

# Fuel Cell Powertrain Market by Component (Fuel Cell System, Drive System, Battery System, Hydrogen Storage System, and Gearbox), Vehicle Type (PC, LCV, Trucks, Buses), Power Output, Drive Type, H2 Fuel Station and Region - Global Forecast to 2027

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## Abstracts

The global fuel cell powertrain market size is projected to grow from USD 512 million in 2022 to USD 3,629 million by 2027, at a CAGR of 47.9%.

“Government policies and funding boost H2 stations in Europe”

Germany and France have the largest number of hydrogen fuel station in the region. The number of hydrogen fuel station has increased significantly during the past few years due to OEM support along with government encouragement. Public-private partnerships have been undertaken under the European Strategic Energy Technology Plan (SET-Plan) to accelerate the development of fuel cells and hydrogen technologies in Europe. For instance, H2 Mobility stated that Germany is estimated to build the highest number of HRS in 2021 as it has to reach a target of 100 HRS in 2022 from 92 operational ones in 2021. Additionally, the growth of the German market is attributed to associations such as the German Hydrogen and Fuel Cell Association (DWV) and National Organization Hydrogen and Fuel Cell Technology (NOW GmbH), which work for the development of fuel cell technologies. The UK is projected to grow at the highest CAGR during the forecast period. Toyota, Honda, Hyundai, and Shell have partnered with the UK Department for Transport with an aim to introduce fuel cell vehicles in emergency services and police departments and enhance the hydrogen refueling infrastructure across the UK. Considering above factors the hydrogen fuelling station in Europe will provide growth opportunities in near future.

“high power demand in commercial vehicles will boost >250 kw segment”

The feasibility of the >250 kW power segment is being studied by various OEMs. This fuel cell powertrain is mainly used to pilot heavy vehicles. Nikola is one of the major OEMs involved in activities related to the piloting of the >250 kW fuel cell powertrain in its Nikola One truck model. This truck is capable of producing a staggering 745 kW power output. The second generation of the BMW fuel cell powertrain system will give an output of 275 kW, which will be piloted in the BMW i Hydrogen NEXT from 2022. Once this vehicle is rolled out, the truck market is expected to experience rapid changes as the company offers 100% zero emission, which would become the norm. More such developments are expected to drive the growth of the >250 KW segment in the fuel cell powertrain market during the forecast period.

Heavy-duty transportation such as trucking needs a high driving range, power, and efficiency. Fuel cells with an output of more than 250 kW are more suitable and sustainable for such applications as compared to battery-powered vehicles. Hence, in countries like the US and Australia, where long-haul trucking has high demand, high-powered fuel cell trucks will witness high impactful growth opportunities. The heavy-duty commercial vehicle industry will undergo a revolutionary change due to the presence of fuel cell vehicles with more than 250 kW power output in the coming decade. This will help in emission reduction, and the demand for refueling stations will be manageable at a certain distance from each other.

“Government investment in research and infrastructure will drive market in Australia”

Australia is estimated to be the largest in the fuel cell powertrain market and is also estimated to be the fastest growing over the forecast period. Factors such as high demand as well as government initiatives to promote the growth of FCEVs will play a critical role in driving the market. according to the report published by the Australian Renewable Energy Agency (ARENA), around 2,800 jobs and USD 1.2 billion in revenue can be generated annually by 2030 by hydrogen exports. Japan, China, and South Korea are the potential markets for these exports. In March 2022, The government is boosting its support for uptake heavy hydrogen fuel cell vehicle by funding construction of first public new energies service station in Geelong, Victoria, through Australia Renewable Energy (ARENA) is providing USD 22.8 million to Viva Energy (Australia) for building the hydrogen cell refueling station.

The study contains insights from various industry experts, ranging from component suppliers to tier 1 companies and OEMs. The break-up of the primaries is as follows

By Company Type: Tier I - 45%, Tier II - 23%, and OEMs - 32%

By Designation: Directors - 28%, C Level Executives- 37%, and Others - 35%

By Region: North America - 37%, Europe - 28%, Asia Oceania - 25%, and RoW-10%

Major players in the fuel cell powertrain market are Ballard Power Systems (Canada), Cummins Inc. (US), Denso Corporation (Japan), Robert Bosch GmbH (Germany), and FEV (Germany).

#### Research Coverage:

The market study covers the fuel cell powertrain market size and future growth potential across different segments such as by component (fuel cell system, battery system, drive system, hydrogen storage system, others) vehicle type (passenger car, LCV, bus, truck), drive type (front-wheel drive (FWD), rear-wheel drive (RWD), all-wheel drive (AWD)), power output (250 kw), h2 fuel station, and region (Asia Oceania, Europe, North America). the study also includes an in-depth competitive analysis of the key players in the market, along with their company profiles, key observations related to product and business offerings, recent developments, and key market strategies.

#### Key Benefits of Buying the Report:

The report will help market leaders/new entrants in this market with information on the closest approximations of revenue numbers for the overall automotive motors market and its subsegments.

This report will help stakeholders understand the competitive landscape and gain more insights to better position their businesses and plan suitable go-to-market strategies.

The report also helps stakeholders understand the pulse of the market and provides them information on key market drivers, restraints, challenges, and opportunities.

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