

# **Global Automotive Fuel Cell Market Size study & Forecast, by Type (Proton Exchange Membrane Fuel Cell, Phosphoric Acid Fuel Cell, Others), by Power Rating (Below 100 kW, 100 – 200 kW, Above 200 kW), by Vehicles (Passenger Vehicles, Light Commercial Vehicles, Bus, Trucks) and Regional Analysis, 2023-2030**

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## **Abstracts**

Global Automotive Fuel Cell Market is valued at approximately USD XX billion in 2022 and is anticipated to grow with a healthy growth rate of more than XX% during the forecast period 2023-2030. An automotive fuel cell is a device that generates electrical energy through an electrochemical reaction between hydrogen and oxygen. The types of automotive fuel cells are Proton Exchange Membrane (PEM) fuel cells, and Phosphoric Acid Fuel Cells (PAFC). Moreover, the supportive government incentives and subsidies to promote the development and adoption of fuel cell vehicles, increasing hydrogen infrastructure, stringent emission regulations and the global push toward reducing greenhouse gas emissions that anticipated to support the market growth during the forecast period 2023-2030.

Additionally, the growth of a reliable hydrogen infrastructure, including refueling stations, is crucial for the widespread adoption of fuel cell vehicles. Governments and private entities are investing in the development of hydrogen infrastructure to support the expansion of the Automotive Fuel Cell Market. For instance, In May 2023, The U.S. Department of Energy (DOE) is allocating USD 42 million across 22 projects in 14 states to accelerate the development of clean hydrogen technologies. These initiatives, overseen by the DOE's Hydrogen and Fuel Cell Technologies Office (HFTO), aim to harness solar energy for creating hydrogen fuel. It also focus on enhancing hydrogen

storage methods, reducing fuel cell costs for heavy transportation, and improving hydrogen emissions monitoring. This funding underscores the commitment to advancing sustainable energy solutions and promoting hydrogen's role in the clean energy landscape. As a result, the growing development of hydrogen infrastructure is anticipated to support the market growth. Moreover, growing advancements in fuel cell technology, and increasing investment in research and development are anticipated to create lucrative opportunities for the market. However, the high initial investments in hydrogen fueling infrastructure, and lower efficiency than BEVs and HEVs stifle market growth throughout the forecast period of 2023-2030.

The key regions considered for the Global Automotive Fuel Cell Market study includes Asia Pacific, North America, Europe, Latin America, and Middle East & Africa. North America dominated the market in 2022 owing to the growing investments in hydrogen infrastructure, growing emphasis on sustainable and eco-friendly transportation solutions, stringent environmental regulations and a growing emphasis on reducing greenhouse gas emissions. Whereas, the Asia Pacific is expected to grow at the fastest growth rate over the forecast period, owing to factors such as supportive government initiatives and policies, growing hydrogen infrastructure, and increasing awareness of environmental issues.

Major market player included in this report are:

Ballard Power Systems

Hyundai Motor Company

Toyota Motor Company

Nissan Motor Corporation

Nedstack Fuel Cell Technology B.V.

Plug Power Inc

American Honda Motor Company, Inc.

Daimler AG

Toshiba Corporation

Robert Bosch GmbH

#### Recent Developments in the Market:

In October 2023, Toyota Motor introduced a compact 50kW Fuel Cell module (FC module), showcasing an innovative Fuel Cell (FC) system. This module, designed for diverse applications such as lift trucks, agricultural machinery, and construction equipment, offers flexible installation options.

#### Global Automotive Fuel Cell Market Report Scope:

Historical Data – 2020 - 2021

Base Year for Estimation – 2022

Forecast period - 2023-2030

Report Coverage - Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

Segments Covered – Type, Power Rating, Vehicles, Region

Regional Scope - North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope - Free report customization (equivalent up to 8 analyst's working hours) with purchase. Addition or alteration to country, regional & segment scope\*

The objective of the study is to define market sizes of different segments & countries in recent years and to forecast the values to the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry within countries involved in the study.

The report also caters detailed information about the crucial aspects such as driving factors & challenges which will define the future growth of the market. Additionally, it

also incorporates potential opportunities in micro markets for stakeholders to invest along with the detailed analysis of competitive landscape and product offerings of key players. The detailed segments and sub-segment of the market are explained below:

**By Type:**

Proton Exchange Membrane Fuel Cell (PEMFC)

Phosphoric Acid Fuel Cell (PAFC)

Others

**By Power Rating:**

Below 100 kW

100 – 200 kW

Above 200 kW

**By Vehicles:**

Passenger Vehicles

Light Commercial Vehicles (LCVs)

Bus

Trucks

**By Region:**

North America

U.S.

Canada

Europe

UK

Germany

France

Spain

Italy

ROE

Asia Pacific

China

India

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South Korea

RoAPAC

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