European Commission

Policy brief:

Competitiveness of clean energy technology – CCUS

October 2023

Headline findings

- EU climate neutrality by 2050 indicates that up to **477 million tonnes** of CO_2 will need to be captured. Currently, this is done most cheaply at the source of the emissions and cement production, solid biomass and waste incineration plants are key sectors from which to capture CO_2.
- The CCUS industry has recently entered a period of rapid growth, and the EU has set an objective of at least **50 million tonnes** of CO_2 injection capacity per year by 2030.
- Infrastructure development for CO_2 transport and storage is a critical factor in determining the viability of CCUS projects. The EU has several players in the oil and gas industry experienced in constructing pipelines, drilling wells and performing geological studies.

Key (competitiveness) challenges for CCUS

Challenge 1

The high cost is the main barrier to carbon capture being deployed at scale. The industry still needs scale and incentives to get capture, transport, and storage costs to a point where it makes economic sense for companies to implement CCUS, and it becomes more cost-effective.

Challenge 2

There is a lack of harmonised regulations for CO_2 transport and storage infrastructure in the EU and the CCS Directive is not yet homogenously implemented across the EU.

Challenge 3

Additional studies to assess the resilience of key inputs are required.

Key policy recommendations

Recommendation 1

Continued research and innovation is still needed to improve the available technologies or develop new innovative solutions, and public funding will be needed to attract private capital.

Recommendation 2

Support the construction of pipelines and transportation networks to move captured CO_2 safely and efficiently from emission sources to storage sites.

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