Frontier

CARBON REMOVAL PURCHASE AGREEMENT

	Purchase overview
Description	Stripe, Inc. (“**Stripe**”) and Shopify (“**Shopify**”), for themselves as members of Frontier, will purchase 1,351 metric tons of carbon dioxide removal from the first two years of operation from Alkali Earth’s pilot deployment constructing gravel roads with steel slag to react and mineralize atmospheric CO2 while cementing the roads. The project is detailed in full here.
Type	Enhanced Weathering
Purchase amount	$500,000
Service quantity	1,351 metric
Price	$370 / metric ton
Estimated delivery schedule	The Purchase Amount will be allocated according to the following schedule:
First customer? *(alongside other Frontier buyers)*	Yes
Largest customer? *(Frontier buyers combined)*	Yes
Estimated delivery start & completion	Q2 2024 - Q4 2025

Year	**Quantity** (Net metric tons of CO_2 removed)
2024	169 metric tons
2025	1,182 metric tons

Interim milestones & payment schedule

We anticipate these steps will be important markers of progress toward delivering carbon removal.

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**
$500,000	Upon execution of the agreement	August 2023
	Secured steel slag supply agreements and finalize site details for initial deployments.	Q3 2023
	Installation of testing prototypes and monitoring array, automatic controls, and sampling process at sentinel measurement site to quantify carbonate formation. Report baseline measurements from field sites to Frontier.	Q2 2024
	Provide interim report on carbonation rates along with associated measurements from sentinel site..	Q4 2024
	Deploy initial slag aggregate, targeting 18,000 tons. Conduct frequent and consistent on-road sampling.	Q3 2024 - Q4 2025
	Notify Frontier of first ton removed.	Q4 2024

	Pre-conditions for future purchase
Description	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 new offtake agreement. These criteria summarize what would make us excited about the further trajectory of this project. However, at our discretion, we may be willing to engage in this conversation earlier - especially if it would meaningfully advance your progress.
General	• Delivery of 100% of initial tonnage, 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 modelled 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	• Secure strategic partnerships with municipalities and other customers for road applications for larger scale deployment at suitable sites • Confirm pipeline of steel slag partners with suitable supply for next wave of deployments, and ensure slag sourcing prioritizes legacy piles where there are fewer alternative uses and mineralization over baseline is higher. • Demonstrate slag supply network and future road construction sites can achieve targets for minimizing transport costs and emissions • Submit scientific manuscript containing field data to constrain carbonation rates along with associated data to improve understanding and quantification of carbon removal through

	mineralization in road settings ● Provide peer reviewed, validated model that is constrained by inorganic carbon measurements, direct gas flux measurements, and carbon isotope analysis to accurately and precisely quantify carbon removal for scalable gravel road deployments in different environments.