Non-paper on Carbon Capture and Storage (CCS)

By the Netherlands, Norway, Denmark and Sweden

CCS is one of many important technologies for achieving the EU's goal of climate-neutrality by 2050 at the latest. This paper highlights three policy recommendations targeted towards the deployment of CCS across the EU:

- Establish robust, transparent and consistent monitoring and reporting guidelines for transportation of CO_2 by waterborne vessels, road vehicles and rail.
- Further integrate CO_2 removals from negative emission technologies in EU climate policy and analyse policy options for incentivising their development and deployment.
- Consider broadening the Trans-European Networks – Energy (TEN-E) Regulation to include geological storage and associated infrastructure as part of cross-border CO_2 networks. The TEN-E regulation should be compatible with the goals of the Paris Agreement.

Through the proposal for a European Climate Law, on the 4th of March 2020, the European Commission set forth a plan to enshrine the EU objective of climate-neutrality by 2050 in European legislation. In the explanation of the proposal, the Commission states that whereas greenhouse gas emissions should be avoided at source as a priority, **removals of greenhouse gases will be needed** to compensate for the remaining emissions from sectors where decarbonisation is the most challenging. It includes the notion that 'carbon removal technologies, such as **carbon capture and storage (CCS)** and **carbon capture and utilisation (CCU)** should be made cost-effective and deployed'.

We underscore the important role of CCS in achieving the EU's goal of climate-neutrality by 2050 at the latest. **CCS can realise substantial CO_2 emission reductions from some energy-intensive industries**, where no other viable options exist. In this light, CCS could be a focus point of the upcoming industrial alliance on low-carbon industries. Technologies like bio-energy CCS (BECCS) and direct air capture of CO_2 (DACCS) have an important role in **providing negative emissions** for residual emissions that may remain in the economy and to achieve negative emissions thereafter. Where CCU applications result in **permanent and verifiable emission reductions**, they too can contribute to climate change mitigation.

In this non-paper, we highlight three policy matters which have been identified as warranting increased attention by the Commission. Addressing these matters could have a positive influence on the speed at which CCS projects develop, facilitating carbon removal technologies to contribute to achieving the EU's climate goals. Taking further action on implementing such policy measures could be achieved under the revision of EU climate-related policy instruments under the European Green Deal.

1) Establish robust, transparent and consistent monitoring and reporting guidelines

We welcome the clarification from the Commission confirming that the existing provisions of the ETS Directive and Monitoring and Reporting Regulation (MRR) are compatible with different forms of CO_2 transport.

We would like to reaffirm the importance in maintaining flexibility in the forms of transportation to be utilised as part of national and cross-border CO_2 transport infrastructure, and would welcome collaboration with the Commission and other interested Member States in the development of **robust, transparent and consistent monitoring and reporting guidelines** for these alternative forms of transport.

It is recognised that despite the interpretation of the MRR, there remains scope for affirming the role of alternative forms of CO_2 transport in the EU's legislative framework. Hereby the transport of

greenhouses gas by water, road and rail for geological storage in a storage site permitted under Directive 2009/31/EC could be included under Annex I in future revisions of the EU ETS Directive. Equally the definition of 'CO_2 transport' in the MRR could be broadened accordingly.

In order to ensure a coherent and compatible approach to monitoring emissions from CO_2 transport, the **establishment of an activity-specific monitoring methodology for CO_2 transportation by water, road and rail** is considered a necessary addition to the existing suite of guidelines for capture, transport by pipelines and geological storage. Once more, we would like to reaffirm a readiness to support the Commission in this regard through the contribution of expertise and practical experience.

The inclusion of **ETS and non-ETS CO_2 streams** (for example from waste incineration in some countries) into a networked infrastructure for transport and storage should be kept in mind when adjusting the regulatory framework.

2) Recognition of negative emissions and development of an appropriate incentive mechanism

To reach the EU's objective of climate neutrality by 2050, substantial removals of CO_2 from the atmosphere will be needed. While natural sinks can deliver significant removals, it is likely that **technological solutions delivering so-called negative emissions could play a part in the efforts to reach climate neutrality.** Negative emissions can be achieved through for example, the use of bioenergy with CCS (BECCS), or from direct air capture of CO_2 (DACCS). Currently, these technologies do not have the economic incentives to be deployed.

The Commission should further integrate CO_2 removals from negative emission technologies in EU climate policy and analyse policy options for further **incentivising the development and deployment of these technologies**. One possible option could be to integrate negative emissions technologies in the ETS – for example by providing incentives to installations that generate negative emissions certified through robust and transparent carbon accounting. Alternatively an incentive scheme could operate outside of the ETS. We look forward to working with the Commission on this matter.

3) Consider the inclusion of CO_2 storage under the Trans-European Networks – Energy (TEN-E) Regulation

We fully recognise and strongly support that the TEN-E regulation should be compatible with the goals of the Paris Agreement. We also support **European cooperation in the development of CO_2 transport and storage infrastructure**. There are a number of CCS projects under development across the EU which are being designed to facilitate the cross-border transport and storage of CO_2, and as such these projects have been classified as Projects of Common Interest under the Trans-European Network-Energy (TEN-E) regulation. These projects can apply for funding through the Connecting Europe Facility (CEF) for studies and investments in **transport infrastructure only**.

Considerable **investment is needed in developing safe and sufficient geological storage sites** for both national and cross-border CO_2 storage. In many cases, portfolios of storage sites will need to be prepared simultaneously to provide a dependable and flexible storage infrastructure.

At present, the costs of developing CO_2 storage resources for cross-border CCS projects appear to be overlooked in EU support mechanisms for CCS, and therefore it is recommended to consider the **inclusion of storage facilities and associated infrastructure for the purpose of transboundary CO_2 transport** as an energy infrastructure category in the TEN-E regulations, provided such projects actively contribute to the decarbonisation of the EU energy system, consistent with climate neutrality by 2050, and do not involve use of CO_2 for enhanced recovery of hydrocarbons.