

CARBON REMOVAL PURCHASE AGREEMENT

	Purchase overview										
Description	Stripe, Inc. (“ Stripe ”) and Shopify (“ Shopify ”), for themselves as members of Frontier, will purchase 275 metric tons of carbon dioxide removal from the first 3 years of operation for Carbon Atlantis’ 260 ton per year electrochemical pH-swing direct air capture pilot, detailed in full here .										
Type	Direct air capture										
Purchase amount	\$500,000										
Service quantity	275 metric tons										
Price	\$1,816 / metric ton										
Estimated delivery schedule	<p>The Purchase Amount will be allocated according to the following schedule:</p> <table border="1"> <thead> <tr> <th>Year</th><th>Quantity (Net metric tons of CO₂ removed)</th></tr> </thead> <tbody> <tr> <td>2025</td><td>41 metric tons</td></tr> <tr> <td>2026</td><td>82 metric tons</td></tr> <tr> <td>2027</td><td>105 metric tons</td></tr> <tr> <td>2028</td><td>47 metric tons</td></tr> </tbody> </table>	Year	Quantity (Net metric tons of CO ₂ removed)	2025	41 metric tons	2026	82 metric tons	2027	105 metric tons	2028	47 metric tons
Year	Quantity (Net metric tons of CO ₂ removed)										
2025	41 metric tons										
2026	82 metric tons										
2027	105 metric tons										
2028	47 metric tons										
First customer? <i>(alongside other Frontier buyers)</i>	Yes										
Largest customer? <i>(Frontier buyers combined)</i>	Yes										
Estimated delivery start & completion	June 2025 - June 2028										
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
\$499,560	Upon execution of the agreement.	August 2023
\$0	Successful operation of 1 tpy system.	Q4 2023
\$0	Provide hiring plan to expand team's commercial expertise. Secure additional funding to build 260 tpy pilot.	Q1 2024
\$0	Secure key partnership agreements for pilot, including for storage (i.e., Paebbl or alternative storage provider meeting 1,000 y permanence).	Q1 2024
\$0	Testing of aircontactor options and finalizing design for 260tpy plant.	Q4 2024
\$0	Successful technical stack demonstration at pilot scale: <ul style="list-style-type: none"> • 65 tpy / stack • active membrane area per cell 400cm² • number of cells in stack 60 • operating at current density of 200 mA/cm² • operating cell voltage <1.2 	Q4 2024
\$0	260 tpy pilot plant built (4x 65 tpy stacks and air-contactor integrated).	Q1 2025
\$0	Begin pilot system operations and notify Stripe of first ton successfully removed.	Q2 2025

	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 new offtake 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"> • 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 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 summary of feasibility research into Pt-alternative catalyst materials and secure supply agreements for catalyst and membrane materials that meet performance specs • Quantify water consumption at pilot scale and present mitigation strategies • Effectively demonstrate ability to achieve target electrochemical performance at pilot scale, including: <ul style="list-style-type: none"> ○ Capture from ambient air ○ Proof of limited membrane degradation with extrapolated lifetime estimates exceeding >80,000 h

	<ul style="list-style-type: none">○ Energy requirement of <1.1 MWh/t○ Integration with mineralization for permanent storage● First commercial site identified, including agreements with storage partner
--	---