

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

Japan

Australia

South Korea

RoAPAC

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

Contents

CHAPTER 1. EXECUTIVE SUMMARY

- 1.1. Market Snapshot
- 1.2. Global & Segmental Market Estimates & Forecasts, 2020-2030 (USD Billion)
 - 1.2.1. Automotive Fuel Cell Market, by Region, 2020-2030 (USD Billion)
 - 1.2.2. Automotive Fuel Cell Market, by Type, 2020-2030 (USD Billion)
 - 1.2.3. Automotive Fuel Cell Market, by Power Rating, 2020-2030 (USD Billion)
 - 1.2.4. Automotive Fuel Cell Market, by Vehicles, 2020-2030 (USD Billion)
- 1.3. Key Trends
- 1.4. Estimation Methodology
- 1.5. Research Assumption

CHAPTER 2. GLOBAL AUTOMOTIVE FUEL CELL MARKET DEFINITION AND SCOPE

- 2.1. Objective of the Study
- 2.2. Market Definition & Scope
 - 2.2.1. Industry Evolution
 - 2.2.2. Scope of the Study
- 2.3. Years Considered for the Study
- 2.4. Currency Conversion Rates

CHAPTER 3. GLOBAL AUTOMOTIVE FUEL CELL MARKET DYNAMICS

- 3.1. Automotive Fuel Cell Market Impact Analysis (2020-2030)
 - 3.1.1. Market Drivers
 - 3.1.1.1. Supportive government incentives and subsidies
 - 3.1.1.2. Increasing hydrogen infrastructure
 - 3.1.1.3. Stringent emission regulations and the global push toward reducing greenhouse gas emissions
 - 3.1.2. Market Challenges
 - 3.1.2.1. High initial investments in hydrogen fueling infrastructure
 - 3.1.2.2. Lower efficiency than BEVs and HEVs
 - 3.1.3. Market Opportunities
 - 3.1.3.1. Growing advancements in fuel cell technology
 - 3.1.3.2. Increasing investment in research and development

CHAPTER 4. GLOBAL AUTOMOTIVE FUEL CELL MARKET INDUSTRY ANALYSIS

- 4.1. Porter's 5 Force Model
 - 4.1.1. Bargaining Power of Suppliers
 - 4.1.2. Bargaining Power of Buyers
 - 4.1.3. Threat of New Entrants
 - 4.1.4. Threat of Substitutes
 - 4.1.5. Competitive Rivalry
- 4.2. Porter's 5 Force Impact Analysis
- 4.3. PEST Analysis
 - 4.3.1. Political
 - 4.3.2. Economical
 - 4.3.3. Social
 - 4.3.4. Technological
 - 4.3.5. Environmental
 - 4.3.6. Legal
- 4.4. Top investment opportunity
- 4.5. Top winning strategies
- 4.6. COVID-19 Impact Analysis
- 4.7. Disruptive Trends
- 4.8. Industry Expert Perspective
- 4.9. Analyst Recommendation & Conclusion

CHAPTER 5. GLOBAL AUTOMOTIVE FUEL CELL MARKET, BY TYPE

- 5.1. Market Snapshot
- 5.2. Global Automotive Fuel Cell Market by Type, Performance - Potential Analysis
- 5.3. Global Automotive Fuel Cell Market Estimates & Forecasts by Type 2020-2030 (USD Billion)
- 5.4. Automotive Fuel Cell Market, Sub Segment Analysis
 - 5.4.1. Proton Exchange Membrane Fuel Cell (PEMFC)
 - 5.4.2. Phosphoric Acid Fuel Cell (PAFC)
 - 5.4.3. Others

CHAPTER 6. GLOBAL AUTOMOTIVE FUEL CELL MARKET, BY POWER RATING

- 6.1. Market Snapshot
- 6.2. Global Automotive Fuel Cell Market by Power Rating, Performance - Potential Analysis

