

# Canadian Cement Plant Becomes First to Capture CO2 in Algae | Earth and Industry



Pond Biofuels is testing a process to capture CO2 at a Canadian cement factory (Photo: SeRVe61/flickr)

**A Canadian company called Pond Biofuels is capturing CO2 emissions from a cement plant in algae — algae the company ultimately plans on using to make biofuel.**

It's no secret that the process of manufacturing cement is both energy intensive and dirty. Global cement production alone emits roughly five percent of greenhouse gas emissions annually, both as a byproduct of limestone decarbonation (60%) and from the burning of fossil fuels in the cement kilns (40%). And as the demand for concrete-intensive infrastructure soars in developing countries like China and India, global emissions from cement plants—and other industrial sources—will continue to rise.

But a Canadian company called [Pond Biofuels](#) sees some real opportunity in all those industrial greenhouse gas emissions. At the [St. Marys Cement](#) plant in southwestern Ontario, Pond Biofuels has become the first to successfully use carbon dioxide emitted from a major industrial source to produce high value biomass from microalgae.

Pond Biofuels is capturing carbon dioxide and other emissions from a cement plant and using it to create a nutrient-rich algae slime which can be dried and used as a fuel.

The algae will be grown at a facility adjacent to the stacks, harvested, dried using industrial waste heat, from the cement plant and then used along with the fossil fuels that are currently used in its cement kilns. The company says they hope to demonstrate the scalability of the industrial pilot project and to show that it can be employed on virtually



any industrial stack.

“To resolve the problem you have to have an industrial solution, not a laboratory solution,” Terry Graham, [chairman of Toronto start-up Pond Biofuels](#) told the *Toronto Star*. “In a laboratory you can control everything. But you can't do that in the field,” added Graham.

Several companies are developing promising technologies in the race to successfully capture, divert and repurpose industrial-scale emissions of greenhouse gases into algae-based biofuels, but investment in the fledgling industry has been slow to develop.

However, if the Pond Biofuels project shows that it can successfully produce a microalgae crop that can then be turned back into fuel to fire the kilns or [converted to an algae-based biofuel](#)—a process they are currently testing and hope ultimately to be fueling their trucks with—the three-year-old start-up is going to have a lot of interested venture capitalists knocking at its front door.

*Photo: [SeRVe61](#) via flickr/Creative Commons*