CLIMATE PRINCIPLES
Climate Policy Advisory

Financing Engineered Carbon Removal with the Voluntary Carbon Markets

Synergies with Public Funding and a Look Beyond Double Claiming

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Introduction

High-durability carbon removal[1] is gathering increasing attention in the national and corporate net-zero plans. Both public and private sectors have recognised the importance of this sector and started mobilising funding to scale it up. The first examples of projects that have received substantial public funding and are looking to stack it with the proceeds from selling removal credits on the Voluntary Carbon Markets (VCM) have emerged, together with diverging views on how to combine these resources. This paper provides a brief exploration of considerations for such situations, together with elaborating on the changing role of the VCM and possible ways forward.

1. Considering Voluntary Carbon Markets next to public funding

Several types of engineered carbon removal projects[2] have long lead times, are capital intensive, and require public support to be developed. To scale up these industries, governments (and supranational entities like the EU) offer different types of financial aid. The high capital costs often require project developers to consider stacking various funding sources. Such projects are outside the current scope of compliance carbon markets, which today consist of emissions trading systems (but will include Article 6 markets under the Paris Agreement in the future).

VCM has played a crucial role in financing novel carbon removal methods. The rapid increase in the VCM size (Ecosystem Marketplace 2022) indicates that combining project financing from public sources and VCM can stimulate the scale-up of engineered carbon removal. The strong demand from corporate buyers for high-durability carbon removal credits to meet their climate targets is a case in point.

There are three aspects to consider when combining public support and VCM for such projects:

1) Additionality criteria in standards
2) Government requirements
3) The intersection of Article 6 of the Paris Agreement and the VCM

The sections below delve into these considerations in sequence, followed by an exploration of the role of the VCM and the synergies between public finance and VCM.

[1] For the purpose of this paper, "high-durability carbon removal" has durability in the magnitude of hundreds of years.
[2] For the purposes of this paper, "engineered carbon removal" is used to cover Direct Air Capture and Carbon Storage, Biomass Carbon Removal and Storage (including Bioenergy with Carbon Capture and Storage, and Waste-to-Energy with CCS).

1.1. Additionality criteria in standards

The first step would be to check what the standards say. Can credits be issued for such a project in the given circumstances, which include a certain amount of public funding? What do the additionality criteria specify? The financial additionality tends to require carbon credit revenue to be crucial in making the project happen, even if that revenue comes on top of other types of support. If that is the case, credits could be issued for removals from such projects. Should the project be viable without the revenue stream from carbon credit sales, it won't meet the standard's requirements and generate any carbon credits.

Carbon markets would benefit from a harmonised approach by governments, perhaps based on the requirements of carbon crediting standards. However, given the uncertainties in the intersection of Article 6 of the Paris Agreement and the VCM, each government is likely to take a slightly different approach to carbon markets in the future (Gold Standard Foundation 2022). Such a patchwork of approaches is a direct result of the bottom-up nature of the Paris Agreement, and VCM stakeholders will need to manage their risks accordingly.

1.2. Government requirements

Governments may choose to regulate which sectors/projects and under which conditions can participate in the VCM, establish administrative requirements to that end (approval, registries), and add a fee structure to such arrangements, whether public funding is part of the picture or not.

Tailor-made examples are emerging regarding engineered removal projects that receive public funding. One European country is planning to allow the project developer to sell credits on the VCM on the condition of paying the state back the equivalent amount of money per tonne that the project has received from public funds. There are no written sources to refer to at this point.

Another very different example is the US, where the federal 45Q tax credit comes with no strings attached when it comes to VCM. The project's viability is determined based on a carbon crediting standard and the additionality requirements therein (see point 1 above).

New approaches by governments to regulating the link between public funding and VCM crediting are bound to emerge as this field matures.

1.3. The intersection of Article 6 of the Paris Agreement and the VCM

Corporate and national carbon accounting systems are not compatible. There is no clear way to nest companies' emissions and removals within those of a country, especially in the case of multinational corporations. This limitation is one of the main reasons for the uncertainties that have emerged in the intersection of compliance and VCM. If companies' emissions and removals could be transparently nested within national accounting, VCM would already have a much more explicit role in achieving the Paris Agreement goals.

