











Removal Projects

Enhanced Rock Weathering

Rock weathering is a carbon removal process that has been happening naturally for millions of years. The Enhanced Rock Weathering project speeds things up and **stores atmospheric carbon dioxide permanently in basalt rock**. As rainwater falls through the atmosphere it combines with CO₂, forming carbonic acid. When it lands on forests, grassland and mountains, the CO₂ interacts with rocks and soil, mineralises, and is stored in carbonate form for 100,000+ years. **This natural process can be accelerated** by spreading crushed basalt on farmland to increase the surface area of the rock and giving it immediate contact with the CO₂ produced by plant roots and soil microbes.





Project name	Delivery	Project description	SDGs	Price CHF / CO ₂
Enhanced Rock Weathering in the United Kingdom (Standard: ISO)	2025 – 2030 (Futures)	In this project uses finely crushed procuring basalt rock, which is a waste product of the mining and quarry industry and does therefore not require any additional extraction process. Basalt is the most abundant rock on earth, enabling the project activity to scale its operations considerably. The project partners with local landowners and farmers to spread the basalt at scale. Typically, four tonnes of basalt remove one tonne of carbon dioxide.	    	359
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Biochar

The project is **based on the process of pyrolysis of biomass** (i.e. the decomposition of biomass by heat in the absence of oxygen). The biomass comes from waste products, e.g. from the wood industry. The plant carbon produced is then added to agricultural soils, **increasing carbon stocks and storing carbon in the soil**. The plant carbon acts as a mineral store in the soil and has a positive effect on plant growth, making it attractive to farmers.






Project name	Delivery	Project description	SDGs	Volume t CO ₂	Price CHF / CO ₂
Biochar Project in Brazil (Standard: Puro)	2023	This project is run by a Brazilian forestry business that produces charcoal, wood, seedlings and seeds from their sustainable eucalyptus forests in the northeast region of Minas Gerais. With the biochar project, the biomass residues is brought back as biochar to forests and applied to the soil, where it not only serves as a durable carbon removal measure but also acts as an important natural component for soil reconditioning and improvement. The project covers about 76,000 ha of planted eucalyptus and 50,000 ha of native forest with important biodiversity and economic impacts on local communities.		5'000	116
				10'000	116
Biochar Project in Australia (Standard: Puro)	2022	In 2021, with this project one of the largest biochar plants in Southern Hemisphere was commissioned. Fuelled by recycled woody green organics, this plant not only creates high quality biochar but generates enough energy from the syngas to power further state-of-the-art compost and mulch screening plants of the project developer. The biochar plant is designed to run 24x6 and is designed to produce around 1500 dry tons of Biochar and about 230 MWh of power a year.		5'000	112
				10'000	112

Cellulose Fibre Insulation

The project allows for **carbon net-negative cellulose fibre insulation (CFI)** made from renewable natural resources. The carbon removal with CFI works as follows: Growing trees capture and store carbon in their biomass. Bio-based construction materials such as the cellulose fibre insulation retain the wood's carbon storage capacity. Once installed, **CO₂ is locked away in durable building structures** for a minimum of 50 years.














Project name	Delivery	Project description	SDGs	Price CHF / CO ₂
Bio-based Construction Material Project in Finland (Standard: Puro)	2023	This project offers carbon net-negative CFI made from renewable natural resources. One tonne of the insulation material removes 1,11 tonnes of CO ₂ from the atmosphere that is being stored in the product. Sustainably grown wood is used for producing newspapers, which are recycled and used as the main ingredient for manufacturing this CFI. The insulation is suitable for both new construction and renovation projects. It comes to use in about 10,000 buildings annually such as schools, or industrial and residential construction. Insulating with bio-based material can displace other insulation materials such as polystyrene (EPS) or mineral wool that are difficult to recycle.	  	35.5 35.5

Carbonate Building Materials

In this project, **the physical properties of the waste are changed** to improve its handling. Many wastes react naturally with carbon dioxide in the presence of water, which acts as a solvent. If conditions are carefully controlled, this process can be accelerated so that it takes minutes instead of years and leads to the **formation of calcium carbonate (limestone)**. Very little energy is needed for the process as it relies on the reactivity of the waste material. The limestone produced can be used in construction for masonry blocks, concrete, asphalt, hydraulically bound and unbound mixtures.









