

Carbon dioxide Capture and Storage (CCS): What it's all about and why we need it

COP22 Side event, Marrakech, 10 November 2016

In the morning of Thursday 10 November 2016 about 25 people met in a side event at the COP22 in Marrakech discussing the status of CO₂ Capture and Storage (CCS) as a climate mitigation measure. The event was organized by CO₂GeoNet, Club CO₂ and IEA GHG. Aicha El Khamlichi (Club CO₂) led the event.

Ton Wildenborg (CO₂GeoNet) introduced the principles of CCS with special reference to CO₂ storage. He pointed out that CCS is a reality; the experience to date shows that it is a safe activity. Massive storage potential is available which now needs to be unlocked so that investors can decide on rolling out CCS. Tim Dixon (IEA GHG) clarified that Carbon Capture and Storage - next to renewables and energy efficiency measures - is a necessary mitigation measure to meet the ambitious targets of the Paris agreement. Most future mitigation scenarios need CCS and climate mitigation costs will increase with almost 140% if CCS would be excluded. Mike Monea presented the Boundary Dam in the Canadian province Saskatchewan and argued that clean fossil power will be needed here next to renewables during the transition to the low carbon future. Tony SurrIDGE presented the status of CCS in South Africa and emphasized that CCS is a transition technology needed to achieve a future with low carbon emissions.

The audience responded very actively to these presentations by raising questions on CCS abatement costs and the availability of measures to secure to CO₂ storage and by making comments to the discrepancy between the facts and the perceptions of CCS and other mitigation technologies. The costs of CCS projects will decrease once the first commercial scale have been built and operated. The costs of a next version of the CCS installation at Boundary Dam can be built for 30% less. In the very unlikely event that a storage site might not perform as expected, mitigation measures are available, like pressure reduction and sealing off wells. In future CCS networks, CO₂ streams can be redirected to other storage sites if necessary. A comment was made in the audience on the discrepancy between facts and the public perception of mitigation technologies like wind and CCS. Public participation is seen as necessary to understand and to meet the needs of people living nearby.