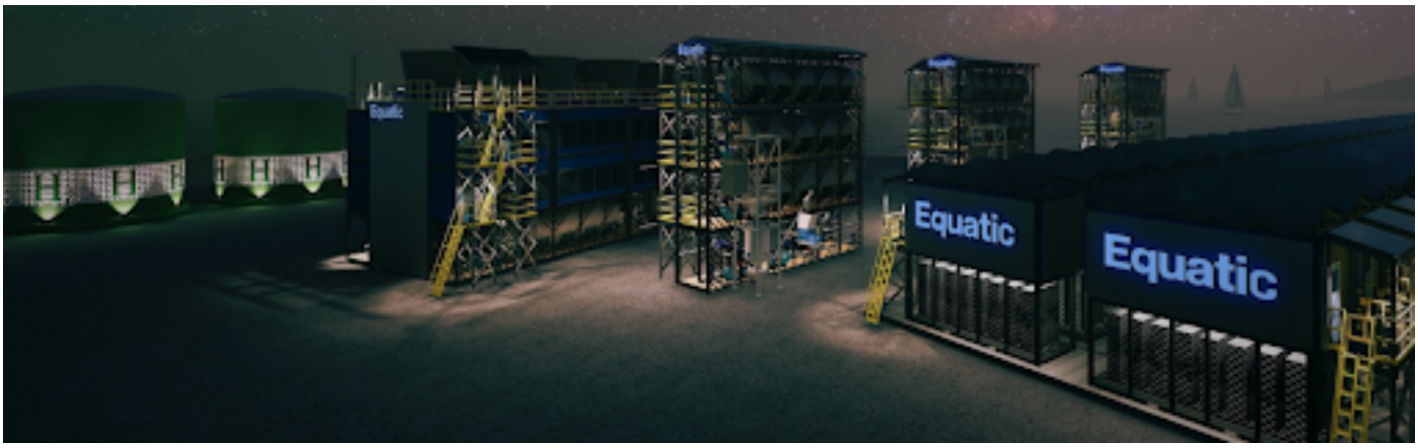
UCLA Innovation Powers Equatic, Harnessing The Ocean To Fight Climate Change

UCLA



The world faces two unprecedented challenges: reducing reliance on fossil fuels and removing legacy carbon emissions from the atmosphere. Equatic is the only carbon removal company that tackles both. Created from more than a decade of research and development at UCLA's Samueli School of Engineering, the patented technology accelerates the ocean's inherent ability to absorb and permanently store massive amounts of carbon while simultaneously producing carbon-negative hydrogen. Mobilizing Equatic technology at commercial scale will help solve the world's most urgent climate challenge, while creating immense value for industries and communities.

The ocean is our planet's largest carbon sink, which absorbs about 30% of the CO_2 we released into the atmosphere. But the ocean is struggling to keep pace as we emit more and more carbon. The result? A dangerous imbalance that's driving us toward catastrophic climate change.

Current carbon management solutions aren't enough—they're often small-scale, expensive, and plagued by issues of transparency and verification. The world needs a breakthrough: an affordable, large-scale solution to removal carbon from the atmosphere that doesn't harm the environment and uses renewable energy. Equatic is that breakthrough. Their patented technology uses a process called electrolysis to turn CO_2 into a stable, solid form carbonate

material—much like naturally-formed sea shells. It's a method that permanently removes carbon by extracting CO_2 from seawater, transforming it into carbonates, and returning the cleaned water to the ocean, unharmed. Think of it as nature turbo-charged—the process is 99,000 times faster than the ocean's natural ability to absorb CO_2.

What's even more exciting is that the process produces clean hydrogen fuel—both lowering emissions and creating a renewable power source for Equatic's operations. They work in shoreline plants that can be set up anywhere there's a coastline and energy supply (preferably renewable), providing a scalable solution to one of the planet's most pressing challenges. At full commercial scale, Equatic has the potential to transform industries, create jobs, and fuel green energy economies—while actively healing the climate. Through the sale of carbon credits, clean hydrogen, and even building materials made from the captured carbon, Equatic creates value while making a measurable impact on global emissions.

These small-scale operations are just the beginning. With costs expected to drop to as low as $30 per tonne of carbon removed — far below the current $100 per tonne benchmark — Equatic is poised to scale rapidly.

Equatic was founded by Gaurav N. Sant who leads it with the executive team. Sant is the Pritzker Professor of Sustainability in UCLA's Samueli School of Engineering, where he is also the Founder and Director of UCLA's Institute for Carbon Management.

UCLA Technology Development Group licensed the technology to Equatic. The company was a finalist in the prestigious 2024 EarthShot Prize, a competition of solutions that will positively drive global change and protect the environment for future generations. Equatic has received backing from Chan-Zuckerberg, Boeing, and the US Department of Energy. With a multi-million-dollar offtake agreement from Boeing and plans for commercial-scale plants in Singapore by 2026, they're well on their way to commercial scale. Equatic's plants will not only remove carbon but also generate clean hydrogen, helping to decarbonize industries, such as aviation and shipping, and drive the transition to a more sustainable future.

With their technology and strong partnerships, Equatic is positioned to be a key player in global carbon removal efforts, setting the stage for a cleaner, greener, and more resilient

planet.

View the tech animation.

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