



Sailcargo plants more trees than it chops down, making the project carbon negative overall. | Photo source Sailcargo

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WOODEN CARGO SHIP MELTS MODERN AND TWENTIETH-CENTURY TECH



MOBILITY & TRANSPORT

A startup is building a wooden cargo ship that uses both solar-generated electric power and traditional sails

Spotted: Shipping goods by sea is the world's most efficient form of transport, but it still has a major environmental impact, accounting for around 3 per cent of global emissions. As ship engines use heavy fuel oil — the most polluting form of the fuel — they actually emit a lot of pollution; just 15 cargo ships emit the equivalent sulphur dioxide emissions of every car in the world.

A number of companies are working to address this, and one — Sailcargo — is currently building a sustainable cargo ship called Ceiba that does not use any fossil fuels at all. Made almost entirely from timber, the ship is powered by solar panels and an electric engine, as well as with sailing masts — a combination of 20th and 21st-century technology. While the ship is built of wood, Sailcargo plants more trees than it chops down, making the project carbon-negative overall.

Ceiba is sustainable but has some practical drawbacks. It will be capable of carrying just nine standard shipping containers, as opposed to the 20,000 on a conventional container ship. The ship will also only be able to travel at a maximum of 16 knots (18 mph), compared to 22 knots (25 mph) for a traditional ship. However, the Ceiba is really designed as a proof of concept, to demonstrate that cargo shipping can be emissions-free.

Ceiba is also demonstrating that cargo can be stylish as well. The hull and sail design are based on a 1906 Finnish trading schooner and will be reminiscent of a classic turn-of-the-century trading vessel. Sailcargo plans to use more modern sail technology in future boats. Despite some delays, they hope

to have Ceiba in the water by the end of 2021 and operating by 2022, when she will begin transporting cargo between Costa Rica and Canada.

According to Danielle Doggett, managing director and co-founder of Sailcargo, “The thing that sets Ceiba apart is the fact that she’ll have one of the largest marine electric engines of her kind in the world. The system also has the means to capture energy from underwater propellers as well as solar power, so electricity will be available for the engine when needed. Really, the only restrictions on how long she can stay at sea is water and food onboard for the crew.”

The use of alternative fuels has been growing massively in the transportation industry. While the focus has primarily been on land-based vehicles, people are increasingly interested in building other types of sustainable vehicles. At Springwise, we have seen this recently with an [electric](#), autonomous cargo ship and a [solar-powered](#) plane.

Written By: Lisa Magloff

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Takeaway:

While Ceiba will be smaller and slower than traditional cargo ships, this may not be as big an issue as it seems. Once she has proven herself, future ships can be built to handle larger loads. Sailcargo also points out that one way to remove emissions is to reduce speeds. New rules to limit the speeds of cargo ships would make slower ships like Ceiba more competitive. Others point out that the real problem is that fossil fuels are still too cheap. If the price of fossil fuels were to rise, electric/sail ships like Ceiba will also make economic sense.