



Co-creating a common EU
vision of carbon removals

**A CO-CREATED
PROPOSAL FOR AN EU
PERMANENT CARBON
DIOXIDE REMOVAL
DEVELOPMENT AND
DELIVERY FRAMEWORK**

December 2025

TABLE OF CONTENTS

Introduction	01
Background and principles	01
Process	02
Content and overall summary of the proposal	02
Summary of the provisions	02
Explanatory memorandum	05
Proposed EU regulation for an EU permanent carbon dioxide removal development and delivery framework	07
Chapter 1: General provisions	07
Article 1: Purpose	07
Article 2: Scope	08
Article 3: Definitions	09
Chapter 2: Researching, testing and developing permanent carbon removals	09
Article 4: Research, development and innovation funding	09
Article 5: EU permanent CDR pilot procurement programme	10
Article 6: Delegated acts	11
Chapter 3: Achieving climate neutrality and net-negativity	12
Article 7: Establishing an EU removals compliance scheme	12
Article 8: Purchase, transfer and cancellation of atmospheric removals credits	13
Article 9: EU removals compliance scheme central purchasing and reselling platform	13
Article 10: Use cases of atmospheric removals credits	14
Article 11: Review clauses	14
Participants	16



INTRODUCTION

Background and principles

CO2ol Down is a project based on collaborative policymaking and co-creation theory. It is grounded in principles of collective progress and mutual benefit, rather than the advancement of individual agendas. The first phase of the project in 2024 aimed to improve the governance of carbon removals (including both biogenic sequestration by natural sinks and permanent removals) in the European Union. This resulted in the publication of a proposal to revise the European Climate Law; and a set of policy recommendations on EU instruments for permanent removals.

In 2025, the project continued with phase 2, during which participants focused on the financing of permanent removals within the EU. This document presents the results of phase 2.

The co-creation process in phase 2 was based on three core principles.

Firstly, carbon removals should not be used as a substitute for reducing emissions. Financing permanent removals should help speed up rather than deter accelerated investments to support drastic emissions reductions.

Secondly, the EU should establish separate targets for emissions reduction, land-based sequestration, and permanent removals.

Thirdly, this process will only consider alternatives to the integration of permanent removals in the EU Emissions Trading System.¹

Phase 2 of CO2ol Down did not assess whether the considered framework can also, in parallel, support important, yet likely more vulnerable, biogenic sequestration activities. Incentivising nature conservation and restoration activities, which primarily protect biodiversity but also enhance carbon uptake from natural sinks, remains urgent but requires dedicated policy efforts and solutions beyond the domain and purview of carbon removals.

¹ While all participants agreed to focus this process specifically on exploring alternatives to ETS integration, this does not preclude individual stakeholders from considering ETS integration a potentially valid approach in other contexts.

Process

Around 20 interested people met at two workshops in Brussels in May and June 2025 to co-create proposals for regulatory instruments for permanent removals in the EU. These participants represented civil society, academia, non-profit organisations and business.

The final proposal was assembled by Carbon Market Watch under the guidance of the CO2ol Down editorial board. The editorial board consisted of a selection of CO2ol Down workshop participants who helped streamline the results of the workshops' discussions and resolve differences of opinion. The proposal was sent to all participants for feedback prior to publication.

The proposal is co-owned by all stakeholders involved. While co-creation is grounded in collaboration, some differing perspectives did arise. To represent the views of all participants fairly, key areas of disagreement are reflected at the bottom of the document.

Content and summary

This document elaborates on the basic elements of a prototype for an EU permanent carbon dioxide removals financing framework, in the form of a proposal for an EU regulation. The drafted prototype regulation establishes a financing framework for deploying and governing permanent removals that is both short term (to the end of the 2020s) and long term (to 2050 and beyond), (articles 1-3).

It also envisages financial and regulatory instruments for early-stage research, testing and procurement (articles 4-6). This would be achieved through an EU research, development and innovation initiative for permanent removals with a technology readiness level (TRL) of 1 to 5 and an EU permanent CDR pilot procurement programme for the purchase of EU carbon removal units with a TRL of 6 to 9.

Moreover, our blueprint outlines a pathway towards a compliance market through the creation of an EU removals compliance scheme with obligations for covered entities to buy permanent removals in the longer term (articles 7-10).

This proposal is the result of a co-creation exercise that drew on the collective contributions of participants. It reflects diverse input and offers to enrich the policy debate on financing permanent removals.²

Summary of the provisions

Chapter 1: General provisions

Article 1 defines the purpose of the regulation. This is to establish measures that support the development and delivery of a secure and sustainable supply of high-quality permanent removals at scale within the European Union to supplement drastic emissions reductions. It clarifies that such measures shall respect sustainability, social justice and ethical principles, contribute to competitiveness, and ensure investment in innovation and infrastructure.

