

Canadian firm opens facility to pull carbon from air

October 10 2015, by Deborah Jones



Jane Ritchie explains the carbon capture system at the opening of a Canadian Carbon Engineering pilot plant in Squamish, British Columbia on October 9, 2015

A company with global plans to pull carbon from thin air to make fuel, while tackling climate change, opened a pilot plant in this remote

western Canadian community.

Carbon Engineering, backed by Bill Gates and other investors, unveiled a test facility able to extract [carbon](#) dioxide from the atmosphere using giant fans.

That carbon goes through a series of chemical processes and emerges as pellets, which can be used to make fuel—or simply be stored underground.

The company was founded in Calgary in 2009 by David Keith, a Harvard University climate scientist, with funding from private investors.

Unlike existing machines that capture carbon from smokestacks like those of [coal-fired power plants](#), the direct air capture plant deals "with emissions from sources you just can't otherwise capture," said company chief executive Adrian Corless.

"It's now possible to take CO₂ out of the atmosphere, and use it as a feed stock, with hydrogen, to produce net zero emission fuels."

The benefit of those synthesized fuels, Corless told AFP, is they can be tailor-made for use in existing systems, from petrol pumps to automobiles and airplanes.

"You don't have to re-tool the \$30 trillion in (global) infrastructure now used to deliver fossil fuels," Corless said.

While alternative energies, from wind to solar, are being developed, "there's not a lot of options to power airplanes and vehicles," said Corless. "For me, this is most exciting."

"The economics are attractive," said scientist Hadi Dowlatabadi, of the University of British Columbia.

This small town north of Vancouver welcomed the company moving into an unused industrial site, and the opening was blessed by members of the aboriginal Squamish Nation as a working example of traditional teachings to take care of the world.

'Have to adapt'

"We have to adapt to the modern world," said councilor Chris Lewis.

Mark Jaccard, professor of sustainable energy at Simon Fraser University in Vancouver, said the technology holds promise to reduce greenhouse gases and [climate change](#).

"What humans really should be doing is really either not using fossil fuels—or using fossil fuels and capturing the carbon so it doesn't go into the atmosphere," Jaccard said.

Other companies around the world are experimenting with air capture, but Corless said Carbon Engineering's design is unique because it can be quickly and affordably scaled up to industrial size.

Corless said the pilot plant began operations in June and has already captured 10 tonnes of CO₂.

The company says it plans to use the data from the pilot plant in Squamish to design its first commercial plant by 2017, which it says will cost no more than \$200 million.

"We should be in a position to be selling [synthetic fuels](#) in 2018," said Corless.

He said synthetic fuels, like [fossil fuels](#), provide an energy source concentrated enough to power airplanes and long-haul ground transportation.

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