

ZEP response to the call for feedback on the adopted proposal for a regulation establishing a Union certification framework for carbon removals

The Zero Emissions Platform (ZEP) welcomes the initiative to establish a certification framework for carbon removal activities, seeing it as a first step towards the establishment of a flourishing market that instils trust in carbon credits. Carbon removals will be a crucial component of the EU's green toolbox and their deployment at scale will complement the much-needed emissions reductions that can be achieved through solutions such as CCS, enabling the EU to reach carbon neutrality by mid-century. The recognition and support lent to these activities must reflect the crucial role they play, avoid misconceptions and establish a level-playing field where the climate benefits of each activity are accurately measured, monitored and recognised.

It is essential that the EU has the right framework in place, from an accurate identification of what constitutes carbon removals to the recognition of permanent solutions, supported by thorough carbon accounting from a life-cycle perspective, as outlined below. We welcome the opportunity to provide feedback on the proposal and are pleased to continue to contribute to the work process, remaining available to expand on any element of this feedback.

Storage timescales – defining and recognising permanent storage

ZEP welcomes the inclusion of a definition of “permanent carbon storage” in the proposal. Furthermore, we stress that setting an indicative timeframe can provide a signal to both the markets and the general public of the level of security that geological storage can provide. Getting the definition of “permanence” right is therefore crucial and it must reflect the fact that geological reservoirs offer the opportunity to safely store CO₂ for thousands of years.

In the same fashion, the definitions should indicate the different storage timeframes that the different carbon removal activities set out to achieve, as well as communicate the risk of reversal – for carbon storage in products and carbon farming, a timescale from decades to centuries seems appropriate. This includes clarifying what is envisioned as “long-term storage” under the meaning of Article 6 of the proposal.

The different timescales and risks should also be included in the minimum information required in a certificate, as listed in Annex 2, allowing for the differentiation of the activities supported under the framework and for the commensurate recognition of the benefits that geological storage offers.

Defining carbon removals

As currently drafted, the proposed regulation includes activities that lead to carbon reductions in its definition of carbon removals by including the “reduction of carbon release from a biogenic carbon pool to the atmosphere”. This must be avoided so as to clearly distinguish activities that lead to

reductions and removals. We call for a more robust and thorough definition of carbon removals, underpinned by the following principles¹:

1. CO₂ is physically removed from the atmosphere.
2. The removed CO₂ is stored out of the atmosphere in a manner intended to be permanent.
3. Upstream and downstream greenhouse gas emissions, associated with the removal and storage process, are comprehensively estimated and included in the emission balance.
4. The total quantity of atmospheric CO₂ removed and permanently stored is greater than the total quantity of CO₂ emitted to the atmosphere.

Where principles 1 and 2 are screening criteria, as failure to meet them prevents processes from qualifying as removals.

Clarifying eligibility criteria is needed to provide predictability for developers and investors

A clarification of the eligibility of certain activities is needed for predictability. While the proposal mentions BECCS explicitly as a carbon removal activity that can qualify for certification, it is not clear whether blue economy solutions or waste-to-energy facilities with CCS fall in the scope of the framework, particularly in light of the provisional agreement reached between the European Parliament and the Council on the EU ETS revision and which would have municipal waste incineration facilities included in the EU ETS from 2028 onwards (subject to a positive assessment from the EC). As only the fossil emissions from waste-to-energy will fall under the EU ETS, it is important that there is also an incentive to capture the biogenic CO₂ fraction. The capture and storage of biogenic CO₂ in the waste-to-energy sector should be recognised as a removal activity and be able to generate certificates under the EU framework. This will unlock important revenue streams for waste management activities, enabling the industry to deliver on its large removal potential (36 million tonnes per year, according to a recent paper²).

The regulation should also provide enough flexibility to incorporate new technological solutions that can mature over the coming years.

Moreover, the regulation should clarify how carbon removal activities with trans-boundary value chains – including where storage takes place outside of the EU – will be treated. In this respect, it is also recommended that a mechanism for the (mutual) recognition of high-quality storage sites is put in place and applied for the purposes of certification as well as accreditation under the EU ETS.