² DG Climate is currently exploring the design of an EU purchasing programme for permanent removals.

Article 2 sets the scope of the regulation. It limits support to permanent CDR methods that remove carbon dioxide from the atmosphere and store it securely for at least 1,000 years, which is consistent with the best available science. It requires compliance with additional quality, sustainability and ethical criteria beyond those in the Carbon Removals and Carbon Farming (CRCF) Regulation, including the “do no significant harm” and precautionary principles, human rights safeguards, and the principle of additionality. The article also specifies that removals supported under this regulation contribute to the EU’s greenhouse gas inventory and climate targets, while ensuring that funding for country projects outside the bloc does not result in tradable Union removal units.

Article 3 lays down definitions, including for “atmospheric removal credits” (ARCs), the financial instruments that will underpin the future compliance scheme, and the “ability to pay” principle.

Chapter 2: Researching, testing and developing permanent carbon removals

Article 4 establishes a dedicated research, development and innovation (RDI) initiative for permanent removals for projects with technology readiness levels (TRL) between 1 and 5. Money should come from existing funding programmes within the EU budget, particularly the research and innovation programme succeeding Horizon Europe. Member states can also voluntarily contribute to the funding.

Article 5 creates an EU permanent CDR pilot procurement programme to purchase high-quality permanent removal units from projects with TRLs between 6 and 9. The programme would be managed by an existing EU institution or agency on behalf of the Union and would contribute towards the EU’s climate goals. Funding would come from a mix of public (the EU budget, including part of the Innovation Fund, and member state contributions) and private sources. National governments providing funding can get permanent removal units in return which would count towards their national targets for permanent removals. Private companies would contribute financially in forms of donations and receive participation certificates to use towards their potential voluntarily set monetary targets for removals. It specifies details on the implementation of the procurement process, including use of offtake agreements.

Article 6 empowers the Commission to set rules for eligibility, procurement, and funding, for both the RDI initiative and the pilot procurement programme, through delegated acts. The eligibility will be based on, but not limited to, the CRCF. These acts must establish a multi-criteria assessment process for project evaluation which considers cost, scalability, innovativeness, sustainable resource use, co-benefits and risks, and overall potential for permanent removals. The aim is to ensure a diverse and innovative CDR portfolio and to avoid an outcome dominated by the cheapest options.

Chapter 3: Achieving Climate Neutrality and Net-Negativity

Article 7 requires the Commission, by 1 January 2030, to present a legislative proposal establishing an EU permanent removals compliance scheme (EU RCS). The scheme would introduce a carbon dioxide removal obligation for defined “covered entities”, requiring them to purchase ARCs (as defined in Article 3) to meet compliance obligations starting no later than 2035. The proposal would need to be based on an impact assessment analysing the environmental, economic and social effects and consider the polluter pays and ability to pay principles, historical responsibility and equity.

The EU RCS would create a long-term compliance market to provide a predictable revenue stream for permanent removals and ensure that residual emissions are counterbalanced by 2050. The article also mandates periodic reviews, in consultation with the European Advisory Board on Climate Change, to reassess the definition of residual emissions and the sustainable potential of removals.

Article 8 outlines rules for the purchase, transfer and cancellation of ARCs within the future compliance scheme. It provides parameters for the establishment of an EU-wide registry to ensure the transparency and traceability of the issuance, holding and cancellation of credits, and allows the transfer of ARCs between member states and covered entities.

Article 9 establishes a central purchasing and reselling platform (CPRP) to manage carbon dioxide removal units under the EU RCS. The CPRP would:

