



Vattenfall position on an EU framework for industrial carbon removals

Policy Paper

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- Vattenfall fully supports the EU's goals of becoming a climate-neutral economy by 2050 and achieving at least -55 % reductions of the EU's net-GHG emissions by 2030. **The 'Fit-for-55' package is a crucial initiative** to align the EU's 2030 policy framework with these goals.
- **Carbon dioxide removals (CDR) will be required** to reach 'net-zero' GHG emissions in the EU by 2050, in line with the global 1.5 °C target. Therefore, it is **urgent to put in place a robust EU certification framework for CDR** that ensures the real climate benefit of these activities and paves the way for new policy incentives targeting high-quality CDR projects.
- The use of **CDR credits must always be a complementary measure** to reach net-zero GHG emissions, meaning that it should not to any extent replace the efforts to reduce GHG emissions by phasing out fossil fuels. At the same time, CDR will be necessary to achieve the EU's goals, hence it is important to focus on both types of climate action at the same time.
- Vattenfall welcomes the plans for **a new EU-wide certification framework for CDR** as the backbone for scaling up CDR activities. Bearing in mind the time schedules of CDR projects in the planning today, such a system should become fully operational **no later than 2026**.
- There is a particular need to **focus on the technical solutions that can deliver high quality and long duration CDR**. As these are easier to monitor and verify, while also requiring more time to develop, compared to nature-based CDR, it could make sense to establish the EU certification framework in different tracks, in case that enables a faster implementation of CDR on the industrial side.
- The EU should set **a higher ambition level of industrial CDR in the 2030 horizon** than the 5 Mt CO₂ indicated by the European Commission. By just looking at the plans for Bio-Energy CCS (BECCS) projects in the Nordics, it is clear that the EU could accomplish a lot more.
- **New policy incentives that support CDR needs to be developed** directly in connection to the EU certification framework. The support for these activities needs to be enhanced on both the EU and national levels and this is clearly an issue also for the pre-2030 legislative cycle.
- The certification of a CDR project should result in **a delivery of credits to the operator that initiated and financed the carbon removal**. The ownership must be well defined, so that a trade in CDR credits can take place without any double-counting on company or country level.

Vattenfall is a European energy company with approximately 19,000 employees. For more than 100 years we have electrified industries, supplied energy to people's homes and modernized our way of living through innovation and cooperation. Our goal is to make fossil-free living possible within one generation. Everything we do and the decisions we take shall lead to this goal. This is the basis of Vattenfall's strategy, and we advocate for a regulatory environment that makes this transition possible – in the energy sector and beyond in transport, industry etc

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Carbon removals are increasingly important for reaching the 1.5 °C target and a more supportive policy framework is urgently needed

Vattenfall welcomes the initiative by the European Commission to prepare an EU-wide and robust certification framework for carbon dioxide removals (CDR) in the near term. Negative CO₂ emissions will be absolutely crucial for the ability to reach the EU's climate-neutrality goal for 2050 and should also contribute to delivering the EU's target of -55 % net GHG emissions reductions by 2030. At global level, it is obvious that enhanced carbon removals will be a necessity for pushing down the atmospheric concentration of GHG emissions to levels that are consistent with limiting the global warming to 1.5 °C. The global GHG emissions are continuing to increase and every year that the peak is delayed, the steeper the GHG emissions must decline towards net-zero and the more CDRs will be required in the following years.

A system for measuring, verifying and crediting carbon removals will constitute the fundament for activities in this field. But a certification system alone will not deliver the significant volumes of CDRs that are required to reach the climate targets. The EU's climate policy framework must be reformed, with a view to better support CDR activities and create more demand for these climate activities. This is also recognised in the European Commission's 'Sustainable Carbon Cycles' Communication, which clearly states that the development and deployment of CDRs at scale will require significant targeted support in the next decade¹.

Carbon removals must not replace any emissions reduction efforts, but rather be a complementary measure to reach net-zero emissions

Every effort should be made to phase out the use of fossil fuels in the energy system and the industrial processes. But also in scenarios where the society manages to achieve steep GHG emission reductions, it will be necessary to use CDR to compensate for certain residual CO₂ emissions, for example in hard-to-abate sectors or processes. CDR should offset only the part of GHG emissions that will be more or less impossible to reduce for practical or economic reasons. The EU climate policy framework should incentivise the users of CDR credits to first exhaust every option at their disposal to abate CO₂ emissions by phasing out fossil fuels. As a supplementary, but necessary, climate action, CDR can then be used to compensate for residual emissions already in the 2030 perspective, as well as enable the EU to become a climate-neutral economy by 2050 and to achieve net-negative GHG emissions thereafter.

An EU certification framework for carbon removals should be robust, comprehensive and become fully operational no later than 2026

An EU-wide certification system for carbon removals will bring an important addition to the EU climate policy framework. A common and centralised certification system paves the way for more standardisation and conformity in the international carbon market, compared to the patchwork of voluntary certification schemes that are available today. Assuming that it will be governed by the European Commission or one of its agencies, it will most likely be recognised as highly reliable and transparent, and more easily integrated in the wider EU policy framework.

