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Headline: Sky's the limit: Israeli startup develops balloons to capture carbon

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A balloon is seen during a demonstration by Israeli startup High Hopes Labs who are developing a balloon that captures carbon directly from the atmosphere at a high altitude, in Petah Tikva, Israel November 3, 2021. REUTERS/Amir Cohen

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PETAH TIKVA, Israel — An Israeli startup has joined the fight against global warming by seeking inspiration in the upper atmosphere, where it hopes to send fleets of balloons that will trap carbon dioxide for recycling.

Carbon dioxide emissions, from the burning of fossil fuels and from industrial agriculture, are the main cause of climate change. But removing CO₂ from the atmosphere at standard temperatures requires too much energy for governments and companies to consider it cost-effective.

High Hopes Labs developed a system that captures the carbon where it has almost solidified, far above the Earth.

"The beautiful thing is that capturing gas is very easy when it's close to freezing...", CEO Nadav Mansdorf told Reuters.

"Carbon is freezing in minus 80 degrees (Celsius) and the only place that we can find carbon in a temperature close to that, is 15 kilometers (9 miles) above our heads."

A worker welds during a demonstration at the laboratory of Israeli startup High Hopes Labs who are developing a balloon that captures carbon directly from the atmosphere at a high altitude, in Ramat Gan, Israel November 2, 2021. Picture taken November 2, 2021. REUTERS/Nir Elias

The company has tested its system on a small scale, Mansdorf says, releasing gas-filled balloons with a box that serves as a carbon-capture device attached underneath.

The frozen carbon is then separated from the air to be brought back to earth and can be recycled.

The company aims to build larger balloons within two years that could each be deployed to remove a ton of carbon a day at a cost below \$100, much less than comparable on-ground facilities currently in use, Mansdorf said.

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