Today, the open questions are around the requirement for countries to adjust their carbon accounting (called "corresponding adjustment") when authorising carbon credits for use in the VCM to avoid double claiming[3]. There are stakeholders calling for "corresponding adjustments for everything", as outlined in the San José Principles (San José Principles Coalition 2021). Another viewpoint sees the mandatory nature of such adjustments as an unnecessary concept (given that corporate and national carbon accounting are separate) that is detrimental to the growth of VCM and finds that the technical details in applying the corresponding adjustments distract from the real action on the ground. Yet a third group sees a role for corresponding adjustments in the mid-to-long term, but not in the current time of transition where the technical nuances and infrastructure are still being established. And there are many views in between. The fact remains that the host governments have the right to choose whether to authorise the use of carbon credits for VCM (that would lead to corresponding adjustment) or to retain the right to use these emission reductions or removals towards their own Nationally Determined Contribution (NDC)[4].

Market actors have differing views on how carbon credits should be treated in the VCM when they are not authorised for use under Article 6 and whether non-authorised credits can be used towards offsetting claims (Gold Standard Foundation 2022). A common recommendation from governments is to use carbon credits for contributing to national NDC instead of a corporate claim for compensation or neutralisation (Finnish Ministry of the Environment 2022). The private sector has not been keen on this solution for various reasons, the most prominent being that such claims might not count towards their corporate climate targets – the sole reason for the exponential growth in the VCM.

This comes down to how science-based targets (SBTI 2022) are designed. It's worth noting that when it comes to removals, this SBTI does not currently require neutralisation claims to go beyond NDCs. This is, however, not an intentional distinction between how emission reductions/avoidance and removals are considered, but a work in progress where the decision has not yet been taken.

Another option would be to transparently recognise that the same activity can contribute to both the NDC and the corporate climate target[5]. In practice, most corporate emissions and removals are part of national emissions (the same way corporate profits are part of national GDP); we're just not yet able to robustly nest one into the other. Indicating to which NDC a removal credit contributes safeguards that such credits cannot be used in systems that require corresponding adjustments (e. g. in CORSIA).

[3] Double claiming – a sub-type of double counting where two different entities claim the same emission reduction or removal towards achieving climate change mitigation (but the atmosphere only sees it once) (EDF et al. 2020). Double claiming occurs when both claims are made for reductions or removals in the same accounting system (e. g. two NDCs) but might not be the case when a issued carbon removal credits transparently claim to contribute to country's NDC and are used to achieve a corporate climate target. To its country of operation, the corporate will always report its actual emissions, not its progress towards a corporate target. Hence, such a corporate claim does not undermine the environmental integrity of the markets.

[4] Countries' climate pledges under the Paris Agreement.

[5] Pathway #3 in Annex 1 of the (LEAF Coalition 2021), and a similar idea is suggested in (United Nations 2022) "*Any credit transactions must be transparently reported, and associated claims must be easily understandable, consistent and verified (where land-based activities are concerned, they should be geo-referenced). Whether or not the credits used* <u>*can also*</u> *be counted towards Nationally Determined Contributions under the Paris Agreement must be transparently reported.*"

Governments are bound to be careful when considering requests for authorisation that lead to corresponding adjustments. The first and foremost priority will always be to achieve the countries' NDC. Suppose authorisation is required for a wide range of purposes, where some activities might not even be within the scope of the national emissions inventory[6]. In that case, governments will have a limited appetite to engage on this front or they might risk not meeting their climate target. This, in turn, will mean losing the upside of mobilising private funding to support the achievement of the NDCs.

What is needed is clarity from the governments regarding which activities require authorisation and which don't (and what that means in practice) and, if required, how the authorisation can be obtained and the safeguards that come with it.

2. The changing role of the VCM

For corporations and non-state actors, VCM has been the primary tool to achieve corporate climate targets. However, when looking from the perspective of compliance markets and government action, the role of VCM has mainly been seen as twofold: (1) the testing ground for new decarbonisation solutions and methodologies, learnings from which could then be applied when designing compliance markets, and (2) the tool to bridge the gap between what the NDCs can deliver (UNFCCC 2022) and the temperature goal of the Paris Agreement.

This notion has evolved over the last year. The rapidly increasing size and funding capability of the VCM, together with the convergence with compliance markets (Eve Tamme 2022), is changing the scene. Achieving the national net zero targets is the most challenging goal set in climate policy to date. Limiting the potential of the VCM to operate in the margins and only contribute "on top of" the scope of the – ideally economy-wide – NDCs doesn't seem to be in the best interest of delivering the steep emission reductions and carbon removal required over the coming decades. VCM has the potential to contribute to both the achievement of NDCs and to go beyond them. And in that path, it's crucial to build in transparency to show precisely where and for what purpose (or claim) VCM credits are used for.

