

Media Release

Climate Cent Foundation funds five Swiss projects in the field of negative emission technologies with 50 million Swiss francs

The Climate Cent Foundation is supporting five Swiss projects with 50 million Swiss francs until 2030, in which CO₂ is captured directly at plants and permanently stored in building materials or underground abroad. In this way, it is making an important contribution to the development of so-called negative emission technologies. These are an important part of achieving the net-zero climate target voted for by the public in June 2023.

In April 2022, the Climate Cent Foundation and the Swiss Confederation renewed their agreement, which has been in place since 2005. This means that the remaining funds of the foundation will primarily be used to finance private climate protection projects in Switzerland and abroad, where CO₂ is permanently removed from the atmosphere (negative emissions technologies, NET) or directly captured from facilities and then permanently stored in the underground or in products (carbon capture and storage, CCS, or carbon capture and utilization, CCU).

In the summer of 2022, the Foundation launched a call for proposals to identify projects worthy of funding. 21 project outlines were submitted, 14 of which were further elaborated in a second round. In February 2023, five projects received a final funding commitment (see the attached fact sheet for details). These all envisage the capture of CO₂ in Switzerland, mainly at biogas plants. Three projects intend to store the CO₂ in Switzerland in building materials, and two projects intend to transport the CO₂ abroad for permanent underground storage. The funding contracts totalling CHF 50 million were signed in August 2023.

The Climate Cent Foundation will transfer all carbon sinks achieved, provided that national certificates are issued for them under the CO2 Act, to the Confederation by 30 June 2032 at the latest. With its commitment, the Foundation contributes to consolidating Switzerland's pioneering role in the field of NET, CCS and CCU. These new technologies are considered imperative to offset emissions that are difficult to avoid and to reduce Switzerland's greenhouse gas emissions to net zero by 2050.

From 2005 to 2012, the Climate Cent Foundation levied a surcharge of 1.5 centimes per litre of fuel as a voluntary measure under the CO2 Act. In the period 2008 to 2012, it financed the reduction of 2 million tonnes of CO₂ in Switzerland and 16 million tonnes of CO₂ abroad. In the period 2013 to 2020, it financed further reductions of more than 20 million tonnes of CO₂ abroad, thanks to which Switzerland was able to fulfil its commitment to limit emissions under the Kyoto Protocol.

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Annex: Factsheet on the five supported projects

FACTSHEET on the five supported projects

ReCO2ver, Sika Services AG

Sika AG is a globally active company for construction aggregates. ReCO2ver stands for a process in which demolished concrete is mechanically separated and, with the aid of additives, broken down into its main components of gravel, sand and powdered mineral material. The latter is gassed in a tank with CO2 previously separated at point sources and converted by the mineralisation into carbonate powder, which in turn is added to the cement/concrete/mortar production. In addition to the storage of the separated CO2 in the carbonate powder achieved in this way, the technology enables reduced resource consumption by reusing the original components of the concrete demolition waste. Several plants are scheduled to go into operation in 2026 and store 16'500 t of CO2 by 2030.

Sequestration of biogenic CO₂ in concrete granulate, zirkulit AG

zirkulit AG is a subsidiary of the Eberhard companies, which are well established in the construction industry. Zirkulit stands for a brand of recycled concrete which, thanks to a special formula, has a lower cement content and thus a lower CO₂ footprint compared to conventional concrete. The concrete granulate is additionally gassed with biogenic CO₂ extracted from biogas plants, so that CO₂ is stored in the concrete during the mineralisation process. The concrete is then sold as recycled concrete. The zirkulit AG would like to operate several such storage plants by 2025, whereby around 3'000 t of CO₂ are to be stored annually. The contract volume is 16'500 t CO₂.

BEST, Neustark AG

Neustark AG was founded in 2019 as an ETH spinoff. The company has developed a process for storing CO_2 in recycled concrete and brought it to market maturity. On the one hand, lique-faction plants are built for CO_2 separated in biogas plants, and on the other hand, storage plants at recycled concrete plants, where concrete granulate is gassed with CO_2 in special reactor containers and this is permanently stored in them via mineralisation. The programme focuses on the gassing of concrete granulate that is not used for the production of recycled concrete, but is used as loose ballast material, for example in road construction. The contract volume is 16'500 t CO_2 .

Capture and sequestration of CO₂ at the Nesselnbach biogas plant, CO2 Energie AG

CO2 Energie AG operates the biogas plant in Nesselnbach. It produces methane from food waste for feeding into the natural gas grid and captures CO₂ from the biogas for this purpose. A liquefaction plant has already been in operation since November 2022, which processes the CO₂ into food-grade quality. Due to an expansion of the biogas plant, an additional treatment plant for feeding natural gas into the grid will also be built. The CO₂ separated in the process is to be liquefied in another plant as part of the project and then permanently stored underground. As there are currently no such storage facilities in Switzerland, the CO₂ will be exported by lorry, rail and ship to storage facilities abroad - such facilities are currently being built in Norway, Iceland, the Netherlands, Denmark and the UK. The contract volume is 21'800 t of CO₂.

TOGETHER, Neustark AG

As part of its second project, Neustark AG intends to build liquefaction plants at various biogas plants in Switzerland that already separate CO_2 for biogas processing and to transport the liquefied CO_2 by truck, rail and ship to storage facilities abroad. Here, too, the target countries are primarily Iceland, but also Norway, the Netherlands, Denmark and the United Kingdom. The contract volume is 13,000 t of CO_2 .

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