

# For Israeli firm, an answer to global warming blowing in the wind

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Vice president Uzi Aharony (R) and chief executive officer David Banitt of the Israeli startup company NewCO<sub>2</sub>Fuels (NCF), work on a solar test facility in Rehovot

For an Israeli start-up, one answer to global warming is blowing in the wind. The company called NewCO<sub>2</sub>Fuels, or NCF, has been developing its own version of a technology that allows heat-trapping carbon dioxide emissions to be captured and recycled back into useable fuel.

It sounds complicated—and it is—but the company's founders say it holds real potential in the fight against [global warming](#).

Such capture technologies have gained increased attention as countries seek alternative methods of cutting back on [greenhouse gas emissions](#), the main culprit in global warming.

Around 140 world leaders have gathered this week for highly anticipated talks in Paris with the aim of spearheading a climate pact and heading off a disastrous rise in [global temperatures](#) in the coming years.

"Our concept is to take the residue from the production of CO<sub>2</sub> along with heat produced in industries and turn them into profit," chief executive David Banitt said of the company located in Rehovot, south of Tel Aviv.

"We cannot only wield the stick and make polluters pay. You also have to hold out the carrot and allow them to see commercial potential."

The company is attempting to position itself in a new market offering what has come to be known as carbon capture, utilisation and storage technologies.

A global race has been underway to develop such industrial-scale solutions.



David Banitt, CEO of the Israeli startup company NewCO2Fuels (NCF), explains the innovative technology that converts carbon dioxide (CO<sub>2</sub>) and water (H<sub>2</sub>O) into synthetic transportation fuel, a clean and affordable energy

NCF hopes to begin offering its technology commercially before 2018 and estimates the global market at a potential \$24 billion annually.

"We have to find a proactive solution, and that is where we come in," Banitt told AFP.

## Hi-tech recycling machine

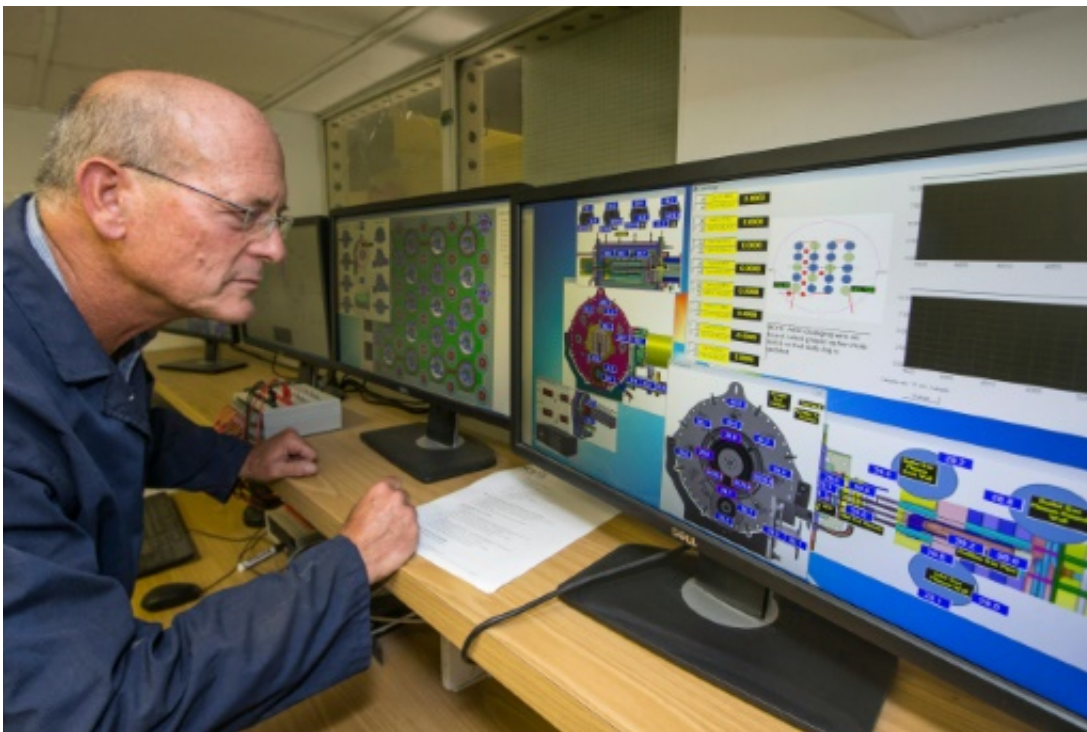
Marie Renner, climate economics researcher at the University of Paris-Dauphine, said there was major enthusiasm over capture and storage technology around 2008-2010, but the economic crisis and collapse in prices of carbon-based fuels dampened interest.

She said the NCF technology appeared to be aimed at producing clean-burning fuel and she hoped other companies would keep the focus on what is good for the environment if such solutions become widespread.

"We have to ask if placing value on CO<sub>2</sub> to produce fuel will derail the capture-and-storage plan's philosophy—of its primary role—which is to slow climate change," Renner said.

On a top floor of a building at Rehovot's Weizmann Institute of Science, the NCF team has been carrying out work on its prototype involving a [solar power plant](#) capable of producing something called syngas from CO<sub>2</sub>, water and heat.

The syngas can then be used to create synthetic fuels.



Uzi Aharony, vice president of the Israeli startup company NewCO<sub>2</sub>Fuels (NCF), works on a solar test facility in Rehovot

A field of solar panels surrounds the building along with a mirror to heat the reactor to more than 1,000 degrees Celsius (1,0832 Fahrenheit).

Within the reactor, the CO<sub>2</sub> and water is used to produce the syngas, said Uzi Aharoni, the company's head of operations.

The idea is for the technology to be used by plants that emit heat and CO<sub>2</sub>, such as steel or coal gasification plants.

The CO<sub>2</sub> would be captured instead of being sent into the atmosphere, then transformed back into fuel—a hi-tech recycling machine.

In its final form, syngas that fits into a one-cubic-metre tank is equivalent to the photosynthesis energy of 300 trees.

"We are transforming these constraints into opportunities," said the 63-year-old Banitt, who calls himself an environmentalist, "but not fanatic".

"Treating CO<sub>2</sub> and transforming it into a product does not necessarily involve costs, but can instead generate revenue and profits."

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