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Sent: Monday, 10 October, 2022 17:11
To: Supervisory-Body <Supervisory-Body@unfccc.int>
Cc: Rylander Erik, Stockholm <erik.rylander@stockholmexergi.se>; Wikstrom Ulf <ulf.wikstrom@stockholmexergi.se>; Lindroth Adam <adam.lindroth@stockholmexergi.se>
Subject: Call for input 2022 - activities involving removals under the Article 6.4 Mechanism of the Paris Agreement

Dear Sir/Madame,

Over the last five years, Stockholm Exergi has been preparing to launch the largest carbon capture plant for removals in the EU, capable of sustainably capturing and removing 800 000 tonnes of biogenic CO₂ per year, based on an already existing CHP plant in Stockholm. With funding being secured in 2023, our project will launch in 2026 with the ambition to make a substantial contribution to the very demanding need for CDR as deemed necessary by IPCC AR6 to stay within a global warming of 1.5 °C.

Against that background, the UNFCCC's work on rules, modalities and procedures for the implementation of Article 6 is of great significance for Stockholm Exergi. Consequently, we much welcome the opportunity to be heard on the activities involving removals under the Article 6.4 Mechanism of the Paris Agreement. Please find attached our consultation response.

Should you have any questions, don't hesitate to seek clarification.

Sincerely yours,

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Contribution by Stockholm Exergi in response to UNFCCC's Call for input 2022 - activities involving removals under the Article 6.4 Mechanism of the Paris Agreement

Stockholm Exergi welcomes the opportunity to be heard on the development of the modalities of Article 6.4. We believe that robust integrity and quality principles for the carbon credit markets are essential for genuine climate mitigation and, from our perspective, volume deployment of removals with geological storage.

Over the last five years, Stockholm Exergi has been preparing to launch the largest carbon capture plant for removals in the EU, capable of sustainably capturing and removing 800 000 tonnes of biogenic CO₂ per year, based on an already existing CHP plant in Stockholm. With funding being secured in 2023, our project will launch in 2026 with the ambition to make a substantial contribution to the very demanding need for CDR as deemed necessary by IPCC AR6 to stay within a global warming of 1.5 °C.

General comments

While the Paris Agreement instructs the Supervisory Body to elaborate on further rules to make Article 6.4 operational, it would be most beneficial if the UNFCCC work in this regard could contribute to a convergence of standards for how the carbon market within the Paris Agreement and the voluntary carbon market outside of the Paris Agreement should be governed to ensure high integrity and climate benefits.

Against that background, it is recommended that the Supervisory Body assesses how it could leverage the comprehensive work carried out by the IC-VCM. This work covers practically all the aspects addressed in the consultation documents.

It would be unfortunate if these two rule books start to diverge significantly, as it would hamper investment and trade in carbon credits, resulting in less climate mitigation projects over-all. Against that background, the Supervisory Body should request the working group to describe how each requirement compares to the corresponding requirement as proposed by the IC-VCM.

Below, specific comments are presented based on the files submitted for consultation ([Call for input 2022 - Activities involving removals under the Article 6.4 Mechanism of the Paris Agreement | UNFCCC](#)).

A6.4-SB002-AA-A05 Recommendations for activities involving removals under the Article 6.4 mechanism (a64-sb002-aa-a05-22092022.pdf)

Definitions, Chapter 2

There is already a widespread confusion of terms. In case the application of Art 6.4 requires a departure from the definition proposed by IPCC AR6-WG-III, the document prepared by the working group should clearly describe why that is necessary as well as how the proposed definition would be different.

Accounting for removals, Chapter 3.3

The implication of the suggested text is not clear. The accounting must not mix the physical reporting of a negative tonne with the required measures to achieve a net negative tonne in accounting terms.

From a carbon removal certificate (CRC) perspective for geologically stored tonnes, this implies that the carbon crediting program must have a mechanism to secure that the removal project ensures that acquired CRCs represent a net tonne.

A simple way to ensure this is to require the removal project to cancel CRCs in proportion to the emissions related to the implementation of the project based on the LCA of the project. Each acquired CRC will then represent a net tonne, while the total number of CRCs would correspond to the physical UNFCCC NIR reporting by nations of negative tonnes. Standardizing the required LCA is one of the most important tasks for certification methodologies.

Crediting period, Chapter 3.4

The suggested crediting period mechanism is clearly a reflection of the requirements of nature-based removals. This is not appropriate for removals with geological storage, considering the very significant amount of CAPEX and risk associated with the investments in capture, transport and storage. A minimum crediting period of 30 years should apply for this type of removals to allow for necessary investment decisions.

Addressing reversals, Chapter 3.5

When this is developed further by the Supervisory Body, it should for geological storage rely wherever possible on different regulatory regimes, where such regimes meet agreed minimum requirements, thus avoiding a complex layered structure of legal and voluntary market requirements as far as possible.

Avoidance of leakage, Chapter 3.6

The question of leakage can become very complex for industrial solutions, such as BECCS and DACCS. It is not recommended, at least for industrial solutions, that Art 6.4 develops its own LCA criteria. It should instead rely on the certification methodologies for CCS currently being in development.

A6.4-SB002-AA-A05 Requirements for the development and assessment of mechanism methodologies pertaining to activities involving removals (a64-sb002-aa-a05.pdf)

For Accounting, Chapter 1.3, Crediting period, Chapter 1.4, Avoidance of leakage, Chapter 1.5, please refer to the comments in the previous section under the corresponding headings.