3. Synergies between public funding and VCM

VCM can mobilise increasing amounts of funding for climate change mitigation and has been the main driver in financing the early phase of a range of carbon removal methods. Such innovation support is in the interest of both the global achievement of the Paris Agreement temperature goal and the corporates seeking high-durability carbon removal credits.

Engineered carbon removal methods must be scaled up to gigatonnes in the coming decades (IPCC 2022). Government policies, such as the recently updated 45Q tax credit in the US, don't cover the whole ecosystem of engineered carbon removal methods. Meanwhile, other types of funding, like the EU Innovation Fund, are several times oversubscribed.

[6] As one may deduct from the San José Principles.

Leveraging VCM to help scale up carbon removal next to government support would put all resources to work for the climate and deliver the broadest possible climate impact.

Large, engineered carbon removal projects have long lead times and are capital-heavy. An important consideration is how to support project developers' early action and related risk (business model, legal and technology choices) by public funding during the years when these industries are still being established, and learnings from each project have a substantial contribution to the field.

Final words

There is space for public funding to stimulate growth in engineered carbon removal methods and to stack it with VCM financing to create a business case. The ambiguity in terms of claims – in which cases can the removal be claimed by the government, the corporate, or both? – is currently hindering the way forward. There is a need for further clarity in the SBTI guidance on how the claims for durable carbon removal should be made to meet corporate climate targets. In whichever way the solutions are found, especially when VCM contributes to NDCs. Transparency will be a crucial element of its implementation.

Public finance alone will not be enough to build the carbon removal capacity the world needs. Clear guidance from governments on how the VCM can contribute would enable to further scale the VCM next to regulatory activity, with the synergies between the two helping to make the most for the climate. Whilst waiting for this clarity, VCM funding will be drawn to those jurisdictions that create positive and more certain enabling environments.

References

Ecosystem Marketplace (2022). VCM Reaches Towards $2 Billion in 2021: New Market Analysis Published from Ecosystem Marketplace. Available online at https://www.ecosystemmarketplace.com/articles/the-art-of-integrity-state-of-the-voluntary-carbon-markets-q3-2022/

EDF, WWF and Oeko-Institut (2020). What makes a high-quality carbon credit? Phase 1 of the "Carbon Credit Guidance for Buyers" project: Definition of criteria for assessing the quality of carbon credits. Available online at https://www.edf.org/sites/default/files/documents/what_makes_a_high_quality_carbon_credit.pdf

Eve Tamme (2022). What's Next for Carbon Markets? Available online at https://evetamme.com/2022/05/16/whats-next-for-carbon-markets/

Finnish Ministry of the Environment (2022). Report identifies various opportunities for avoiding double claiming in voluntary compensation. Available online at https://mmm.fi/-/1410903/selvitys-vapaaehtoisten-paastokompensaatioiden-kaksoislaskentaa-voidaan-valttaa-eri-tavoin-

Gold Standard Foundation, EY Law (2022). Carbon credit rights under the Paris Agreement. How article 6 and the implementation of NDCs may shape government approaches to the carbon market, and what this mean for rights related to carbon credits. Available online at https://www.goldstandard.org/sites/default/files/documents/carbon_credit_rights_under_the_paris_agreement_november_2022.pdf

IPCC (2022). Sixth Assessment Report. Available online at https://www.ipcc.ch/assessment-report/ar6/

LEAF Coalition (2021). LEAF Coalition Transactions in the Context of Article 6 Negotiations at COP26. Available online at https://www.emergentclimate.com/wp-content/uploads/2021/12/LEAF-corresponding-adjustments-and-COP26.pdf

San José Principles Coalition (2021). Following COP26 climate talks, the San José Principles Coalition Recommits to Principles for High-Integrity Carbon Markets, Pledges to Act on Them Together. Available online at https://cambioclimatico.go.cr/following-cop26-climate-talks-the-san-jose-principles-coalition-recommits-to-principles-for-high-integrity-carbon-markets-pledges-to-act-on-them-together/

SBTI (2022). Science Based Targets Initiative. Available online at https://sciencebasedtargets.org/

UNFCCC (2022). Updated NDC Synthesis Report: Worrying Trends Confirmed. Available online at https://unfccc.int/news/updated-ndc-synthesis-report-worrying-trends-confirmed

United Nations (2022). Integrity Matters: Net Zero Commitments by Businesses, Financial Institutions, Cities and Regions by the United Nations' High-Level Expert Group on the Net Zero Emissions Commitments of Non-State Entities. Available online at https://www.un.org/sites/un2.un.org/files/high-level_expert_group_n7b.pdf

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