

CARBON REMOVAL RESEARCH AGREEMENT

	Research & development funding overview
Description	Stripe, Inc. (" Stripe "), for itself as a member of Frontier, will fund Rewind.earth (C-Sink Ltd.) to support their research into the durability, measurement methodology, and safety of biomass sinking into anoxic basins of the Black Sea. The project is detailed in full here.
Type	Biomass sinking
R&D grant amount	\$250,000
Estimated research start & completion	Q4 2023 - Q1 2025
R&D Description	<p>Grant to accelerate Rewind's rigorous scientific research and experimentation to demonstrate the durability, environmental safety, and measurability of carbon dioxide removal (CDR) via terrestrial biomass sinking, in collaboration with their academic institutions and broader network of scientific collaborators. Specifically, Frontier will support the following experimentation:</p> <ul style="list-style-type: none"> • To sharpen the field's understanding of the efficacy of anoxic basins for biomass preservation, Rewind will build a refined long term biomass decomposition model based on measured rates from pilot experiments. Alongside, Rewind will use physical oceanographic models of the Black Sea and in-situ measurements of deep water currents and water residence time to build a higher accuracy vertical mixing model to predict if any inorganic carbon from dissolved biomass is at risk of reentering the atmosphere. • To further understanding of the impact of biomass sinking in ocean ecosystems, Rewind will conduct a comprehensive environmental impact assessment to understand any potential bio-geo-chemical changes to the environment as a result of sinking (though sinking in oxygen-free environments is expected to minimize impacts given the lack of active micro- and macro-fauna). This research will include sediment and water column sampling to assess impact on the microbial community and sulfide, methane, and nitrous oxide re-emissions. • Throughout this research, Rewind will deliver 10 tons of carbon removal to Frontier to test and refine their biomass sinking mechanism and methodology for measuring removals. <p>Rewind.earth will share an experimental report alongside a scientific manuscript with research results and analysis.</p>

Interim milestones & payment schedule	We anticipate these steps will be important markers of progress toward delivering on the scope above.		
	Subject to Section 2 below, the Purchase Amount will be payable 45 days after Company provides Buyer an invoice and evidence of achieving the following milestones, subject to Buyer's reasonable requirements, and Buyer's acceptance:		
	Payment (USD)	Milestone	Estimated date
	\$250,000	Upon execution of the agreement	August 2023
		Sampling processes and measurement equipment in place. Sink 20 tons of biomass.	Q1 2024
		Provide interim report with preliminary data and analysis from biomass decomposition and environmental impact research. Share findings with Black Sea Climate Roundtable and publish a discussion summary.	Q2 2024
		Submit final scientific deliverables. Notify Frontier of first ton removed from experiments.	Q4 2024

Pre-conditions for future purchase	
Description	<p>Upon Company achieving all of the conditions below, Buyer, or an affiliate thereof, for itself or in connection with Frontier, may enter into negotiations for a purchase agreement. These criteria summarize what would make us excited about the further trajectory of this project.</p> <p>However, at our discretion, we may be willing to engage in this conversation earlier - especially if it would meaningfully advance your progress.</p>

General	<ul style="list-style-type: none"> • Submission of the research deliverables • Demonstrate delivery of 10 tons of carbon removal with third party measurement, reporting, and verification (MRV) evidence of tons removed. Public reporting of tons delivered, price per ton, and protocol used at time of delivery. • Completion of a third-party lifecycle analysis (LCA) to confirm the net tons removed for this project • Updated LCA for future deployments that demonstrate declining future process emissions and improving net negativity • Updated techno-economic analysis (TEA) providing significant evidence that a sub-\$100/ton capture cost by the date projected in the application to Frontier is achievable and highlighting key cost sensitivities. Differences between current experimental values and TEA assumptions for \$100/ton highlighted, including a plan to narrow the gap between actual and modeled performance is presented • Evidence of ongoing responsible community engagement and efforts to achieve the highest standards of safety, compliance, and local environmental outcomes • Meeting with Frontier and potential site visit upon delivery and achievement of project-specific renewal conditions to answer any questions about the results
Project-specific	<ul style="list-style-type: none"> • Provide compelling evidence that deployment does not cause additional ecosystem damage based on experimental data and there is minimal uncertainty remaining. Demonstrate technical ability to actively manage deployments based on ongoing ecosystem monitoring. • Secure permit or provide a clear path to securing a permit for larger, commercial deployments. • Provide an independent, scientifically-reviewed measurement methodology confirming ability to accurately quantify carbon removal from biomass sinking.