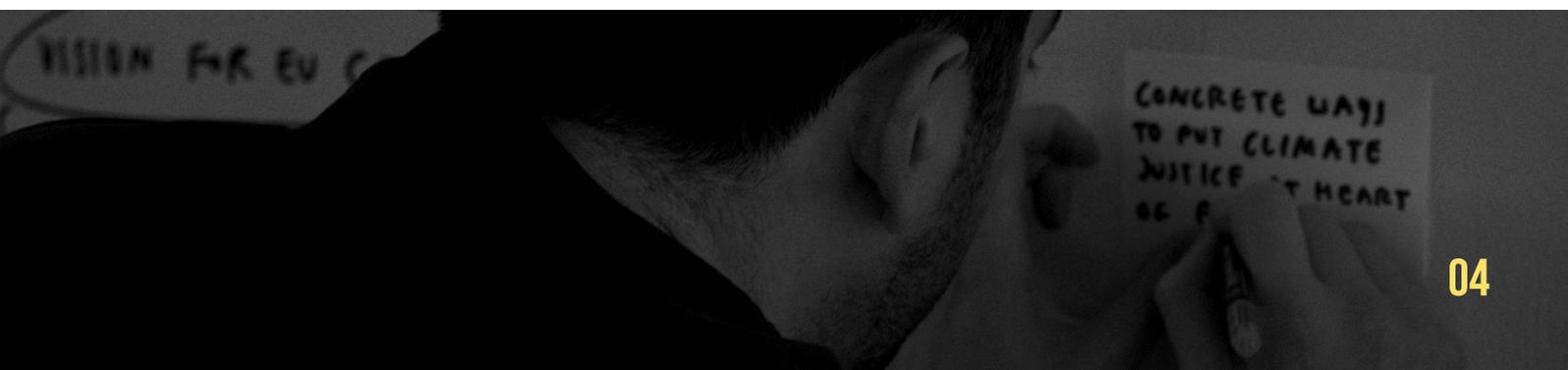
- maintain a diversified portfolio of CRCF certified removal methods which respect the additional criteria included in Article 2
- purchase units centrally and allocate fractions into standardised ARCs
- address liability and quality risks
- set price mechanisms to ensure a sufficient supply of removals to meet EU-wide obligations

The platform would enable both compliance trading among obligated entities and voluntary participation by non-obligated actors contributing to Union targets.

Article 10 defines legitimate uses of ARCs. Removals purchased for compliance purposes would be reported under the Union's GHG inventory and would not be eligible for private sector offsetting. Companies would only be allowed to state that their financial contributions have supported the EU's climate targets and NDCs and use them towards their potential monetary targets for permanent removals.

Chapter 4: Review and Governance (Article 11)

Article 11 provides for a review clause. The Commission would review the scope, definitions and functioning of the regulation within 2 years after its entry into force, with particular attention to the definitions of permanent removals and residual emissions, in light of IPCC findings and technological progress. Regular five-year reviews thereafter will assess the effectiveness of the framework, including its contribution to achieving net-negative emissions from 2040 onwards, and determine whether to expand the scope of compliance obligations to additional sectors or entities.





EXPLANATORY MEMORANDUM³

Context of the proposal

Reasons for and objectives of the proposal

Urgent, ambitious and sustained near-term emissions reductions remain critical to successfully tackling the climate crisis. Without those, the balancing of emissions sources and sinks, and the temperature objectives of the Paris Agreement, are impossible to reach. While we urgently need global emission reduction efforts to accelerate, there is also a need to support the development of a sustainable, permanent carbon dioxide removal (CDR) capacity to bring down net emissions in the short term and eventually balance out limited residual emissions to reach net-zero emissions and achieve net negativity thereafter.

There are four overarching objectives that policy instruments to finance permanent removals should seek to achieve:

- 1. Supplementing emissions reductions:** Incentives to finance the scaling up of permanent removals should not come at the expense of reducing emissions and protecting and enhancing natural ecosystems. Rather, synergies have to be utilised to maximise all three sustainably.
- 2. Ensuring quality of supply:** Incentives should be directed towards a portfolio of permanent removal methods that promote sustainability, justice and ethical criteria that respect the ‘do no harm’ and ‘precautionary’ principles, as well as planetary boundaries.
- 3. Triggering short-term investments:** Investment in permanent removals has to start in the near term to allow time for developing and testing methods, enhancing knowledge and addressing potential impact, as well as making technologies (commercially) viable at scale. Good policy would help trigger and de-risk investment.
- 4. Sustaining long-term deployment:** Policy options to finance permanent removals should be predictable enough to secure and sustain the supply needed to achieve net-negative emissions in the longer term.

³. The present explanatory memorandum contains preliminary text included for inspiration. It should be supplemented by the European Commission with the following sections: legal basis; subsidiarity and proportionality; results of ex-post evaluations, stakeholder consultations and impact assessments; budgetary implications; and any other necessary elements.

Consistency with EU climate policies

This proposal contributes to the implementation of the EU Green Deal and the European Climate Law's objective to reach climate neutrality by 2050 by balancing emissions with removals, and the aim to achieve net negative emissions thereafter, and to the achievement of the proposed EU climate target for 2040.

This proposal complements and builds on Regulation (EU) 2024/3012 establishing the Union framework for the certification of carbon removals and carbon farming, while adding additional criteria to ensure the integrity of an EU financing framework for permanent removals.

The suggested framework remains coherent with existing Union funding instruments, including Horizon Europe and the Innovation Fund, by creating synergies and ensuring targeted support for research, innovation and deployment of innovative solutions. It fills a structural gap in the EU's climate policy architecture by creating a dedicated framework for permanent carbon dioxide removals.