6.3. Global Automotive Fuel Cell Market Estimates & Forecasts by Power Rating 2020-2030 (USD Billion)

6.4. Automotive Fuel Cell Market, Sub Segment Analysis

6.4.1. Below 100 kW

6.4.2. 100 – 200 kW

6.4.3. Above 200 kW

CHAPTER 7. GLOBAL AUTOMOTIVE FUEL CELL MARKET, BY VEHICLES

7.1. Market Snapshot

7.2. Global Automotive Fuel Cell Market by Vehicles, Performance - Potential Analysis

7.3. Global Automotive Fuel Cell Market Estimates & Forecasts by Vehicles 2020-2030 (USD Billion)

7.4. Automotive Fuel Cell Market, Sub Segment Analysis

7.4.1. Passenger Vehicles

7.4.2. Light Commercial Vehicles (LCVs)

7.4.3. Bus

7.4.4. Trucks

CHAPTER 8. GLOBAL AUTOMOTIVE FUEL CELL MARKET, REGIONAL ANALYSIS

8.1. Top Leading Countries

8.2. Top Emerging Countries

8.3. Automotive Fuel Cell Market, Regional Market Snapshot

8.4. North America Automotive Fuel Cell Market

8.4.1. U.S. Automotive Fuel Cell Market

8.4.1.1. Type breakdown estimates & forecasts, 2020-2030

8.4.1.2. Power Rating breakdown estimates & forecasts, 2020-2030

8.4.1.3. Vehicles breakdown estimates & forecasts, 2020-2030

8.4.2. Canada Automotive Fuel Cell Market

8.5. Europe Automotive Fuel Cell Market Snapshot

8.5.1. U.K. Automotive Fuel Cell Market

8.5.2. Germany Automotive Fuel Cell Market

8.5.3. France Automotive Fuel Cell Market

8.5.4. Spain Automotive Fuel Cell Market

8.5.5. Italy Automotive Fuel Cell Market

8.5.6. Rest of Europe Automotive Fuel Cell Market

8.6. Asia-Pacific Automotive Fuel Cell Market Snapshot

8.6.1. China Automotive Fuel Cell Market

- 8.6.2. India Automotive Fuel Cell Market
- 8.6.3. Japan Automotive Fuel Cell Market
- 8.6.4. Australia Automotive Fuel Cell Market
- 8.6.5. South Korea Automotive Fuel Cell Market
- 8.6.6. Rest of Asia Pacific Automotive Fuel Cell Market
- 8.7. Latin America Automotive Fuel Cell Market Snapshot
 - 8.7.1. Brazil Automotive Fuel Cell Market
 - 8.7.2. Mexico Automotive Fuel Cell Market
- 8.8. Middle East & Africa Automotive Fuel Cell Market
 - 8.8.1. Saudi Arabia Automotive Fuel Cell Market
 - 8.8.2. South Africa Automotive Fuel Cell Market
 - 8.8.3. Rest of Middle East & Africa Automotive Fuel Cell Market

CHAPTER 9. COMPETITIVE INTELLIGENCE

- 9.1. Key Company SWOT Analysis
 - 9.1.1. Company
 - 9.1.2. Company
 - 9.1.3. Company
- 9.2. Top Market Strategies
- 9.3. Company Profiles
 - 9.3.1. Ballard Power Systems
 - 9.3.1.1. Key Information
 - 9.3.1.2. Overview
 - 9.3.1.3. Financial (Subject to Data Availability)
 - 9.3.1.4. Product Summary
 - 9.3.1.5. Recent Developments
 - 9.3.2. Hyundai Motor Company
 - 9.3.3. Toyota Motor Company
 - 9.3.4. Nissan Motor Corporation
 - 9.3.5. Nedstack Fuel Cell Technology B.V.
 - 9.3.6. Plug Power Inc.
 - 9.3.7. American Honda Motor Company, Inc.
 - 9.3.8. Daimler AG
 - 9.3.9. Toshiba Corporation
 - 9.3.10. Robert Bosch GmbH

CHAPTER 10. RESEARCH PROCESS

10.1. Research Process

10.1.1. Data Mining

10.1.2. Analysis

10.1.3. Market Estimation

10.1.4. Validation

10.1.5. Publishing

10.2. Research Attributes

10.3. Research Assumption

List Of Tables

LIST OF TABLES

TABLE 1. Global Automotive Fuel Cell Market, report scope

TABLE 2. Global Automotive Fuel Cell Market estimates & forecasts by region
2020-2030 (USD Billion)

TABLE 3. Global Automotive Fuel Cell Market estimates & forecasts by Type
2020-2030 (USD Billion)

TABLE 4. Global Automotive Fuel Cell Market estimates & forecasts by Power Rating
2020-2030 (USD Billion)

TABLE 5. Global Automotive Fuel Cell Market estimates & forecasts by Vehicles
2020-2030 (USD Billion)

