Dear Article 6.4 Supervisory Body

RE Article 6.4 Mechanism.

We would like to submit comments in response to the Questions for Public Inputs put out by the Article 6.4 Supervisory Body regarding the last draft Information Note 'Requirements for the development and assessment of mechanism methodologies' A6.4-SB004-AA-A10 version 03.0. Our responses are in blue script in the order of the questions posed. The contact point is Harriet Hunnable, Cambridge Centre for Carbon Credits at email: hh555@cam.ac.uk

Thank you for inviting input from academia and other expert and interested parties.

Questions for Public Inputs

Baseline Setting

2. What is understood by the elements in the chapeau to paragraph 33 of the RMP and how could they be operationalized?

e) recognize suppressed demand;

In the energy sector, supressed demand refers to the situation where the energy demand is insufficient or not satisfied, due to barriers such as low income or lack of energy infrastructure.[1]

In order to operationalize this concept, it is also necessary to consider other elements, for instance, a satisfied demand or the income effect. A satisfied demand conveys the idea of a minimum level of energy services, such as electricity supply, lighting or heating. The income effect addresses the idea that incomes grow over time, energy service demand and consumption would increase, so that even without access to electricity it is likely that energy consumption in the 'without project scenario' would rise over time.[2]

3. How might these elements be further elaborated with reference to literature?

There is a need of further understanding in the literature on how to measure the level of energy services and, ultimately, how to determine whether there is a supressed demand or not. Usually, the energy services are measured in units different to the energy units, like kilowatts per hour, for example, lumens of lighting or litres of water heated to a certain temperature.[3]

This distinction is quite relevant because, for the same energy demand, two different technologies can deliver different energy service levels. At the same time, these measures are critical to understand when the energy demand is suppressed and when is satisfied.

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1 SPALDING-FECHER, Randall. Suppressed demand in the clean development mechanism: Conceptual and practical issues. J. energy South. Afr. [online]. 2015, vol.26, n.2 [cited 2023-04-04], pp.2-10. Available from: <http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S1021-447X2015000200001&lng=en&nrm=iso>. ISSN 2413-3051.

2 Ibid.

3 Sovacool, B.K., (2011). Conceptualizing urban household energy use: Climbing the 'Energy Services Ladder'. Energy Policy 39, 1659-1668. doi:10.1016/j.enpol.2010.12.041.

Other aspects to consider in the literature include two broader concepts that can modify the relationship between demand and consumption, and ultimately, the understanding of satisfied demand and supressed demand.

First, the decoupling of energy demand and economic growth. Historically, the increase of the industrial production requires larger energy production. However, many countries -mostly developed economies- have managed to achieve economic growth while reducing energy consumption and their CO2 emissions. On the other hand, developing countries have become more energy-intensive in order to boost their economies.[4]

Second, the implementation of policies of energy efficiency has caused a big change in the energy consumption and, as a consequence, also in the energy demand. Therefore, those policies need to be considered for the understanding of the supressed demand.

7. The interaction of the elements from paragraph 33 and approaches identified in paragraph

36 of the RMP:

a) How do the options for implementation of paragraph 33 of the RMP identified in the paper deliver on the proposed elements?

i. Scalability and replicability

ii. Increasing stringency over time

b) How could implementation of the approaches identified in paragraph 36 of the RMP address the elements?

A query on the how the word 'stringency' is being applied. Is it to convey increasing rigor or to impose more progressive and changing requirements? If it is the latter it would be helpful to link it with specific wording in the SB mandate and/or the RMPs.

Additionality

18. Should the crediting period less than 5 years be eligible to be specified in methodologies?

Reflecting on the SB04 discussions - a crediting period of less than 5 years could be feasible with an equivalent permanence approach. This approach requires that buyers must at a single point in time purchase sufficient credits to deal with the damage caused by an emission (we provide further information on this in our response to question 30).

19. Should enforcement rates of mandatory regulations be considered in the additionality demonstration?

Yes, additionality is premised on achieving reduced emissions beyond business as usual including the degree of enforcement.

General Questions on baseline and additionality

25. When does leakage occur, where are the greatest risks?

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4 Ezra, Lord. "Energy, Politics and the Environment." Managerial Auditing Journal 7.2 (1992): 18.