Consistency with other EU policies

This initiative is linked to many other policy areas, as all EU actions and policies should foster EU competitiveness, and a just transition towards climate neutrality and a sustainable future.

It supports the objectives of the Net-Zero Industry Act by fostering innovation, investment and the creation of industrial value chains for permanent carbon dioxide removals within the Union.



A SUGGESTED PROTOTYPE FOR AN EU CDR FINANCING FRAMEWORK, IN THE FORM OF A REGULATION

Proposal for a regulation on an EU permanent carbon dioxide removal development and delivery framework

Recitals

...

Chapter 1 General provisions

Article 1

Purpose/Subject matter

1. The general objective of this regulation is to support the development and delivery of a secure and sustainable supply of high-quality, permanent carbon dioxide removals, which includes the capture, transportation and geological storage of atmospheric carbon dioxide, at scale within the European Union, as a supplement to drastic emissions reductions. It shall contribute to achieving the Union's greenhouse gas neutrality and net-negativity objectives as per Article 2 of Regulation (EU) 2021/1119, while safeguarding the Union's net removal target for natural sinks as enshrined in the EU Land Use, Land Use Change and Forestry (LULUCF) Regulation EU 2018/841. This regulation shall respect sustainability, justice and ethical criteria, as well as planetary boundaries, while ensuring competitiveness and investments in infrastructure, skills and innovation.
2. To achieve the general objective referred to in paragraph 1, this regulation lays down measures aiming to:
 - (a) Support sustainable research, testing and development at scale of a diversified portfolio of permanent carbon dioxide removal methods and their value chains.
 - (b) Accelerate the scale-up and deployment of mature and sustainable methods, in line with Article 2 (4) of this regulation.
 - (c) Ensure consistency with the rules and objectives related to CO₂ transport and storage infrastructure included in Regulation EU 2023/0081 and Directive 2009/31/EC.
 - (d) Ensure that funding pooled through the implementation of this framework is directed to finance projects that deliver high-quality carbon removals, which do not include capture and storage of fossil CO₂ at the point source to reduce production emissions.
 - (e) Empower the European Commission to establish specific eligibility criteria and develop a ladder for funding permanent removal projects, building on Regulation (EU) 2024/3012.

- (f) Ensure that proper mechanisms are in place to oversee ownership of the removal units it enables to create, and clarify the permissible use cases or the immediate cancellation of such units and attached liability.
- (g) Ensure human rights and social justice concerns are respected when carbon removal projects are implemented, in line with Article 2 (4) of this Regulation.
- (h) Establish mechanisms to pool, coordinate and disseminate knowledge, data, and best practices related to permanent carbon dioxide removal methods, including their environmental integrity, monitoring methodologies, technological performance, cost-effectiveness, and societal acceptance.

Article 2

Scope

1. This regulation applies to those permanent removal methods, included in the definition of Regulation (EU) 2024/3012, that can remove carbon dioxide from the atmosphere and ensure its storage for at least 1,000 years. The mentioned duration is in line with the best available science on the durability of carbon storage⁴ to stay within the temperature limits of the Paris Agreement. This definition may be subject to review, in line with Article 12 of this regulation, on the basis of future reports on carbon removals by the Intergovernmental Panel on Climate Change.
2. Carbon dioxide removal methods supported under this regulation shall meet strict quality and sustainability criteria. In line with Article 6 of this regulation, the Commission shall develop the appropriate eligibility criteria to be considered for the financial instruments referred to in this regulation, building on, but not limited to, those set out in Regulation (EU) 2024/3012 establishing the Union framework for the certification of carbon removals, carbon farming and carbon storage in products. These criteria shall serve as a baseline to ensure the environmental and social integrity of supported projects. In addition, methods must comply with ethical and sustainability principles, in accordance with applicable EU, international and national law. Particular attention shall be paid to:
 - (a) Compliance with the ‘do no significant harm’ and precautionary principles, in accordance with Regulation (EU) 2020/852
 - (b) Compliance with human rights law, including the prohibition of modern slavery, forced labour and the protection of affected communities and vulnerable groups, in accordance with EU Regulation 2024/3015 to Prevent Forced Labour and in line with the Union’s treaties and the Charter of Fundamental Rights
 - (c) Additionality, as defined by Regulation 2024/3012 and in line with rules on co-financing referred to in Article 6 (2), meaning that the removals would not have occurred in the absence of support under this Regulation and go beyond existing legal obligations
3. This regulation establishes a framework to support the development and deployment of permanent carbon dioxide removal activities, primarily within the territory of the European Union. Removal units generated under this regulation shall contribute to the achievement of the Union’s climate objectives, including its climate neutrality and net-negativity objectives, and the nationally determined contributions (NDCs) under the Paris Agreement, and shall be accounted for under the Union’s greenhouse gas inventory.

