

# Carbon dioxide removal cost



## Overview

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DAC is expensive because the concentration of CO<sub>2</sub> in the atmosphere is very low - only about 420 to 430 parts per million. This means a lot of energy is needed to process large volumes of air to capture each tonne of CO<sub>2</sub>. Current projects cost an estimated USD 500 to 1 900 per tonne of. The carbon dioxide removal (CDR) industry needs to scale carbon removal by 25 to 100 times by 2030 to align with net-zero pathways. Scaling this essential technology comes with significant costs, as is expected with scaling any new technology.

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### [Clearing the air: Exploring the pathways of carbon removal technologies](#)

The carbon dioxide removal (CDR) industry needs to scale carbon removal by 25 to 100 times by 2030 to align with net-zero pathways. Biochar leads engineered CDR in both cost ...

### [Carbon Dioxide Removal \(CDR\) Technologies](#)

Carbon dioxide removals (CDR) are one of several necessary levers to achieve net-zero CO2 emissions from air transport. This report looks at the most common CDR technologies currently deployed, their ...



### [U.S. Carbon Removal Needs Have a \\$100-Billion Price Tag--Per Year](#)

CLIMATEWIRE , The U.S. government needs to spend roughly \$100 billion annually on carbon dioxide removal by 2050 to help the world avoid extreme climate change, according to an ...



### [Carbon Dioxide Removal: Counting the Cost](#)

Of all mooted CO2 removal tactics, soil sequestration appears to carry the greatest potential for profit. This Royal Society Greenhouse Gas Removal report estimates profit potential to ...



### [How much do carbon removal credits cost in 2024?](#)

The average cost of carbon removal credits in 2024 is \$449 per tonne of CO2 removed. This figure represents an average, with costs varying significantly depending on the removal methodology, ...



### [Driving down the cost of carbon removal: Why innovation matters](#)

Cost remains one of the most important barriers to scaling industrial carbon dioxide removal. Technologies today span a wide cost range, with large uncertainties over how quickly costs ...



### [The cost of permanent carbon dioxide removal](#)

We demonstrate that, once the impacts of reversal and ongoing MRV costs are accounted for, the cost of permanent removal is generally lower than that of non-permanent removal.

[Chart: Which Carbon Removal Methods Are the Most Cost-Effective](#)

This infographic shows the weighted average price per carbon credit of selected carbon removal methods in 2023 (in \$/tCO<sub>2</sub>e), and the evolution in global carbon capture capacity.



[Carbon Dioxide Removal: Costs, Pathways, and Market Outlook](#)

Developers are laying out explicit cost-down roadmaps for DAC. Climeworks targets \$250-350/t for capture and \$400-600/t net removal by 2030, with further declines thereafter; today's ...

[Science to Scale: Reducing Costs in Carbon Removal, BCG](#)

Durable carbon dioxide removal (CDR) is necessary to address 6-10 Gtpa residual emissions by 2050 and achieve a net-negative economy in the second half of the century. Beyond its ...



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