TABLE 6. Global Automotive Fuel Cell Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 7. Global Automotive Fuel Cell Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 8. Global Automotive Fuel Cell Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 9. Global Automotive Fuel Cell Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 10. Global Automotive Fuel Cell Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 11. Global Automotive Fuel Cell Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 12. Global Automotive Fuel Cell Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 13. Global Automotive Fuel Cell Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 14. Global Automotive Fuel Cell Market by segment, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 15. Global Automotive Fuel Cell Market by region, estimates & forecasts,
2020-2030 (USD Billion)

TABLE 16. U.S. Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD
Billion)

TABLE 17. U.S. Automotive Fuel Cell Market estimates & forecasts by segment
2020-2030 (USD Billion)

TABLE 18. U.S. Automotive Fuel Cell Market estimates & forecasts by segment
2020-2030 (USD Billion)

TABLE 19. Canada Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 20. Canada Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 21. Canada Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 22. UK Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 23. UK Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 24. UK Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 25. Germany Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 26. Germany Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 27. Germany Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 28. France Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 29. France Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 30. France Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 31. Italy Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 32. Italy Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 33. Italy Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 34. Spain Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 35. Spain Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 36. Spain Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 37. RoE Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 38. RoE Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 39. RoE Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 40. China Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 41. China Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 42. China Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 43. India Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 44. India Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 45. India Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 46. Japan Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 47. Japan Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 48. Japan Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 49. South Korea Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 50. South Korea Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 51. South Korea Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 52. Australia Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 53. Australia Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 54. Australia Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 55. RoAPAC Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 56. RoAPAC Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 57. RoAPAC Automotive Fuel Cell Market estimates & forecasts by segment

2020-2030 (USD Billion)

TABLE 58. Brazil Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 59. Brazil Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 60. Brazil Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 61. Mexico Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 62. Mexico Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 63. Mexico Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 64. RoLA Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 65. RoLA Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 66. RoLA Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 67. Saudi Arabia Automotive Fuel Cell Market estimates & forecasts, 2020-2030 (USD Billion)

TABLE 68. South Africa Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 69. RoMEA Automotive Fuel Cell Market estimates & forecasts by segment 2020-2030 (USD Billion)

TABLE 70. List of secondary sources, used in the study of global Automotive Fuel Cell Market

TABLE 71. List of primary sources, used in the study of global Automotive Fuel Cell Market

TABLE 72. Years considered for the study

TABLE 73. Exchange rates considered

List of tables and figures and dummy in nature, final lists may vary in the final deliverable

List Of Figures

LIST OF FIGURES

- FIG 1. Global Automotive Fuel Cell Market, research methodology
 - FIG 2. Global Automotive Fuel Cell Market, Market estimation techniques
 - FIG 3. Global Market size estimates & forecast methods
 - FIG 4. Global Automotive Fuel Cell Market, key trends 2022
 - FIG 5. Global Automotive Fuel Cell Market, growth prospects 2023-2030
 - FIG 6. Global Automotive Fuel Cell Market, porters 5 force model
 - FIG 7. Global Automotive Fuel Cell Market, pest analysis
 - FIG 8. Global Automotive Fuel Cell Market, value chain analysis
 - FIG 9. Global Automotive Fuel Cell Market by segment, 2020 & 2030 (USD Billion)
 - FIG 10. Global Automotive Fuel Cell Market by segment, 2020 & 2030 (USD Billion)
 - FIG 11. Global Automotive Fuel Cell Market by segment, 2020 & 2030 (USD Billion)
 - FIG 12. Global Automotive Fuel Cell Market by segment, 2020 & 2030 (USD Billion)
 - FIG 13. Global Automotive Fuel Cell Market by segment, 2020 & 2030 (USD Billion)
 - FIG 14. Global Automotive Fuel Cell Market, regional snapshot 2020 & 2030
 - FIG 15. North America Automotive Fuel Cell Market 2020 & 2030 (USD Billion)
 - FIG 16. Europe Automotive Fuel Cell Market 2020 & 2030 (USD Billion)
 - FIG 17. Asia pacific Automotive Fuel Cell Market 2020 & 2030 (USD Billion)
 - FIG 18. Latin America Automotive Fuel Cell Market 2020 & 2030 (USD Billion)
 - FIG 19. Middle East & Africa Automotive Fuel Cell Market 2020 & 2030 (USD Billion)
- List of tables and figures and dummy in nature, final lists may vary in the final deliverable

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