⁴ Brunner, C, Hausfather, Z & Knutti, R, ‘Durability of carbon dioxide removal is critical for Paris climate goals’, Communications Earth and Environment 5, article 645, 2024. <https://doi.org/10.1038/s43247-024-01808-7>

4. Financial support provided to eligible activities based in third countries shall be considered a form of international climate finance in line with the Union's obligations under the Paris Agreement, and shall not give rise to tradable removal units used for the purpose of complying with Union targets.

Article 3

Definitions

For the purposes of this regulation, the following definitions apply:

(a) 'Ability to pay' stipulates that the burden of climate mitigation and action should fall on those who are most able to meet that burden, also in line with the "common but differentiated responsibilities" framework of the United Nations Framework Convention on Climate Change.

(b) 'Atmospheric Removal Credits (ARCs)' are financial instruments consisting of multiple fractions of a variety of carbon dioxide removal activities that are certified under Regulation (EU) 2024/3012 and meet the additional criteria referred to in Article 2 (2) of this regulation. ARCs shall be bought by covered entities under the EU Removals Compliance Scheme referred to in Article 7 of this regulation to fulfil their obligations under the scheme.

(c)....

Chapter 2

Researching, testing and developing permanent carbon removals

Article 4

Research, development and innovation funding

1. The new seven-year Multiannual Financial Framework and the research and innovation programme succeeding Horizon Europe shall take into account the need for dedicated funding for accelerating innovation in permanent carbon dioxide removals.
2. By [1 January 202X] the Commission shall establish a dedicated research, development and innovation initiative for permanent carbon removals.⁵ The initiative shall be aimed at supporting and coordinating funding for EU projects in line with Article 2 of this regulation. The initiative should leverage at least [€XX]⁶ of funding within current EU funding programmes.
3. The initiative may allow member states to pool voluntary contributions dedicated to research, development and innovation on a diversity of permanent carbon dioxide removal methods.

The Commission shall also facilitate the establishment of permanent removals regulatory sandboxes, for the testing and accelerated deployment of innovative permanent carbon dioxide removal technologies and business models. These sandboxes shall enable project developers to operate under temporary, controlled regulatory conditions to identify and address legal, technical, environmental, and administrative barriers to innovation.

⁵ The model could draw inspiration from the European Hydrogen Bank and the Clean Hydrogen Joint Undertaking.

⁶ According to the European Commission's report on "An EU purchasing programme for permanent carbon removals" the EU's aspirational objective of 5 MtCO₂-eq of industrial removal per year by 2030 would require a total investment of approximately €2.4 to €6.7 billion, with the upper limit corresponding to a portfolio exclusively of medium TRL technologies (such as ERW, DACCS and BECCS): <https://data.europa.eu/doi/10.2834/8212975>. This budget still represents a small fraction of current fossil fuel subsidies in the EU, which amounted to 111 billion in 2023 according to the EEA: <https://www.eea.europa.eu/en/analysis/indicators/fossil-fuel-subsidies>.

4. To comply with paragraph 2, research, development and innovation funding shall be granted to projects whose technology readiness level is between 1 and 5. The Commission shall adopt delegated acts to supplement this regulation containing elements included in Article 6 below.
5. The collection, management and dissemination of data related to the carbon dioxide removal projects supported under the initiative shall be facilitated.

Article 5

EU permanent CDR pilot procurement programme

1. By [202x] the EU should start a pilot programme for the procurement of carbon removal units from projects with a TRL between 6 and 9 based in the EU. The aim of the pilot programme shall be to:
 - (a) Procure high-quality permanent removal units on behalf of the Union and help the Union build the permanent carbon removal capacity needed to achieve its climate neutrality and net-negativity target, in line with climate justice and the Union's historical and ongoing responsibility to tackle climate change;
 - (b) Support demonstration and scale up to first of a kind and next of a kind projects, and bring forward a diverse portfolio of methods;
 - (c) Reduce costs and demonstrate and test permanent removals technologies to understand their scaling potential;
 - (d) Aid, together with the Research, Development and Innovation initiative for permanent removals referred to in Article 4 of this regulation, in creating a pipeline that feeds into EU compliance policies on permanent removals in the longer term.
2. The programme shall be publicly managed by an existing EU institution or agency. The total budget for the pilot procurement programme shall be of at least [€XX]⁷ by [20XX]. The responsible institution shall coordinate funding pooled from both public and voluntary private sources, starting with dedicated streams for permanent removals and a portion of existing funding streams based on the polluter pays principle, as defined by Directive 2004/35/EC, within the EU budget, such as the EU Innovation Fund.