Provision is needed for innovation in the requirements for leakage. Innovation is needed to improve estimation of leakage also, to better avoid leakage such as increased emissions elsewhere due to displacement of food or timber production to non-project areas.[5,6] At present many leakage assessments focus on rough estimates of local-scale (or "direct") leakage and ignore or greatly underestimate longer-range ("market") displacement of forgone production.[7]

28. Should the emissions from the construction phase be accounted for as leakage or project emissions?

Emissions from the construction phase should be accounted as project emissions. Section 2.7 of the draft requirements paper A6.4-SB004-AA-A10 is not the right place for this issue.

Non-permanence and reversals

30. Where are non-permanence risks in respect of emission reductions?

First to ask for consistency here and in the draft requirements paper A6.4-SB004-AA-A10. The paper's sections 2.15.5 and 52 only mention removals. However 'reductions' should be included in the text or by sticking to use of the definition of 'emission reductions' in Normative definitions 2.1.6.. Suggested edits:

> 51. "Reversal" means the release into the atmosphere of the verified tonnes of ~~removals~~ emission reductions.
> 52. Mechanism methodologies shall address reversals ~~of removals~~ using a consistent approach specified under the recommendations on removals.

Next we ask for the distinction between permanence and reversals to be made. Non-permanent 'emission reductions' is a type and not a risk. Whereas permanent[8] and non-permanent emissions reductions will have various degrees of risk of reversal.

On this question 30 in the Questions for Public Inputs we consider the correct question is 'Where are ~~non-permanence~~ **reversals** risks in respect of emission reductions? And respond that nature based solutions have avoidable and unavoidable reversals risks. Current approaches can be improved. A key consideration is how schemes work with and for people. SEDDON[9] outlines five design features that can strengthen motivations and scaling-up.

Dealing with the issue of both reversals risk and non-permanence it is vital that emissions reductions are made now. For trades between emissions and NBS emissions reductions we propose that buyers of NBS credits should make use of the data, technologies and methodologies that are fast emerging

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5 C. Streck, Climate Policy 21, 843 (2021)

6 N. Villoria et al., Nat. Comm. 13, 5476 (2022)

7 B. Filewod & G. McCarney, "Avoiding leakage from nature-based offsets by design" http://eprints.lse.ac.uk/117927/ (2023)

8 Mortezaei, K., Amirlatifi, A., Ghazanfari, E. & Vahedifard, F. Potential CO2 leakage from geological storage sites: advances and challenges. Environmental Geotechnics 8, 3–27 (2021)

9 Seddon, N., Smith, A., Smith, P., Key, I., Chausson, A., Girardin, C., House, J., Srivastava, S. and Turner, B. (2021), Getting the message right on nature-based solutions to climate change. Glob. Change Biol., 27: 1518-1546. https://doi.org/10.1111/gcb.15513

that take account of reversals risk and non-permanence. Companies buying credits to offset the damage of an emission should purchase sufficient credits upfront to achieve equivalent permanence. This would better align with the long-term temperature goal of the Paris Agreement and contribute to the equitable sharing of mitigation benefits while removing the risk that an obligation for the offsetting party to replace temporary credits or reduce emissions is not honoured or enforceable in the long term.

31. How are these typically addressed, what are the options?

In the past these have been addressed by exclusions, buffers and temporary credits that have not driven mitigation or sufficient investment. At the Cambridge Centre for Carbon Credits we integrate reversal risks into our assessments of NBS[10]. And consider that technology-based offsets at risk of reversal[8] should also use this framework. The framework we have developed for estimating the long-run social benefit of impermanent carbon credits generated by nature-based interventions integrates three substantial advances:

1. the conceptualisation of the permanence of a project's impact as its additionality over time (relative to a statistically-derived counterfactual);
2. **the risk-averse estimation of the social cost of future reversals of carbon gains**; and
3. the deployment of post-credit monitoring to correct for errors in deliberately pessimistic release forecasts.

Our framework generates incentives for safeguarding already-credited carbon while enabling regulators, investors and other stakeholders to make like-for-like comparisons of diverse carbon projects.

Furthermore tailoring and revising the estimation of Equivalent Permanence according to the recent performance of a project (and others like it) should incentivise project providers to implement actions likely to increase permanence, such as improving land tenure and reducing the opportunity costs experienced by local communities.

10 Balmford, A., Keshav, S., Venmans, F., Coomes, D., Groom, B., Madhavapeddy, A., & Swinfield, T. (2023). The value of impermanent carbon credits. Cambridge Open Engage. doi:10.33774/coe-2023-5v93l