VIK-Statement

Verband der Industriellen Energie- & Kraftwirtschaft
Energie für die Industrie

on a

EU-Strategy for the CO_2-Management in the Industry

Date
14.08.2023

On the necessity of Carbon Management

The VIK welcomes the initiative of the Commission to consider a holistic Carbon Management Strategy (CMS) for the EU. As a representative of the energy-intensive industries in Germany, the VIK recognizes the finding of the International Panel on Climate Change (IPCC) that carbon management technologies are a necessary part of our endeavor to stop climate change. Consequently, VIK acknowledges the role of Carbon Capture, Use and Storage (CCU/S) as a third pillar of climate measures besides energy savings and the replacement of fossil fuels with renewable energy sources. The energy intensive industries firmly stand by the priority of avoiding the production of CO_2 before other mitigation strategies.

There remain, on the one hand, value chains in which carbon is needed as a critical raw material and, on the other hand, areas in which unavoidable emissions occur. This requires effective carbon management with the associated infrastructures, rules, incentives, business models and cooperation networks. This also includes the creation of a concept for reducing CO_2 emissions (decarbonization) and - in the case of a continuing carbon demand - for reducing fossil carbon use, e.g. through biogenic carbon use or closed CO_2 cycles (defossilization).

CCU/S technologies make a significant contribution to achieving climate neutrality by 2045 and to accelerating the path to this goal by effectively capturing climate-damaging emissions. This also applies in areas where there is still no economic alternative to avoiding CO_2-emissions. In doing so, they create the basis for an effective circular economy based on the use of hydrogen and CO_2, or the safe storage of CO_2. Therefore, the hydrogen strategy and carbon management strategy must be thought together. To this end, an economically viable regulatory framework must be created quickly as CCU/S-projects need time for development.

In this context, industry will only use those technologies that are economically viable to effectively keep CO_2 out of the atmosphere. For technical reasons, too, both CCU and CCS are necessary.

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Both technology groups assume that we have renewable energy available to a greater extent than today. In addition, it must be taken into account that CCS requires a much smaller amount of renewable energy to implement than CCU and does not rely to the same extent on complex market relationships between emitters and buyers of CO_2, which have yet to be established. In addition, the actual CO_2-balance of the technologies must be considered.

Given the many years of experience with the technology in Norway, among other countries, CCS has proven to be a safe and permanent way to reduce atmospheric CO_2-emissions. Potential suppliers of CCS solutions show large volume potentials. Nevertheless, the technology meets with reservations in parts of society. That is why the industry is committed to transparent communication and a broad dialog with society to address concerns.

In the long run, VIK acknowledges technologies of Carbon Direct Removal (CDR) as a necessary tool to abate residual emissions from industries and land use, land use change and forestry (LULUCF) including Direct Air Capture with CCS (DACCS) and bioenergy with CCU/S (BECCS). In combination with usage, these technologies can also contribute to the establishment of a circular economy.

On the principles for a EU CMS

As a principle, neither CCU nor CCS should be prioritized over each other, but technological neutrality should be applied. With a robust and effective monitoring and reporting scheme in place and with proper recognition in the EU-ETS, both technology groups will effectively keep greenhouse gases from being emitted into the atmosphere. Which route is more viable for each company depends on various factors such as the presence of potential off-takers of CO_2 nearby or the access to CO_2-infrastructure for transport and storage. For example, the most affected industries are often situated in relatively remote locations and will gain access to CO_2-infratructures for storage only late and may thus prioritize CCU-based solutions for their residual emissions.

Furthermore, it is important to regulate Carbon Management technologies in a manner that aims at enabling the use instead of prohibiting the use of the technology. CCU/S also needs a market framework to limit the need for state support of the technology. Some support for the implementation of these technologies and the necessary cooperations among companies in both financial and non-financial forms will be needed, however, during the nascent phase of the market. The corresponding legislation must be designed to be unambiguous and permanently reliable as a prerequisite for social trust and entrepreneurial planning security. Finally, the framework conditions and infrastructures for renewable energy, hydrogen with its derivatives and CCU/S require an integrated approach.

On further aspects of a EU CMS

When companies successfully capture CO_2 and store it geologically or in products, the CO_2 is effectively kept out of the atmosphere and does not cause any climate-damaging effects. Such non-emissions must be eligible for emissions trading under the ETS, including for a variety of transport modes from pipeline to ships and railway. EU-ETS carbon prices are also the decisive market signal for the economic viability of CCU/S technologies in the industry.

A EU CMS should further clearly address the regulation the EU intends to streamline on the supranational level. The VIK suggests that this would pertain to aspects of cross-border transport of CO_2 for the purpose of usage or storage including the liability for leakage, issues of permanency of storage, as unlimited liability for emissions is not reasonable for the companies that sequester CO_2 and hand it to transport and storage companies. In the case of CCU, the issue of permanence should be differentiated regarding geological storage, storage in products with a long life-cycle and products with a short life-cycle.

If CO_2 emissions are bound in long-lived products, e.g. in plastics or building materials, the creditability should be given for a fixed number of years, which is proven once for each product. For shorter-lived products such as carbon-neutral synthetic fuels, it must be demonstrated that a cycle is established that ensures capture, subsequent use, and re-sequestration of CO_2 in a way that effectively keeps CO_2 out of the atmosphere. Proportional credit should be given in the case of blending. In these cases, an exemption from ETS compliance obligations is needed.

In terms of products with short life-cycles, we also expect international trade in CO_2 to make the required quantities of CO_2 available for power-to-X (PtX) products. Climate-friendly fuels and chemicals from PtX can quickly contribute to decarbonization, but require large amounts of CO_2 to do so. In order to start quickly, a sufficient transition period is required in which "gray" CO_2 can also be used for the production of these PtX-products without the PtX-product suffering a disadvantage as a result. This means, for example, that certification must also be carried out here, whereby unavoidable raw material-related emissions and fuel-related emissions should be considered in a differentiated manner. Hydrogen can replace natural gas in many processes - both materially and thermally - or act as long-term storage for electricity. In order to ensure supply and planning security for the developing hydrogen economy, it makes sense to rely on a variety of low- CO_2 production methods for hydrogen, with an open approach to technology.