The Netherlands calls for the consideration of carbon removal procurement through revenues from the EU ETS

This working paper is based on the Dutch Roadmap for Carbon Removals and the roadmap's position on the ETS1. The Netherlands will determine its final position on the desirability of specific interventions when a total set of policy measures is available. Until then, positions should be considered conditional, in particular with regards to budgetary effects.

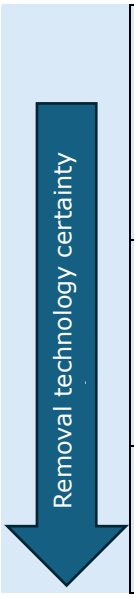
Carbon removals feature prominently in every single scenario for limiting warming to 1.5 degrees (IPCC, AR6 WGIII). The Communication on a 2040 Climate Target considers significant removal quantities to reach the recommended 90% reduction target in 2040. Beyond 2050, the EU aims to achieve net negative emissions.

At the moment, EU policy is insufficient to create a business case for carbon removals. The most important European instruments are the member state obligations under the LULUCF Regulation and the voluntary framework under the Carbon Removal Certification and Carbon Farming (CRCF) Regulation, but more is needed. Some countries have developed national policies, but these are not yet sufficient to kickstart European-wide deployment. As a result, the development and scale-up of carbon removals are lagging behind.

To realise carbon removals at the scale required, European instruments for carbon removals must be developed and implemented quickly. This will reduce uncertainty, further innovations, and scale up removal technologies. It will allow removal policies to be tested in the field. And it will open new technology markets that strengthen European competitiveness. These factors will help us reach our climate targets sooner and with more likelihood. This should be done with a consideration of key principles, including a continued focus on emission reductions, a strong monitoring, reporting and verification system (MRV), key sustainability criteria, certainty for investments required for large-scale deployment, and synergy with other European policy goals.

To achieve this, the Netherlands calls for the consideration of procurement of permanent carbon removals through revenues from the EU ETS. This could be implemented in the short run by staying close to existing legislation. This procurement auction would create a European merit order for carbon removals that balances cost-efficiency and innovation. Most importantly, it would incentivise removals now while keeping options open, e.g. for integration of removals into the ETS for hard to abate emissions.

The upcoming review of the ETS directive provides the opportunity to analyse and implement instruments to incentivise removals. The ETS is one of the EU's most successful climate interventions and is a major source of climate funding. However, altering the ETS to incentivise removals is a complex and far-reaching matter. By splitting the creation of a market for removals into phases, this complexity can be reduced. Three such phases for integration can be identified:



Stage 1: early development	Early on, uncertainty on the price and quantity of most removals is high while the emissions market is relatively mature and stable. Removals are systematically more expensive than emissions. In this phase information should be gathered on how different removals interact in a market space, while avoiding abatement deterrence and uncertainty on the emissions market. Innovation should already be facilitated through direct support and clarity on the future business case.
Stage 2: mid-stage deployment	As removal technologies mature, the cost of some technologies drop below the price of emissions. Others would still be very expensive. This phase requires instruments that can ensure the most cost effective technologies are deployed, while also scaling up options that might be effective in the long run. Possible instruments would need to ensure the uncertainty on the future price and quantity of removals does not significantly negatively affect the emissions market.
Stage 3: potential end game	In the potential end phase, many removal technologies are mature and specific regulatory issues – e.g. for ocean capture or biomass – are fully overcome. Uncertainty is much lower than in the early phase and is not a major factor in the choice of instruments. Instruments for achieving net-negative would still be needed.

We currently have very little information and certainty on how and when stages 2 and 3 will develop. As a result it is important to focus on solutions that a) fit stage 1, b) can be deployed quickly and c) keep open options for stages 2 and 3. This can be achieved by staying close to existing legislation such as the ETS and the Innovation Fund, as well as existing financial structures. Utilising ETS revenues generated through the sale of existing allowances to procure removals is the most promising way to achieve these conditions:

Removal procurement through ETS revenues in 3 components

1. **Create a financial envelope utilising ETS-revenues**. This envelope can consist of a fixed number of allowances and can include a financial maximum after which no additional funds are allocated. This approach based on externally assigned revenues (EAR) is currently employed to finance the Innovation Fund.
2. **Set up a reverse auction to procure permanent removal units compliant with the Carbon Removal and Carbon Framing Certification Regulation**. By using competitive auctions, cost efficiency is safeguarded and windfall profits cannot easily occur. The auction would function similarly to the Innovation Fund (e.g. for hydrogen) and could be combined with this instrument. By banking the certificates, the EU would realise removals without lowering emission reductions. Permanent removals currently lack support the most, in particular those using currently-deployable technologies such as CCS in biofuel refineries.
3. **Set caps on financial allocation or total tons removed per removal technology, following the CRCF methodologies.** Caps per technology can balance cost efficiency with the need to stimulate different technologies, and the CRCF methodologies offer an expedient way to do so. Caps could be set based on a maximum volume of specific technologies, a maximum financial allocation for individual technologies, or both. They could be defined in legislation or delegated acts and could be combined with Auctions-as-a-service to allow additional national action. A similar approach is currently employed in the Innovation Fund.

The result of this system would be a single procurement auction that realises removals for our 2040 target and creates a European merit order for carbon removals, while balancing cost-efficiency and innovation. It would be well suited for stage 1 and could be deployed quickly, as it combines existing, familiar, and proven legislation. Carbon removal developers would have a single point of sale where they know that if they deliver best-in-class technologies, they have a high probability of financing their product. National governments could choose to utilise the same system to set their own national priorities or policy goals. And the LULUCF and ETS would retain their current form, while experience is gathered for future reforms.

Above all, ETS-based removal procurement is flexible and fits current policy needs, while opening avenues to future options for stage 2 and 3. It could facilitate the transition towards the ETS end game by procuring removals and creating emissions allowances for hard-to-abate emissions without external revenue. Or it could be combined with integration of removals into the ETS and transformed into contracts-for-difference, combined with the IF to focus on innovation, or retained separately to contribute to net negative emissions. It could be expanded to temporary removals in products once these are broadly included under the IPCC-framework. And the Auctions-as-a-service could be coupled to future European instruments incentivising removals at the national level.

The common factor is that the system requires a relatively self-contained intervention while gathering information and experience that could be used to make and confirm targeted changes to the ETS. In other words, it opens doors without closing windows, as is fitting for an early-stage policy instrument.