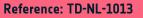
Direct Air Capture Technology for CO₂ Removal





TECHNOLOGY DESCRIPTION

Skytree's direct air capture (DAC) system is designed to efficiently remove CO_2 directly from ambient air. The technology uses a three-step filtration process for CO_2 removal — capturing, isolating and storing — making it available for permanent sequestration. Initial adsorption occurs through specialised filters capture CO_2 from ambient air using proprietary sorbent materials. The next desorption step sees heat or pressure triggering the release of captured CO_2 from the sorbent. Finally, the purified CO_2 is collected and prepared for permanent geological storage. The system is modular and can be deployed in various configurations, making it suitable for small- and large-scale applications. Leveraging expertise derived from space-grade air filtration systems, Skytree's DAC technology is energy-efficient and highly effective, offering a scalable solution to reduce global carbon emissions.





INNOVATIVE ASPECTS

- · Energy efficiency: Optimised processes reduce energy consumption compared to conventional air capture methods
- Scalability: Modular design allows for deployment in both small- and large-scale CO2 removal projects
- ullet Sustainability: Contributes directly to negative emissions goals by sequestering ${
 m CO_2}$ in geological formations
- Proven reliability: Derived from air filtration technology developed for the International Space Station, ensuring high-performance standards



TECHNOLOGY READINESS

COUNTRY OF ORIGIN

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TRL 9 (2025) Netherlands 03/2025

TAGS

#DirectAirCapture

#CarbonDioxide Removal #Carbon Sequestration #ClimateCHange Mitigation #NegativeEmissions Technology

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