Member states may provide funding to the EU procurement programme, resulting in the allocation of removal units to be used to achieve national targets for permanent removals.

Prior to the entry into force of the EU Permanent Removals Compliance Scheme referred to in Article 7 of this regulation, private parties may also contribute to the funding of the EU procurement programme by means of donations, and receive participation certificates with a view to achieving voluntarily established monetary targets for permanent removals.
3. The tonnes of CO₂ removed and procured by the Union and its member states shall be accounted for in the Union's NDC and used to comply with separate EU and national targets for permanent removals.

⁷ Ibid.

4. The pilot programme shall be implemented through offtake contracts⁸ between permanent carbon removals operators and the designated Union counterparty. The maximum contract value for a given operator shall not exceed [€XX]. Each offtake contract shall have a duration of up to three years and shall specify:
- (a) The quantity, expressed in tonnes of CO₂, of permanent removals to be delivered by the operator;
 - (b) The price per unit;
 - (c) The delivery schedule.
5. Offtake contracts shall also include provisions addressing cases of under-delivery by the operator. Such provisions shall ensure that any penalties are proportionate.
6. The Commission shall adopt delegated acts, in accordance with Article 6 of this regulation, to establish eligibility rules for bid submissions under the pilot programme.

Article 6

Delegated acts including rules on funding and public procurement

1. In addition to the general criteria included in Article 2 of this regulation, the Commission shall adopt delegated acts which establish the rules and requirements for applying to the research, development and innovation funding and the pilot procurement programme as referred to in articles 4 and 5 of this regulation, and specify how they will be implemented and operated.
2. For both the Research, Development and Innovation initiative and the EU pilot procurement programme, delegated acts shall include additional rules on:
- (a) The application process and procurement procedure, in line with articles 4 and 5 of this regulation;
 - (b) Eligibility of methods, following a portfolio approach;
 - (c) Eligibility criteria for projects, based on, but not limited to, respecting the criteria under Regulation 2024/3012 and in line with Article 2 of this Regulation;
 - (d) Allocation of funding among different family of methods;
 - (e) The maximum funding per project;
 - (f) Co-financing or co-purchasing by EU member states, public bodies and/or private entities;
 - (g) The nature of applicant(s), including a demonstrated business plan and storage potential and exclusion of fossil fuel producers;
 - (h) The assessment process for the evaluation of grant applications and submitted bids based on a broad range of criteria, including:
 - 1. Cost;
 - 2. Scalability;

⁸ An offtake contract is a contractual commitment in which a buyer agrees to purchase all or a substantial portion of the supplier's future output, typically at pre-agreed prices.

3. Innovativeness;
4. Sustainable use of resources;
5. Co-benefits and risks (environmental and social);
6. Efficiency;
7. Overall potential for permanent removals;
8. Synergies with emissions reduction.

Priority shall be given to projects with the highest total score, including highest score for each of these criteria.

Chapter 3 **Achieving climate neutrality and net-negativity**

Article 7

Establishment of an EU Permanent Removals Compliance Scheme

1. No later than [01/01/2030], the European Commission shall present a legislative proposal establishing an EU Permanent Removals Compliance Scheme (hereinafter referred to as EU RCS). The scheme shall set a carbon dioxide removal obligation requiring covered entities to purchase atmospheric removal credits (ARCs), as defined in Article 3 of this regulation.

In preparing that proposal, the Commission shall pay particular attention to the definition of covered entities and their respective compliance obligations⁹, with a view to initiating such obligations by no later than 2035. The legislative proposal shall be accompanied by an impact assessment analysing the expected environmental, economic and social impact of the proposed measures.

2. The objective of an EU RCS shall be to create a long-term, dedicated compliance market to provide the reliable revenue stream needed to finance permanent removals at the scale needed to supplement, rather than substitute, the Union's emissions reduction objectives and contribute to the Union's climate neutrality and net-negativity objectives.
3. The legislative proposal and accompanying impact assessment referred to in paragraph 1 shall be based on policy options considering the polluter pays and ability to pay principles, equity, as well as historic and ongoing emissions responsibility. It shall also respect the objectives laid down in Article 1 of this regulation.

The obligation for covered entities shall be informed by an assessment of the needs for and sustainable potential of permanent carbon removals in the Union and shall ensure that the total amount of Union-wide residual emissions are counterbalanced with removals by 2050, and net-negative emissions are reached thereafter. What is understood and calculated as residual emissions shall be regularly reviewed, at intervals of no greater than 10 years subsequently in consultation with the Advisory Board, taking into account criteria of technological availability and social necessity. Residual emissions shall be subject to transparent and robust accounting.

