

CAN CARBON CAPTURE TECHNOLOGY HELP CLEAN UP CONSTRUCTION?



Concrete, the world's most abundant man-made substance, ranks second to coal as the world's dirtiest industrial material. Now, a company in Halifax, Canada, is working to make concrete plants carbon neutral, using captured CO₂ to improve their product.

By injecting CO₂ into concrete during production, [CarbonCure](#) sequesters stores that would otherwise pollute the atmosphere. According to Sean Monkman, the company's Vice President of technology development, CO₂ makes concrete stronger and more durable – qualities that translate into reduced waste and energy consumption, and reduced costs for manufacturers and builders.

“CO₂ isn't just a harmful greenhouse gas”, says Robert Nevins, CEO of CarbonCure. “We can use it to make better materials.”

Nevins isn't alone in spotting this potential. California-based [Celera](#) sends its emissions through seawater to create a chalky bicarbonate by-product that, when mixed with concrete, improves its

quality. Celera has built a demonstration plant in Monterey to showcase the “beneficial uses” of CO₂. [Carbon Sciences](#), also in California, offsets CO₂ emissions from coal and steel production plants by sequestering the greenhouse gas in concrete, thereby strengthening the material. And [Novacem](#) of London says that its magnesium silicate cement absorbs enough emissions to make it carbon negative.

To date, however, companies have not demonstrated that clean concrete can be produced to meet industry demands, or that the energy used to build new “green” production plants won’t counter its ecological benefits. According to Noel Morrin, Senior Vice President of sustainability at [Skanska](#), effective carbon storage in concrete is “never going to be more than an interesting lab experiment”.

But Nevins’ model may have an answer to these concerns. Rather than building new production plants, CarbonCure is partnering with North American manufacturers, including [Basalite](#) and [Atlas Block](#), to bring their concept to facilities that already have established markets and the capacity to produce large quantities. Currently, they’re working with three plants in the US and Canada. Plans to expand include the development of other product types, including pipes and pavements.

Source : <http://thisbigcity.net/can-carbon-capture-technology-help-clean-up-construction/>