

Technology that captures CO2 from the atmosphere

Investment Case Study

Asset Class: private equity

Location: UK

An example of an investment by World Fund one of our private markets asset managers.

Mission Zero Technologies: The World's most scalable direct air capture solution

Global CO2 emissions surpassed 40 gigatonnes in 2023, highlighting the need for a decisive juncture for our planet. To limit global temperature rise to 1.5°C above pre-industrial levels, as set out in the Paris Agreement, in addition to drastically reducing new emissions we need to remove vast volumes of already emitted CO2 from the atmosphere.

For more information on Global CO2 emissions in 2023, you can visit

<https://sustainability.stanford.edu/news/global-carbon-emissions-fossil-fuels-reached-record-high-2023>. For more information on the global temperature rise to 1.5°C, see the Intergovernmental panel on Climate Change (IPCC) 2022 summary at www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_TechnicalSummary.pdf.

To achieve this, rapidly scalable carbon dioxide removal (CDR) solutions will be required. While nature-based carbon removal solutions offer a good basis, standalone they won't be sufficient to provide scalable, short-term deployable and permanent storage solutions. In complementing nature-based solutions, Direct Air Capture (DAC) technologies will play a pivotal role in saving our planet.

While DAC offers an attractive solution in the long run, the current bottlenecks of scalability and affordability need to be overcome. Mission Zero have a pragmatic approach to overcome these bottlenecks through using its versatile modular technology to deliver DAC cost effectively and at scale, starting today. You can visit the Mission Zero website at <https://www.missionzero.tech/>

Mission Zero's team of driven, commercially minded technical experts has already developed and launched the UK's first ever commercial DAC plant. The team is on-track to deploy an additional two systems in 2024.



For the market to be willing to adopt DAC as a viable technology, reaching cost-competitiveness with alternative carbon removal solutions will be critical. Mission Zero has developed a novel DAC system at significantly lower cost than traditional DAC technologies based on i) energy savings, ii) process efficiency, and iii) a modular approach. Mission Zero's technology is based on electrochemical CO₂ regeneration that allows operating at ambient temperature and pressure, resulting in energy savings of up to 62.5% compared to competitors in the market today.

Mission Zero is already working on its next generation of technology. In 2024, Mission Zero will already have three systems on the ground in projects pioneering CO₂ mineralisation, carbon-negative building materials, and sustainable aviation fuel.

This is one of many exciting projects we are invested in through World Fund, please visit the World Fund website at <https://www.worldfund.vc/>