

## **Call for input on issues included in the annotated agenda and related annexes of the second meeting of the Article 6.4 Supervisory Body - Reference Agenda item 3 para 9 on Removals**

IEAGHG is an international collaborative research programme, established in 1991 by the International Energy Agency (IEA). The programme is funded by 18 member countries and 17 organisations. The technology of primary focus is carbon dioxide capture and geological storage (CCS). Our scope includes engineered carbon dioxide removal (CDR) techniques such as direct air capture (DACCS) and bio-energy with CCS (BECCS). Our activities include producing over 360 technical reports on all aspects of CCS including technology development and deployment, running the largest conference series on CCS (the GHGT series), operating Networks of experts and Summer Schools, and instigating a scientific journal of impact factor up to 5.11. Our work is used, for example, to inform the IPCC, UNFCCC, IEA, London Convention and ISO, and by USDOE, US EPA and by our other members in the development of climate change mitigation policy and technologies.

The 6.4 Supervisory Body, at its first meeting, considered the Concept note “Removal activities under the Article 6.4 Mechanism” (A6.4-SB001-AA-A05). IEAGHG would like to provide the following information in relation to this concept note.

Under Section 3.3 “Eligibility of removal activities in existing carbon market mechanisms”, reference should be included to the CDM Modalities and Procedures for CCS (2011) because it covers permanent geological storage as used in BECCS and DACCS. Under section 3.3 mention should also be made to the US 45Q tax credit and the California Low-Carbon Fuel Standard for covering both removals with DACCS and permanent geological storage (Romanak and Dixon 2022).

The Concept note section 3.4.5 lists some approaches to address the risks of reversal in general. One approach which is not listed is the surrender of allowances equal to that of any reversal. This approach is used in the EU ETS and the CDM Modalities and Procedures for CCS for potential seepage from CO<sub>2</sub> geological storage to atmosphere. Noting that for CO<sub>2</sub> geological storage permanent removal can be assumed (IPCC GHG 2006) and any reversal is very unlikely and at most will be very small-scale (ref Jones IJGGC 2015).

In section 3.4.2, for monitoring periods and frequency for CO<sub>2</sub> geological storage, the 2006 IPCC GHG Guidelines provide guidance to countries, which is that once CO<sub>2</sub> injection has ceased at a site, monitoring can reduce in frequency to discontinue when evidence suggests secure storage. The existing regulations around the world have different requirements for the duration of such post-injection monitoring, from 5 years to up to 50 years (Dixon et al 2015).

IEAGHG offers more general information on DACCS in the report IEAGHG Technical Report 2021-05 “Global Assessment of DACCS Costs, Scale and Potential”, and on different aspects of BECCS in IEAGHG Technical Reports 2011-06, 2013-11, 2014-05, and 2021-01.

Tim Dixon and Jasmin Kemper,

[Tim.dixon@ieaghg.org](mailto:Tim.dixon@ieaghg.org) [Jasmin.kemper@ieaghg.org](mailto:Jasmin.kemper@ieaghg.org)

IEAGHG, Pure Offices. Cheltenham Office Park. Hatherley Lane. Cheltenham. GL51 6SH. UK | [www.ieaghg.org](http://www.ieaghg.org) |

## References

CDM Modalities and Procedures for CCS (2011, [10a02.pdf \(unfccc.int\)](#))

IPCC GHG 2006 <https://www.ipcc.ch/report/2006-ipcc-guidelines-for-national-greenhouse-gas-inventories/>

Jones et al, IJGGC 2015 <https://www.sciencedirect.com/science/article/abs/pii/S175058361500225X>

Dixon et al, IJGGC 2015 [Legal and Regulatory Developments on CCS - ScienceDirect](#)

Romanak and Dixon, IJGGC 2022 [CO2 storage guidelines and the science of monitoring: Achieving project success under the California Low Carbon Fuel Standard CCS Protocol and other global regulations - ScienceDirect](#)

IEAGHG Technical Report 2021-05 “Global Assessment of DACCS Costs, Scale and Potential

IEAGHG Technical Report 2011-06 “Global Potential of BECCS”

IEAGHG Technical Report 2013-11 “Global Potential for Biomethane with CCS”

IEAGHG Technical Report 2014-05 “Biomass and CCS – Guidance for Accounting for Negative Emissions”

IEAGHG Technical Report 2021-01 “Biorefineries with CCS”