

French Post Office and Renault Trucks testing electric truck with fuel cell range extender

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Renault Trucks and the French Post Office (La Poste) will [introduce](#) on an experimental basis, and as a first in Europe, an electric truck equipped with a hydrogen-powered range extender. The range-extended 4.5-ton Maxity Electric model doubles the electric truck range to 200 kilometers (124 miles) and will be tested for one year under actual operating conditions in the city Dole (Jura Department), allowing Renault Trucks to explore all potential avenues of hydrogen technology under actual operating conditions.



Maxity Electric with fuel cell range extender. [Click to enlarge.](#)

For La Poste, which at present owns the world's largest fleet of electric vehicles, this experiment is part of a continuous effort underway to extend the range of its fleet. For nearly a year, in the Franche-Comté Region, the Post Office has been testing, during carriers' collection and distribution of mail and packages, Renault Kangoo Z.E. mail delivery vehicles with fuel cell range extenders. ([Earlier post.](#))

Renault Trucks configured the 4.5-ton Maxity Electric with a 20 kW hydrogen fuel cell, along with two hydrogen tanks, with a 75-liter capacity each, making it possible to store 4 kg of H₂ at 350 bar. The development and vehicle integration steps were carried out in partnership with [Symbio FCell](#).

When the vehicle is running, the electric motor is fed by two complementary energy sources; the fuel cell is capable of delivering a maximum power of 20 kW and, once that threshold has been reached, the batteries kick in to supply whatever power is still required. When idle, the fuel cell is available to recharge the battery as needed.

—Christophe Vacquier, project supervisor

The heat released by the fuel cell is reused to warm the passenger compartment, which avoids having to consume any energy stored in the batteries, thus helping ensure longer range.

200 kilometers of autonomy make it the ideal choice for a daily schedule of urban and suburban routes. Our purpose behind this project is to support European metropolitan areas in their goal of limiting air and noise pollution emissions, through testing innovative vehicles that produce zero emissions and that in the near term should become economically viable for our customers.

—Karine Forien, Director of Energy Efficiency Strategy with Renault Trucks

Hydrogen stands out today as an efficient solution for extending the possibilities of the electric vehicle product line and its autonomy. More broadly, the development of a hydrogen-based energy storage system is a linchpin to our energy transition.

—Frédéric Delaval, Technical Director of the Mail and Package Delivery Services Office at La Poste

Due to the region's especially harsh winter weather conditions, Dole will serve as the backdrop for the Post Office's entire experimental fleet.

The truck, registered under the N2 category, has a authorized gross weight of 4.5 tons, certified in France at 3.5 tons + 1 ton, via special regulations favoring "clean-burning vehicles" ; the extra 1,000 kg has been authorized as a declared additional rated weight, owing to the deployment of a "clean" alternative technology.

The truck is driven by a 400V, 47 kW asynchronous electric motors with 270 N·m (199 lb-ft) of torque; maximum speed is 90 km/h (56 mph). The truck is equipped with four Valence Technology Li-ion battery packs, weighing a total of 400 kg (882 lbs) and providing 42 kWh capacity.

The vehicle will be used on a mail and package collection route, which is mainly rural and covers a distance of approximately 70 km (43.5 miles).