



Contextualising the Commission's carbon removal certification framework proposal

The Negative Emissions Platform is an association representing a broad range of carbon dioxide removal (CDR) technologies. Our members are primarily technology companies, but also include project developers, investors, carbon marketplaces, and buyers of CDR. We are therefore uniquely placed to understand the needs of the CDR sector. This paper offers insights that we hope are useful in the policy making process.

Climate science continues to voice stark and clear messages on the need for deep reductions in CO₂, methane, and other GHG emissions for a chance to stay within the temperature targets set in Paris. Avoiding and reducing emissions must remain the primary focus of policy and investment.

In addition to unprecedented emission reductions, however, an ever-clearer picture of the need for a complementary deployment of carbon dioxide removal methods is provided. The sixth assessment cycle of the IPCC¹ states: "The deployment of carbon dioxide removal (CDR) to counterbalance hard-to-abate residual emissions is unavoidable if net zero CO₂ or GHG emissions are to be achieved." Consistent with this, the European Commission's analysis regarding the achievement of the European Climate Law includes CDR of several hundreds of MtCO₂ per year by 2050. With the carbon removal certification framework (CRC-F), the Commission has presented a first, "no-regrets", policy tool that should spur further deployment of CDR throughout the Union. The Negative Emission Platform (NEP) welcomes this dedicated CDR policy and encourages the European Union to further contribute towards the sustainable, responsible and effective deployment of CDR approaches, through the CRC-F and beyond.

The CRC-F correctly summarises the barriers faced by the emerging CDR sector as:

- 1) Difficulties with assessing and comparing the quality of carbon removals
- 2) A lack of trust within carbon markets
- 3) Barriers to access finance

Whilst these barriers affect all CDR methods, they are especially pertinent to industrial/"novel methods" of carbon removal. Such methods include Bioenergy with Carbon Capture and Storage (BECCS), Biochar Carbon Removal (BCR), Direct Air Capture and Storage (DACs), Enhanced Weathering (EW) and many more. The first edition of Oxford University's Smith School of Enterprise and the Environment academic review on the state

¹ IPCC AR6 WG3 SPM <https://www.ipcc.ch/report/ar6/wg3/>

of carbon dioxide removal shows that these methods represent a tiny fraction of global CDR deployment today, but suggests that the next decade will be “crucial for novel CDR, in particular, since the amount of CDR deployment required in the second half of the century will only be feasible if we see substantial new deployment in the next ten years, novel CDR’s formative phase.”²

The Commission has acknowledged that the CRC-F is not capable, by itself and as proposed, of resolving all the barriers faced by industrial CDR developers and buyers today. The following provides a summary of discussions held on these barriers within NEP since the release of the CRC-F in late November 2022 and offers recommendations to the Commission and EU legislators on how to go beyond what is proposed in the CRC-F in order to support the development of CDR in Europe.

1. Assessing quality

Timely development of MRV methodologies

Industrial CDR approaches generally build on engineered approaches to sequestering carbon. This is resulting in a comparatively easier approach towards the first problem identified within the impact assessment, namely the difficulties with MRV. Building on vast learnings from industrial emission sources, industrial CDR can allow for highly accurate measurements and quantification of its carbon impact, and can guarantee (permanent) storage, both, via geological formations and other storage means, preventing future release of carbon to the atmosphere. We urge the European Union to develop methodologies for CDR in a timely manner, if the CRC-F is to have a near-term impact for these processes. To further streamline the adoption of the CRC-F, methodologies should be based on existing regulation to ensure harmonisation with other Union law, to the extent possible and where applicable. Timely action is required to develop new frameworks and tools for industrial/novel processes.

Storage and permanence

Next, the CRC-F proposal risks limiting deployment of novel CDR by a premature categorisation of storage guarantees, by focusing on the means of storage (i.e. an overreliance on geologically stored carbon for “permanent removals”) as opposed to establishing a system of science-based assessment that allows for a categorisation according to the effective duration of storage within processes. Carbon removal with storage over several centuries can be realised by a significant number of industrial CDR technologies, such as BECCS, DACS, BCR and EW, amongst others. NEP therefore urges a shift towards a more technology-agnostic framework for the categorisation of “permanent” (minimum several centuries) removals, whilst defining clear liability requirements and establishing corresponding frameworks, where needed.