Quality criteria

The high-level principles defined in the framework are essential to ensure that certified activities deliver real carbon removals with accurately quantified environmental benefits, as well as to ensure their alignment with environmental sustainability objectives (e.g., biomass use). Compliance with

¹ Adapted from Tanzer, S. E., & Ramirez, A. (2019). [When are negative emissions negative emissions?](#). Energy & Environmental Science, 12(4), 1210-1218.

² Rosa, L., Sanchez, D. L., & Mazzotti, M. (2021). [Assessment of carbon dioxide removal potential via BECCS in a carbon-neutral Europe](#). Energy & Environmental Science, 14(5), 3086-3097.

these principles will allow developers to address concerns from buyers and the public, building trust among market participants.

The certification of carbon removal activities must be based on a robust, transparent, and complete quantification of the CO₂ that has been removed. In this sense, a cautious and comprehensive verification of principle 3 (in the section ‘Defining carbon removals’ above) is critical to make sure that all associated emissions are included in the life-cycle analysis (including energy/electricity input). Crucially, this also implies that while some technologies have the potential to lead to carbon removals, a case-by-case approach is needed to ensure that projects deliver real carbon removals. The quantification of the net carbon removal benefit should also take into account the inherent differences between technological and nature-based solutions, particularly when it comes to the assessment of the compliance of the activities with the additionality principle – for many activities, the incentive provided by the certification will likely complement state/Union grant funding.

Net-zero and net-negative objectives require large volumes of removals and a rapid scale-up. When establishing certification methodologies, it is important to leverage on existing carbon accounting methodologies for engineered carbon removals (e.g., GHG quantification in the Innovation Fund). This will avoid duplication and allow to speed up support to carbon removals under the EU framework. Similarly, and recognising that methodologies for different activities may take longer to establish than others, it is important to allow for a phased implementation – i.e., as soon as methodologies are developed for each activity, certification schemes should be able to apply for recognition.

Usage of certified carbon removal units

The adopted Regulation does not include provisions on the allowed uses of carbon removal units certified under the EU framework. We welcome the European Commission’s commitment to investigate and provide guidance on how permanent carbon removals – and the credits generated under the framework – could be integrated in the EU’s carbon market, as laid out in the provisional agreement on the EU ETS revision. However, further clarity on the different use cases is needed and should be explored in the expert group on carbon removals.

Interaction with other frameworks

The proposed EU framework can provide a good basis for the development of similar approaches outside the EU as well as for global carbon market transactions under Article 6.4 of the Paris Agreement. Sharing knowledge and experience at all levels will facilitate the development of similar international approaches, helping to establish a level-playing field for carbon removal activities and unlock further opportunities for developers. In this context, guidance for the interaction with other frameworks as well as voluntary opt-ins for extra-EU countries should be explored.

With the proposed regulation, the EU will lay down the basic principles for identifying high-quality carbon removal activities. In the absence of an internationally agreed framework for carbon removals certification, the EU has the opportunity to set a global standard. With this in mind, it is important that both definitions and principles are carefully and accurately formulated. This will form the basis



on which methodologies will be developed, essential to guarantee support to quality removals in alignment with net-zero. ZEP will actively support the further work required to strengthen the proposed framework, notably via the recently set up expert group on carbon removals.

About the Zero Emissions Platform

ZEP is the advisor to the EU on the deployment of CCS and CCU – a European Technology and Innovation Platform (ETIP) under the European Commission’s Strategic Energy Technologies Plan (SET-Plan).

ZEP supports the European Union’s commitment to reach climate neutrality by 2050, defined as net-zero greenhouse gas (GHG) emissions by 2050. To this end, CCS technologies represent readily available and cost-efficient pathways for the decarbonisation of industrial and energy sectors in the European Union. Some applications of CCU – where CO₂ is stored in a manner intended to be permanent – can also contribute to this goal.