Appendix 1. Additional requirements to be met by land-based removal activities

We believe a much more comprehensive debate is necessary before an appropriate method can be proposed on the level of UNFCCC with regard to Tonne-years. For Chapter 2. Addressing reversals, paragraph 4 (c), please explain in future texts that years indicated are not the storage lengths that are needed to acquire permanence, but possible calculation model conventions. If 1000 years is applied, then a completely different outcome is achieved. Furthermore, the model is based on radiative forcing, but there are also other dimensions of global warming that have to be considered.

Appendix 2. Additional requirements to be met by removal activities that take recourse to geological storage of achieved carbon stocks

The geological storage of CO₂ will be performed on very few jurisdictional territories, at least in the foreseeable future. It is essential that these countries and the EU are directly involved in defining these requirements. To promote comprehensive global trade of highly standardized negative emission rights among corporations as well as among nations – inside and outside of Article 6 – it is essential that diverging standards are not developed in this very important domain.

The current uncertainties relating to the interpretation of "other international mitigation purposes" should be expected to result in significant trade outside of Article 6, in particular in sectors where co-funding between governments and corporations is desirable to drive ambitious high CAPEX climate investments with hard-to-predict returns, such as BECCS and DACCS.

A6.4-SB002-AA-A06 Information note Removal activities under the Article 6.4 mechanism

Terms defined in the IPCC glossary, Chapter 2.1

The heading seems to be broader than the covered definitions, else more precise references should be made to IPCC definitions. It should be made clear that BECCS is a CDR technology, with the requirement of having a LULUCF position of zero or less emissions.

Types of removal activities, Chapter 3

BECCS should be included in item 24 (b), 25 or otherwise be mentioned.

Under LULUCF principles, bioenergy biomass is considered instantaneously oxidated at time of harvest. Thus, from a definition point of view the CO₂ should be considered to be in the atmosphere. The implication is that the carbon capture performed at a bioenergy plant (BECCS) is an engineering-based removal.

Geological storage, Chapter 4.8.1, paragraph 207

The paragraph is unclear:

“However, when the biomass used for combustion comes from biomass waste or other sources outside of a removal activity (i.e. it was not sequestered within a removal activity), the resulting BECCS system achieves emission reductions, and not removals.”

If the implication of this paragraph is that CCS of incinerated biogenic waste is not considered to be a removal, we disagree with this interpretation. Such CCS does face a set of requirements to be considered a removal but cannot *a priori* be deemed not to be a removal with regard the biogenic portion.

Removal activity with BECCS, Chapter 4.8.2

BECCS should, with the exception of the LULUCF position of sourced biomass, not be considered under Chapter 4 on land-based removal activities, but be treated as an engineering-based removal, and thus be treated under Chapter 5, as is implied in Chapter 5 item 224.

Additionality, Chapter 5.3.3

The current wording is too crude since it should be expected that BECCS and DACCS plants will deliver negative emissions both for the voluntary and compliance markets in the medium term.

The notion of additionality for BECCS and DACCS is very different from additionality for traditional carbon credits. The main challenge for traditional off-sets is that they are based on a counter-factual assessment and/or have an inherent in-value-chain-worth for the project owner. For both those reasons, it follows that it is genuinely difficult to assess the true additionality of funds coming from sales of carbon credits emanating from reduction projects or carbon farming.

For negative emissions with geological storage the situation is completely different. They don't have any inherent in-value-chain-worth for the project owner. They are only produced for the purchaser of the negative emission rights, without the potential to come about for any other reason. The counter-factual assessment is very clear – they would not happen without the purchase of the negative emission right associated with the underlying physical removal.

There is, however, one critical limitation to this argument that must be assessed from an additionality perspective. If the project is eligible for state aid and such aid would be comprehensive enough to allow the project to meet its profitability targets without the carbon credit revenues, then – if the project receives such aid – the project would not be additional from the perspective of the voluntary market.

Double-counting, Chapter 5.3.4

This is a critical principle. The confusion of what it implies and how the accounting of companies and nations relate to one another need to be clarified and settled. The current situation is threatening the necessary investments that the private sector can and must contribute to climate mitigation.

The reason for the current confusion is that a mixing of the corporate accounting system with the national/governmental accounting system has been introduced in the debate about the nature of carbon credits.

When the two accounting systems are kept separate, then the question of double counting, including double issuance, double claiming and double use, becomes relatively straightforward and the principles outlined in the document are supported, notably how double-claiming has been defined: “if the same removals are counted twice both by the buyer and the seller”.

The problem occurs if the concept of double-claiming would be applied across the two accounting systems, as may possibly be implied by Decision 3/CMA.3 Annex Chapter X on “other international mitigation purposes” and by the corresponding Decision 2/CMA.3 Annex Chapter III.C. See also the comment on Appendix 2 of A6.4-SB002-AA-A05 Requirements for the development and assessment of mechanism methodologies pertaining to activities involving removals (a64-sb002-aa-a05.pdf), above.

For Crediting period, Chapter 5.4, Addressing reversal, Chapter 5.5, Avoidance of leakage, Chapter 5.6, please refer to comments above on these topics.

Stockholm, 2022-10-10