opinion that, pending the large-scale deployment of technologies like DAC, the use

³ Please see CEMBUREAU [note](#) on recarbonation

⁴ VITO study for CEMBUREAU, 2023

⁵ Please see CEMBUREAU [position paper](#) on Draft Delegated Act on Greenhouse Gas Savings from RFNBOs & Recycled Carbon Fuels, February 2023

of industrial CO₂ – especially when it comes from unavoidable process emissions – should be encouraged in RFNBOs at least until 2050.

- Similarly, it is urgent that the EU clarifies through secondary ETS legislation – article 12(3)(b) – what uses of CO₂ can be considered as permanent. CEMBUREAU is of the strong view that CO₂ mineralisation constitutes a permanent storage of CO₂, based on well-established science. It is urgent to provide clarification on the regulatory treatment of other CO₂ uses such as in chemicals. In this respect, CEMBUREAU pleads in favour of a CO₂ use in chemical products under a multiple recycling loop to be accepted as qualifying for a “no surrender of allowances”, especially when these arise from process emissions.
- Last but not least, the CO₂ accounting rules in the ETS Directive should be reviewed to ensure that CO₂ allowances are surrendered by the ‘emitter’ of the CO₂ contained in a CCU product, and not by the capturing installation. The CO₂ accounting needs to be done at the point where CO₂ is released into the atmosphere. There is no such release into the atmosphere when CO₂ is captured in a cement plant and transferred to a third entity for further use. While we agree that accounting of CO₂ needs to happen at one point in the lifecycle, it does not make legal sense to link it to a point where there is no release into the atmosphere.

CEMBUREAU looks forward to a fruitful debate on the EU Industrial Carbon Management Strategy. In addition to this note, please see CEMBUREAU [Position Paper](#) on a CCUS framework for further reflections on the topic.