

All about Fuel Cell Electric Vehicle

The advent of Fuel Cell Electric Vehicles gives fresh momentum to the energy transition.

Let's get a better understanding of what a Fuel Cell Electric Vehicle is. It is basically a type of electric vehicle. But the electricity powering the engine is not fully stored in a battery like other electric vehicles. It is produced via a fuel cell, working with the hydrogen contained in the tank.

But what is hydrogen? Hydrogen, or H₂, is the most common element in the universe; it can be found everywhere, including in water, which contains two hydrogen atoms.

Today, hydrogen is mainly used by the industry, for chemical and refining applications. Its use in transportation is still marginal.

≈ 65% Chemical industry

≈ 35% Refinery

< 1% Energy

And how is hydrogen produced? Most often, from natural gas heated in the presence of steam, a process known as reforming. It can also be produced from water exposed to an electric current, otherwise known as electrolysis.

What are the advantages of a Fuel Cell Electric Vehicle?

As an electric vehicle, it produces zero emissions of CO₂ and no other pollutants at the exhaust and it's very quiet. Moreover, it delivers a rapid refueling and an extended range.

However, the cost of Fuel Cell Electric Vehicle is still high, that's why the number of these vehicles is still relatively small, with just a few vehicles in the U.S.A., Germany, South Korea and Japan. But it's a market with a promising future!

USA ≈ 5,000 FCEV*

Germany ≈ 400 FCEV*

South Korea ≈ 100 FCEV*

Japan ≈ 3,000 FCEV*

*Fuel Cell Electric Vehicle