The EU RCS shall also be designed in a way that provides clarity on the overall demand for permanent carbon dioxide removals so as to ensure certainty for permanent removal operators, spread the cost of permanent removals, reduce the burden for obligated entities and safeguard competitiveness.

4. The legislative proposal referred to in paragraph 1 shall incorporate the provisions referred to in Article 8, 9 and 10 of this Regulation.

⁹Suggestions for potential approaches are included on page 15

Article 8

Purchase, transfer and cancellation of atmospheric removal credits

1. In the legislative proposal to establish the RCS referred to in Article 7, the European Commission shall include provisions for the establishment and maintenance of a registry in order to ensure the accurate accounting of the issuing, holding, transfer, surrendering and cancellation of ARCs.
2. The European Commission shall ensure that surplus ARCs can be indirectly transferred between persons within the community of covered entities through a centralised platform, as outlined in Article 10.
3. The European Commission shall ensure that ARCs issued by a competent authority of another member state are recognised for the purpose of meeting an entity's obligations.
4. The European Commission shall ensure that, by 30 April of each year at the latest, each covered entity purchases a number of ARCs equivalent to their obligation.
5. The European Commission shall take the necessary steps to ensure that ARCs will be cancelled once they are used to fulfil an entity's obligations and cannot be traded anymore.

Article 9

EU RCS Central Purchasing and Reselling Platform

1. The Commission shall, in addition to its ARCs registry, establish a centralised procurement programme governed by a Central Purchasing and Reselling Platform (hereinafter 'CPRP'). The Platform will be responsible for the management and oversight of carbon dioxide removal units within this market in order to provide stability and enable it to reach the targets set out in Article 7.
2. The CPRP shall also:
 - (a) Select a portfolio of permanent removal units certified under Regulation (EU) 2024/3012 which respects additional social and environmental criteria referred to in Article 2 (2) of this regulation, in line with Article 1 (1). When selecting the activities to be part of the portfolio, the CPRP shall use the criteria referred to in Article 6 (2) point h;
 - (b) Enable the delivery of the portfolio of domestic permanent removal methods referred to in point a) by centralised purchasing of units from a variety of methods which contribute to a fraction of an ARC. Each ARC shall consist of multiple fractions of carbon dioxide removals coming from all methods in the portfolio, summing up to 1. This shall ensure the equal value of ARCs and enshrine a portfolio approach in their design;
 - (c) Address liability issues in case of bankruptcy of covered entities, reversals of carbon dioxide removal units used within this market, or discovery of integrity issues of such units;
 - (d) Establish price mechanisms for atmospheric removal credits, ensuring the delivery of sufficient carbon dioxide removals in line with the needs, potentials and residual emissions referred to in Article 7 (3) of this Regulation;
 - (e) Define the value of an ARC in relation to GHG emission volumes, based on the best available science and metrics based on global warming potentials.

3. Through the CPRP, entities can trade their surplus removal units with other covered entities or bank them for use in the following calendar year, aligned with the provisions in Article 10.
4. Non-obligated entities can engage in this mechanism to contribute to their countries' permanent removal supplies, to claim their financial expenditure towards voluntarily established monetary targets for permanent removals, or to prepare for future obligations.

Article 10

Use cases of ARCs

1. Carbon dioxide removals achieved by complying with the obligation pursuant to Article 7 shall be reported in line with the following year's IPCC report on carbon removals and counted towards the achievement of the Union's permanent removal targets, climate neutrality and net-negativity targets, and included in future EU NDCs. Any overachievement of the Union's targets may lead to the selling of removal units to other countries in the context of Article 6 of the Paris Agreement.
2. ARCs purchased by installations shall be counted only once for the purpose of meeting the regulatory requirements set out in this regulation. The removals purchased as a result of these requirements shall not be used to counterbalance emissions for the purpose of making any corporate net-zero or emissions reduction claims. Companies may claim, however, that the removals purchased contributed to the achievement of the EU's climate targets and NDCs and claim the corresponding financial expenditure towards voluntarily established monetary targets for permanent removals.

Chapter 4

Article 11

Review clauses

1. Within two years after its entry into force, the Commission shall review the scope and functioning of this regulation and suggest changes as appropriate, particularly with regard to but not limited to the aspects listed below:
 - (a) The definition and scope of permanent removals referred to in Article 2 (1), in line with upcoming reports by the Intergovernmental Panel on Climate Change.
 - (b) The definition and scope of residual emissions shall be reviewed in consultation with the Advisory Board at intervals of no greater than [10] years, and necessary, evidence-based adjustments to this regulation shall be made accordingly. These reviews shall be based on social necessity and technological availability.
 - (c) The review should take into account the legislative proposal on the EU RCS referred to in Article 7 and assess the need to further expand the obligations to purchase ARCs to other entities.
 - (d) The regulation shall be subject to review every [5] years. From the year [2040], a separate review for the delivery of net-negative emissions shall be conducted in parallel.