Project name	Delivery	Project description	SDGs	Price CHF / CO ₂
Carbonated Building Material Project in the United Kingdom (Standard: Puro)	2023	This British project processes waste and permanently captures carbon dioxide in stable carbonate minerals such as manufactured limestone for 1000+ years. The project uses multiple wastes from industrial thermal processes, e.g., incineration ashes, steel slags, sewage sludge ash, biomass ash, amongst others and facilitates easier end of life management as well as reduces disposal costs.	    	194
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Afforestation & Reforestation

This type of project involves restoring areas where trees have been cut down or damaged (reforestation) or planting trees where there were none before (afforestation). Trees remove CO₂ from the atmosphere as they grow and store it in living biomass. Afforestation projects are very land-intensive and often take more than 50 years to complete. The durability of the savings is at risk at any time from external factors such as forest fires.




Project name	Vintage	Project description	SDGs	Price CHF / CO ₂
Reforestation Project on degraded Pastureland (Standard: Gold Standard)	2018 -2021	The reforestation program aims at establishing managed plantations of teak (<i>Tectona grandis</i>) in the Southeastern region of Nicaragua. Available land currently used for cattle grazing is assessed following a land analysis protocol which includes technical criteria, as well as social, infrastructure and legal assessment of the land. Eligible land is divided into both, plantable and conservation areas. The latter consist of watersheds, existing secondary forest, and steep hillsides not eligible for establishing plantations but regeneration of native forest species is allowed through managed regrowth.	  	49.5
				49.5
Close to Nature Forests (Standard: Gold Standard)	2021	The climate project is located in the Orinoco Department in Colombia and the main activity is reforestation. The objective of the project is the creation of close to nature forests with the main goal of producing high quality hardwoods combined with carbon sequestration, while stabilizing and restoring fragile and degraded areas in an economically, socially, and ecologically viable way. Overall, the climate project objectives are the establishment of profitable production- and conservation systems, enabling the enterprise to work in a beneficial way, with the complement of sustainable investment opportunities.	  	26.5
				26.5

CO₂-Mineralisation

This project activity captures waste CO₂ which would have otherwise been emitted into the atmosphere, or atmospheric CO₂ which would otherwise be in the atmosphere and utilise that gas as a feedstock in the production of concrete. These project activities reduce greenhouse gas (GHG) emissions by sequestering CO₂ via the production of concrete. This manufacturing process has the additional benefit of requiring less Portland cement, which further reduces emissions, because the cement production process is highly energy and carbon intensive. The project activity will take place at the location where the concrete is first manufactured (mixed with cement, water, aggregates, etc.).







Project name	Vintage	Project description	SDGs	Price CHF / CO ₂
CO₂ Utilisation in Concrete in the U.S. (Standard: VCS)	2022	The project activity will consist of taking a conventional concrete manufacturing facility and adding equipment that will inject CO ₂ into the concrete production process, mineralising it into the concrete and permanently removing the CO ₂ . The intent of this project activity is to reduce emissions by producing a type of concrete that (a) sequesters CO ₂ into the material itself, which has the additional benefit of (b) manufacturing a product that requires less Portland cement.		161

