

CarbonCloud : The Revcoo Solution

Abstract

Revcoo is addressing climate change by pioneering CarbonCloud®, a cutting-edge cryogenic carbon capture and utilization (CCUS) technology. This system utilizes anti-sublimation to recover over 95% of CO₂ from flue gases, starting at concentrations as low as 10%. Fully electric-driven and chemical- and water-free, the solution integrates seamlessly with existing industrial setups, significantly improving energy efficiency and reducing emissions. By capturing high-purity CO₂, nitrogen, and water while optimizing waste heat recovery, the technology enhances resource valorization and supports sustainable operations.

CarbonCloud® has been refined through a rigorous development process, including laboratory validation, patenting, and pilot demonstrations. Key milestones include the construction of an industrial proof-of-concept (POC) achieving daily captures of 2 tons of CO₂ at Eiffage's lime kiln. This progress has elevated the technology to TRL 7, with on-site industrial demonstrator tests scheduled for 2024.

Revcoo's system is designed for rapid deployment, offering a cost-effective, scalable solution to decarbonize industries without delay. With its ability to capture millions of tons of CO₂ annually by 2027, this innovation positions itself as a vital tool in the fight against climate change, ensuring optimal energy utilization and reducing environmental impact across diverse combustion industries.