Most uncertainties regarding CDR projects evolve around the permanence of the storage (i.e. for how long the CO₂ is removed and kept away from the atmosphere) and the additionality (i.e. whether the CDR activity would take place even without support and along the business-as-usual baseline). These factors are just examples of what needs to be carefully addressed and incorporated in the forthcoming EU certification framework. Bearing in mind the time plans of the CDR projects that are already under consideration or development in the industry, it is important that such a new EU certification mechanism becomes fully operational and starts to deliver real CDR credits to frontrunner companies already within the time span 2025-2026. While developing a new EU certification system for CDR, it is important to make full use of experiences and best practices from already existing initiatives, including voluntary certification systems. It should also take into account other relevant criteria, including requirements of the EU Directive on Corporate Sustainability Due Diligence, and be as compatible as possible with the new global certification system that is being put in place by Article 6 of the Paris Agreement.

Priority should be placed on the technical solutions that can deliver high-quality and long-duration industrial carbon removals

All CDR types are much needed. However, there are fundamental differences between the nature-based CDR ('carbon farming') and the technology based CDR ('industrial removals') which suggest that developing the certification system in separate tracks could be advisable. We believe that the EU-Commission should first put emphasis on developing a EU certification scheme for technology-based CDR activities. Large-scale technology-based CDRs with long duration storage also take many years to develop and deploy. Therefore, it is crucial that the right incentives are provided to the private sector at an early stage, so that they can invest and develop such solutions in a timely manner. Making the policy choice only for the post-2030 legislative cycle will not be sufficient for this. Avoidable delays in designing the enabling framework for technology-based CDR projects could otherwise negatively impact its ability to timely contribute to the EU's net-zero GHG pathway.

The EU should set the 2030 ambition level for industrial carbon removals higher than currently suggested by the EU-Commission

In its communication on 'Sustainable Carbon Cycles', the European Commission proposed the ambition that 5 Mt CO₂ should be annually removed from the atmosphere and permanently stored through frontrunner industrial carbon removal projects by 2030. In Vattenfall's view, this seems to be a too modest and insufficient ambition level for several reasons. The potential in the EU is larger than 5 Mt CO₂ by 2030, which becomes obvious when considering the fact that in Sweden alone the government plans to support Bio-Energy CCS (BECCS) projects that involves around 2 Mt CO₂ by 2030. Furthermore, a total portfolio of 3-4 Mt CO₂ by 2035 has already been identified in different feasibility studies carried out by companies in Sweden.

Policy incentives to achieve carbon removals should be developed in parallel with a certification system for issuing high-quality credits

Vattenfall and several other companies in the energy and industry sectors are already involved in projects that will permanently remove CO₂ from the atmosphere, such as BECCS. A national tendering system for providing financial support to these projects in the initial development and demonstration phases are underway and some of them will also get co-financing via the EU's Innovation Fund. Looking further ahead, it will be increasingly important to establish a market-based and EU-wide policy for scaling up and delivering the CDRs that are required. In many regards, achieving negative CO₂ emissions is truly a common interest for the EU. Examples of policy proposals that are discussed at present include using Carbon Contracts for Difference (CCfD) in the context of the Innovation Fund and providing free allocation of ETS allowances to BECCS-projects. Vattenfall is positive to similar policy approaches given that the total EU ETS allowance cap is not increased.



The certification of a CDR project should result in a delivery of credits to the company that initiated and financed the CO2 sequestration

To provide an effective policy incentive, it is essential that it is the company that separates the CO₂ from its production process that gets credited for the climate benefit. For example, an owner of a CHP plant who uses sustainable (zero-rated) biomass has no incentive to capture and store (the biogenic) CO₂ emissions from the atmosphere if they are not incentivized and credited for this particular action, irrespective of what level the CO₂ price is. Normally, it is the same company that captures the CO₂ emissions that will also pay for the CO₂ transport and permanent CO₂ storage by a third party.

A transfer of the resulting CDR should be possible on both the company level and the government level. The actor who is credited for the CDR project must be able to sell or transfer the credit to a customer or any other counterpart. The improved national statistic that is associated with a CDR project, on the other hand, should be possible to transfer between two countries in line with the existing flexibilities of the EU 2030 climate framework and the Paris Agreement's market mechanisms (Article 6). Naturally, all successful CDR activities must also be properly accounted towards the National Climate and Energy Plans (NCEP) and the Nationally-Determined Contributions (NDCs). To avoid double counting, though, it is important that two companies will not be allowed to use, count or claim the same verified 1 tonne of carbon removal and that two countries will not be allowed to do it either. The ownership of the CDR must be clearly defined and follow the trade flow when the credit or statistic is sold.

All carbon removals should be accounted towards the EU's 'Fit for 55' framework and the long term climate objectives

Next to the questions of how to create policy incentives and who should receive the CDR credit that is the result of the certification, it is also important to define towards which EU legislation or target the CDR activity will be accounted. Most importantly, all CDR activities should be counted towards the EU's 'Fit for 55' framework as well as the more long-term objectives. Further assessment is needed around the role of CDR and the associated credits in the EU ETS domain. The integrity of the existing legal framework of the EU ETS and its rules for monitoring and reporting of emissions must be fully preserved at all times.