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News

Innovation and Industry

Climate, environment and circular economy | CO2 capture, utilization and storage

Three regions in Southern Europe have been selected for an in-depth study of their potential to capture, store and use $C0_2$ (CCUS, Carbon Capture Usage and Storage). With their heavy industries, storage sites and pipeline networks, these regions meet many of the conditions required to enable the large-scale deployment of CCUS technologies as part of a strategy to decarbonize the economy.

A partnership bringing together research laboratories and European industrial groups

The aim of the H2020 Strategy CCUS project, launched in 2019, is to establish strategic plans to develop CCUS – a key technology for achieving the green-house gas (GHG) reduction targets of the Paris Agreement – in Southern and Eastern Europe. It also aims to look at the possibility of building a CCUS infrastructure at a European level. Coordinated by BRGM (the French National Geological Survey), the project brings together 16 other European partners, including research centers, universities and industrial groups.

Strategy CCUS: the Rhone Valley, the Ebro Basin and the Lusitanian Basin have many different assets

Within the framework of the project, three pilot regions have been selected based on their potential for

the large-scale deployment of CCUS technologies: the Rhone Valley, the Ebro Basin in north-eastern Spain and the Lusitanian Basin in the west-central part of the Portuguese coast.
The selection took into consideration the following criteria: the presence of industries with high emission rates, the capacity to store and/or use CO_2, the potential to combine CCUS and hydrogen production and a clear political commitment to promoting CCUS.

Assessment of the different scenarios: IFPEN on the front line
With several years of experience and expertise in assessing the technical, economic and environmental aspects of different scenarios for the deployment of the CCUS, the Institut Carnot IFPEN Ressources Energétiques (IFPEN energy resource Carnot institute) will contribute to the project by establishing and assessing scenarios for each of the three sites, the objective being to achieve economies of scale by pooling storage and transport infrastructures within regional clusters. CO_2 transport corridors could also be put in place to link remote storage sites.

An ambitious objective: contribute to achieving the European objective of carbon neutrality by 2050
Many economic, political and practical hurdles still need to be overcome to deploy CCUS on a large scale. The creation of realistic scenarios in collaboration with different regional players will not only allow us to assess the technical feasibility of deploying CCUS, but also to estimate the volume of CO_2 emissions that could be avoided, as well as the impact on the environment and local job creation. The project will therefore lead to a better understanding of CCUS technology among the general public, industrial manufacturers and local political leaders.

More about CO_2 capture, storage and use
> CO2 capture, storage and use : overview and challenges

Strategy CCUS project: launch of an analysis in three pilot regions in Europe
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