**Suggestions for
Scope of the EU RCS, referred to in Article 7**
[Definition of obligated entities]

1. For the purpose of defining the entities covered by the scheme, the Commission shall use the following sequencing approach:

Option 1:

(a) In phase 1, from [2030 to 2040], the obligation will only apply to EU installations from sectors with the largest share of emissions, including but not limited to those covered by the EU ETS, as well as fossil fuels producers and suppliers.

(b) In phase 2, [from 2040 to 2050], the scope of covered entities shall expand to include:

i. Any installation or company in the EU emitting above a sector-specific threshold level of GHG emissions per production unit (emissions intensity).

ii. Any installation or company in economic sectors with large value added but lower direct emissions. Taxation of intellectual property creation and related income and wealth may supplement the raised funds.

(c) In phase 3, [from 2050 onwards], the removals supply needed to reverse overshoot and achieve net-negative emissions shall include, at the EU level, public revenue coming from progressive taxation schemes.

Option 2:

(a) In phase 1, from [2030 to 2040], the obligation will only apply to EU installations from sectors with the highest expected emissions, including but not limited to those covered by the EU ETS 1 and EU ETS 2, as well as fossil fuel producers and importers [based on their production volume between 2035 and 2040], utilising forecasting and accounting methods that shall be defined according to the best and most equitable available methodologies. Financed removals through these obligations shall be used to reverse climate overshoot and clean up historical emissions.

(b) In phase 2, [from 2050 onwards], the removals supply needed to reverse overshoot and achieve net-negative emissions shall be sustained by introducing a negative emissions performance standard for companies, which will need to keep their net-emissions (scopes 1, 2, and 3) under a defined negative level to be allowed to operate. The required amount of negative emissions can be reached both through companies' internal activities and the purchase of ARCs. The threshold to be reached by companies shall be adjusted to sectors' expected ability to pay, with a minimum threshold that respects the polluter pays principle and climate justice.

PARTICIPANT LIST

Ulriikka Aarnio*	Climate Action Network Europe	CSO
Vikrum Aiyer	Heirloom	Industry
Francesca Battersby	Carbon Gap	Non-profit
Petra Bistrinic*	Carbon Balance Initiative	CSO
Martin Cames	Oeko-Institut	Research institute
Fabiola De Simone*	Carbon Market Watch	CSO
Alice Evatt	University of Oxford	Academia
Benjamin Gorlach	Agora Energiewende	Research institute
Lambrini Margariti*	Negative Emissions Platform	Industry
Nils Markusson	Lancaster University	Academia
Leo Mercer	Grantham Research Institute on Climate Change and the Environment, LSE	Research institute
Silke Mooldijk	NewClimate Institute	Research institute
Mark Preston*	Bellona	CSO
Ennio Prizzi	Bioenergy Europe	Industry
Ileana Repaci	Bioenergy Europe	Industry
Felix Schenuit*	SWP	Academia
Wijnand Stoefs*	Carbon Market Watch	CSO
Kasia Wilk	Elimini (Part of Drax Group)	Industry
Duncan Woods	Sandbag	CSO

*Part of the editorial group



DIVERGING VIEWS

Drax/Elimini have different perspectives on the following elements:

- **Claims and accounting:** We agree that removals used in compliance markets should not also be used in voluntary markets. However, we believe that buyers of compliance removal units would still be permitted to make corporate net-zero or other voluntary claims (as emission reductions supported by ETS may still be claimed against corporate targets), provided the party generating/selling the unit correspondingly adjusts their GHG inventory. We also support 'co-claiming' – counting and claiming removals towards both corporate and national inventories – which is common practice and distinct from double counting within a single accounting system.
- **Treatment of international permanent carbon removal units:** We support allowing permanent removal units from third countries to count toward EU targets, provided they are subject to corresponding adjustments in accordance with Article 6 of the Paris agreement. The proposal appears to support the export of credits from the EU. If export is permitted, it would be inconsistent not to also allow the corresponding import of eligible permanent removals.
- **Timelines:** we consider the proposed schedule – particularly for the EU Permanent Removals Compliance Scheme – not sufficiently ambitious to enable the scale-up required to meet climate objectives.

COOL DOWN

Co-creating a common EU
vision of carbon removals

Editor

Khaled Diab, Carbon Market Watch

Cover design and layout

Magdalena Zawieracz, Carbon Market Watch

Photo Credit

- © Magdalena Zawieracz
- © Miriam Vicente Marcos
- © Canva Images

This project has received funding from the Quadrature Climate Foundation. Any opinions, findings, conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the view of these funders .