2. Lack of trust

Voluntary vs compliance markets

² State of CDR <https://www.stateofcdr.org/resources>

Surveys covering recent years outline increased public and market participant scepticism of (voluntary) carbon market effectiveness. Either in fear of greenwashing or overwhelmed by the complexity of carbon markets today, participants are facing great uncertainty, harming increased deployment. Scaling novel CDR through the voluntary carbon market is set to encounter further barriers, as the typical price of novel CDR far exceeds conventional (emissions reduction) units offered on the market (average prices for industrial/novel CDR on voluntary markets are currently ranging between \$179 - \$1662/tCDR³, whereas conventional credits are trading for <10\$/t⁴). Higher pricing is a general and desirable feature of carbon removals, but contributes to the marginal role they currently play within the carbon market ecosystem today (<5% market share). Whilst prices are currently higher than they are anticipated to be in future when CDR is deployed at scale, NEP believes it is unlikely that voluntary markets alone are able to spur the necessary scale of deployment and effectively help overcome additional price premia inherent in industrial/novel CDR.

To accelerate the deployment and ensure that Europe has sufficient removals to reach net-zero by 2050, the Union should set clear and binding objectives for the Member States with regard to permanent carbon removals, starting to ramp up no later than 2030. Member States may achieve those targets through a combination of voluntary and compliance based corporate purchases.

European CDR in global markets

For buyers willing to contribute to the deployment of industrial CDR despite the high costs, an additional uncertainty arises in connection with defining claims between nations and corporations. Whilst the CRC-F can provide certainty on MRV related aspects, it does little to increase and simplify the uptake of industrial CDR via voluntary carbon markets, both with regard to how claims are managed on the corporate vs the national level and the implication of trade with non-European countries. To enable an increased uptake of European CDR through global markets, we urge a timely correction of these shortcomings to effectively scale novel CDR. It is essential that corporations and governments work together to co-fund the very CAPEXintensive and unprecedented ramp-up in technological removals needed to meet climate objectives. The rulebook must also promote transparent reporting and accounting to help accelerate the deployment of carbon removals by leveraging the willingness of the private sector to contribute funds through the acquisition of negative emissions, while ensuring that no double counting occurs - between nations or between corporations.

3. Access to finance

Clarity on CDR's place in EU climate policy

Due to the industrial nature of novel CDR, installations require higher volumes of upfront capital investment. But the CRC-F does not so far offer the investor community clarity on the intended use case(s) for certified industrial CDR units. This lack of clarity for investors is

³ cdr.fyi, year 2022 in review <https://medium.com/cdr-fyi/cdr-fyi-2022-year-in-review-d095acd9a1a0>

⁴ XPansive 2022 year in review: <https://carboncredits.com/annual-carbon-market-vcn-review-2022/>

likely to negatively affect the ability of the CDR sector to rely on international finance mechanisms for project deployment. This implies an urgent need to determine a European CDR policy framework that goes beyond MRV, starting with the inclusion of a distinct role for CDR in 2040 targets and an investable policy environment.

Clarity on linkages between CDR markets and other carbon markets

EU policy on CDR should also address the potential linkages with existing climate compliance policies (e.g. EU ETS or ESR), with a view to clarifying whether and how distinct activities (emissions reductions vs CDR) can and should be linked in some way. For such frameworks to be operational and impactful, the distinct role of CDR, especially for the second half of the century, shall be taken into account.

Clarity on public and voluntary market support

In addition to CDR compliance policy, a more immediate deployment of CDR can be fostered by dedicated policy support, as the Commission is seeking to do through the Green Deal Industrial Plan. EU policy should build on voluntary participation by private market participants by promoting private/public partnerships, as well as public support via funding mechanisms such as the Innovation Fund, or IPCEIs.

Global mindset

The international dimension of many CDR deployment projects should be reflected in European policy proposals. In particular, NEP urges the Commission and EU legislators to consider the point of view of non-EU market participants, sources of investment such as global investors, favourable CDR production conditions abroad and the global demand side of the CDR market. This is important if the EU is to develop global leadership in carbon removals, because the regulations that govern European CDR will be attached to CDR credits produced in Europe. A strong CDR sector supported by regulation that has global markets in mind will be capable of very powerful global impact, while a sector that is regulated with only Europe in mind will inevitably become parochial and have a more limited impact.

We look forward to discussions and interactions to define the “formative phase” of this dynamic, challenging, and mission-critical sector.

For further information, please contact us at info@negative-emissions.org.

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