Denmark's position paper on Capture, Utilisation and Storage (CCUS)

Denmark's main priorities to support the development of a well-functioning European system for Capture, Utilisation and Storage (CCUS)

- Carbon Capture, Utilisation and Storage is a decisive tool for meeting climate goals.
- Development and roll-out of CCUS should be market driven.
- At the European level focus should be on developing the right framework conditions for the development of a single market for CO_2.
- Denmark urges the Commission to launch its CO_2-transport package announced in the Industrial Carbon Management Strategy as soon as possible and preferably in 2025.

Challenge

Carbon Capture, Utilisation and Storage (CCUS) is a decisive tool for meeting climate goals, both globally and at the EU level. CCUS is an important supplement to a deep, rapid, and sustained effort to mitigate greenhouse gas emissions as we approach climate neutrality.

To reach net-zero by 2050 and absolute negative emissions thereafter will require CCUS to deliver reductions and removals well before 2040. According to the European Commission, 280 million tonnes of CO_2 by 2040 and 450 million tonnes by 2050 have to be captured to reach the EU's climate goals.

In certain sectors it is currently either not possible or still too expensive to avoid all emissions. This is where CCUS technology is of decisive importance. CCS is a central tool in achieving CO_2 reductions in these hard to abate sectors and to achieve negative emissions. CCU will help us produce enough green fuels and chemicals for the transition of the hard to abate sectors such as industry, aviation and shipping.

CCUS needs to increase in scale and decrease in price, and this will require rapid and major developments in the EU in the coming years.

Solution

Development and roll-out of CCUS should be market driven. When establishing a new, single market for CO_2, it is important to focus on the entire value chain from capture through transport to utilization or storage of CO_2 and to consider the interdependencies between the different parts of the chain.

The EU Innovation Fund has supported CCS projects with revenue generated by the EU ETS, expecting approximately 10Mt CO_2 to be captured and operational as early as 2027. At the same time, NZIA sets a Union-level objective to be achieved by 2030 for an annual injection capacity in CO_2 storage of 50Mt CO_2. To succeed, its important to determine the approach for CO_2 transport by pipelines to ensure a coherent value chain for capture, transport, utilisation and storage. Without transport no value chain.

As far as possible the market actors should be allowed to develop the market by themselves. In the coming years, the EU should take the necessary steps to address regulatory and economic barriers for a single market for CO_2 in Europe. We need to make sure that any new initiatives support and does not risk delaying the front-runner CCUS projects. In the current stage of the market development it should be considered how best to encourage private investments in all parts of the CCUS value chain, and where needed the EU should facilitate the development of the market.

It is important to address barriers for the development of a common European market for transport of CO_2 and create a geographical overview of needs for cross border infrastructure. There needs to be a clear framework for transporting CO_2 with common standards for CO_2 transport purity and equipment proportional with expected end use and purpose. Both private and public owned companies should be able to establish, own and operate CO_2 transportation infrastructure.

When developing a framework for CO_2-transport, the possibility of leakages and how to deal with them i.e. in the ETS framework should be taken into consideration. The framework should also ensure third-party access to all pipelines, so that infrastructure owners do not take advantage of a monopoly-like position. The infrastructure owners and users should negotiate the commercial conditions for use of the system to secure the market driven development and to encourage private investments.

Finally, since 2013, the EU ETS has allowed industries to take CCS into account when designing their net-zero pathways. This gives a strong price signal and economic incentive for CCS on fossil and industrial emissions. However, the same incentive does not exist for BioCCS or DACCS, which are currently not recognized anywhere in the EU climate regulation. To reach the EU's objective of climate neutrality and absolute negative emissions thereafter, a substantial amount of CO_2 removal from the atmosphere is needed to counterbalance residual emissions. Carbon pricing should therefore be extended to carbon removals in order to incentivize and acknowledge the role of permanent carbon removals in the Commission's 2040 ambition and towards climate neutrality. Therefore, BioCCS and DACCS should be considered in relation to the EU ETS as soon as possible.

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