Bioenergy with Carbon Capture and Storage

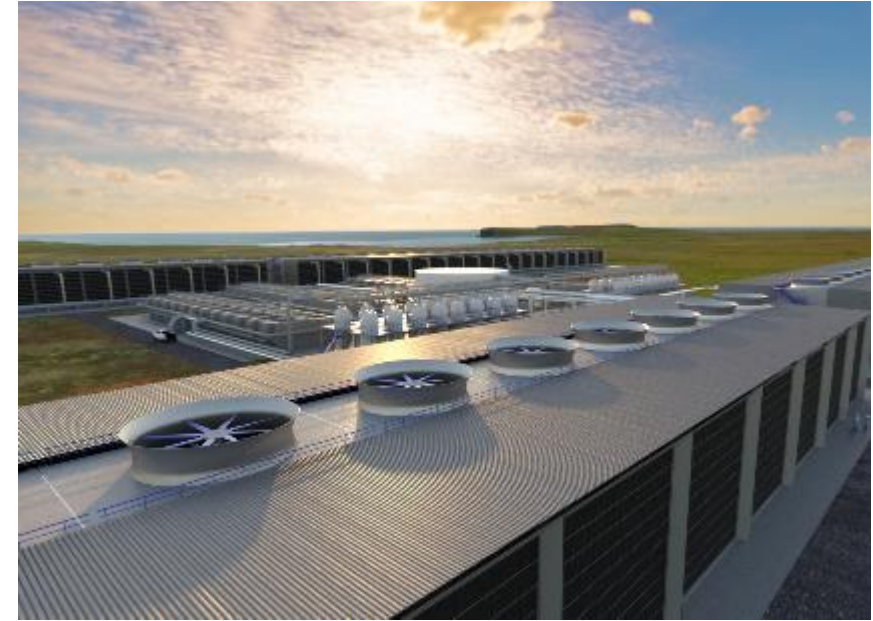
Bioenergy with Carbon Capture and Storage (BECCS) is the process of generating renewable electricity from sustainable biomass. The carbon created during the process is then captured and permanently stored. BECCS uses a post-combustion carbon capture process, where solvents isolate carbon from the flue gases produced when the biomass is combusted. The captured carbon is pressurized and turned into a liquid-like substance so it can then be permanently sequestered underground. Captured carbon can be safely and permanently injected into naturally occurring, porous rock formations, such as unused natural gas reservoirs, coal beds that can't be mined, or saline aquifers (water permeable rocks saturated with salt water). This process is known as sequestration. Over time, the sequestered carbon may react with the minerals, locking it chemically into the surrounding rock through a process called mineral storage.






Project name	Vintage	Project description	SDGs	Price CHF / CO ₂
BECCS Carbon Removal Project in the U.S.	2027 (Futures)	This project can help provide climate leadership quickly and affordably by enabling the rapid procurement of renewable, 24/7 baseload electricity and capturing carbon from the atmosphere. The project will create a U.S. end-to-end value chain, from forest to bioenergy and carbon storage, guaranteeing grid reliability and energy security. The project will enable rapid decarbonization of the power sector and industry to meet demand from investors, consumers, and regulators for significant emissions reductions.	   	286 286

Direct Air Capture

Direct Air Capture (DAC) is a technology that aims to capture and store CO₂ from the atmosphere, essentially reversing the process of carbon emissions. DAC typically involves large-scale facilities equipped with specialized devices called sorbents or filters that selectively capture CO₂ from the air. These filters contain chemicals or materials that have a high affinity for CO₂ and can adsorb it when the air passes through them. Once the CO₂ is captured, it is separated from the sorbent through various processes, and then it can be stored or used for other purposes.



Project name	Delivery	Project description	SDGs	Price CHF / CO ₂
DAC Carbon Removal Project in the U.S.	2026 -2027 (Futures)	This project uses 'molecular sieves' to perform a solid absorption capture process for CO ₂ from the atmosphere, and deploy modular direct air capture machines, by fitting their DAC container sized modules.	  	425 425



References

References I

MEDACTA

- Advising on the introduction of a climate-neutral surgical kit for hip and knee surgery for worldwide marketing
- Advise on the appropriate compensation strategy and assist in managing the compensation process in the global business unit.
- Supply of high-quality CO₂ certificates.
- Calculation of the CO₂ emissions of the product from production to distribution to the end customer and assigning the CO₂-NEUTRAL label.



LIDL SWITZERLAND

- Offsetting of the annual CO₂ emissions of Lidl Switzerland.
- Development of an offsetting strategy related to Lidl's core business.
- We are partners in the evaluation of insetting opportunities for Lidl and propose possible insetting solutions.
- Identification, due diligence and management of a portfolio for offsetting (four different climate projects)
- Climate-neutral labelling of the company, including Scope 1-3 (logistics), certification partner: SGS



COCA-COLA/VALSER

- Offsetting with a project on SDG targets 6 (water) and 13 (climate) in Laos to achieve carbon neutrality for the company and products.
- Development of an insetting strategy together with Coca-Cola and identification and due diligence of a partner for the project "#ValserforWater" in Nepal (partnership with the NGO Helvetas).
- Coordination of the communication and marketing strategy and further development of the insetting strategy.
- Preparation of the CCF for the Coca-Cola brand Valser (ISO 14064-1) and the PCF for all Valser bottle types (ISO 14067/GHG protocol) to identify hotspots in the supply chain and production.



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- Our strengths are dynamics, interdisciplinarity, high quality and credibility.
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Questions?



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