



Pragma's hydrogen-powered ebike | Photo source Pragma

[Innovation](#) > [Mobility & Transport](#) > [Hydrogen fuel-cell bike gets extended range](#)

HYDROGEN FUEL-CELL BIKE GETS EXTENDED RANGE

 MOBILITY & TRANSPORT

Pragma has extended the range of its hydrogen fuel-cell-powered ebike by 50 per cent

Spotted: Last year, Pragma Industries announced that it had begun producing the world's first mass-production fuel-cell-powered ebike. The bike includes a lithium-ion battery and a fuel-cell powered by a hydrogen gas cylinder. Now, the company has announced a 50 per cent increase in the vehicle's range, from 62 miles (100km) to 93 miles (150km). At the same time, the average battery-powered ebike has a range of around 31 miles (50km).

However, the hydrogen refuelling stations, which produce hydrogen through the electrolysis of water, cost around €30,000 each, making them too expensive to be installed everywhere. So, Pragma needed to come up with another option for refuelling. The new model simply uses a larger gas cylinder to increase range.

Pragma has sold a small number of the bikes to French municipalities and has been working to cut the cost of the bikes from around €7,500 to around €5,000, which is similar to the price of other high-end electric bikes. Ultimately, the company hopes to develop an onboard system for converting water to hydrogen, using a chemical reaction between water and aluminium or magnesium to generate the hydrogen gas.

The high-end bikes are primarily aimed at bike-rental operators, delivery companies, and municipal or corporate fleets. The company plans to produce a few hundred of the e-bikes this year.

22nd August 2019

Email: contact@pragma-industries.com

[Download PDF](#)

Takeaway:

A fuel-cell converts the chemical energy stored in hydrogen and oxygen into electrical energy. Because the only by-products of the reaction are water and heat, it is a very clean and sustainable fuel source. The main problems are the need to keep the hydrogen gas compressed, which increases its flammability, and the cost of storing and producing hydrogen gas. Given Pragma's advances, it may not be long before we are all riding hydrogen-celled bikes.