

Hydrogen-Powered Commercial and Bus Fleets Market Forecasts to 2034 – Global Analysis By Vehicle Type (Heavy-Duty Trucks, Medium-Duty Commercial Vehicles, City Transit Buses and Shuttle Vehicles), Powertrain, Fuel & Infrastructure, Application and By Geography

<https://marketpublishers.com/r/H1FC1D420115EN.html>

Date: March 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: H1FC1D420115EN

Abstracts

According to Statistics MRC, the Global Hydrogen-Powered Commercial and Bus Fleets Market is accounted for \$0.7 billion in 2026 and is expected to reach \$2.5 billion by 2034 growing at a CAGR of 17.5% during the forecast period. Hydrogen-powered fleets for commercial vehicles and buses are gaining attention as an effective pathway to reduce emissions in heavy transport. These vehicles rely on hydrogen fuel cell technology to produce electricity, with water vapor as the only exhaust output, ensuring zero tailpipe pollution. Unlike many battery-powered vehicles, hydrogen models enable rapid refueling and extended travel distances, which makes them practical for freight movement, public transportation systems, and continuous fleet usage. Public sector initiatives and government funding are expanding hydrogen refueling networks and promoting green hydrogen production. At the same time, automotive and bus manufacturers are introducing fuel cell-powered trucks and buses to comply with tightening environmental regulations.

According to DOE and NREL evaluations, hydrogen-powered bus fleets have been operating since 2003, with over \$300,000 in DOE funding allocated in FY22–FY23 and more than 25 million miles accumulated by fuel cell buses in U.S. transit fleets. These buses have demonstrated fuel cell lifetimes exceeding 25,000 hours, validating durability and cost targets for heavy-duty hydrogen mobility.

Market Dynamics:

Driver:

Growing investment in hydrogen infrastructure

Increasing financial support for hydrogen infrastructure development is significantly accelerating the hydrogen-powered commercial and bus fleets market. Governments, energy providers, and private stakeholders are investing heavily in hydrogen generation plants, storage facilities, and refueling networks to enable widespread fuel cell vehicle deployment. The availability of reliable infrastructure helps reduce operational barriers and improves convenience for fleet operators using hydrogen-powered vehicles. As refueling networks and hydrogen supply chains expand, transport companies and transit authorities become more confident in integrating hydrogen-powered buses and commercial trucks into long-term fleet strategies.

Restraint:

High initial cost of hydrogen vehicles and infrastructure

One of the primary challenges for the hydrogen-powered commercial and bus fleets market is the high upfront investment required for vehicles and infrastructure. Hydrogen fuel cell trucks and buses often cost more than diesel or battery-electric models because of advanced fuel cell components, specialized hydrogen storage systems, and relatively small production volumes. Moreover, developing hydrogen refueling infrastructure involves considerable spending on station construction, safety equipment, and fuel distribution networks. Without large-scale manufacturing and broader infrastructure availability, the significant capital costs associated with hydrogen technology may continue to slow the expansion of hydrogen-powered fleets.

Opportunity:

Development of hydrogen refueling networks

The expansion of hydrogen refueling infrastructure represents an important opportunity for the hydrogen-powered commercial and bus fleets market. Increasing the number of hydrogen stations improves convenience and ensures reliable fuel access for transportation operators. Governments and private sector participants are supporting projects that build hydrogen fueling corridors across highways and key metropolitan

regions. These initiatives help reduce concerns about limited refueling options and support longer travel distances for hydrogen-powered vehicles. As refueling networks become more widespread and accessible, commercial fleet owners and public transport agencies may gain greater confidence in integrating hydrogen-powered trucks and buses into their daily transportation operations.

Threat:**Uncertain hydrogen supply chain development**

The hydrogen-powered commercial and bus fleets market faces a threat from the uncertain development of hydrogen supply chains. A fully functioning hydrogen ecosystem requires synchronized progress in production facilities, storage solutions, transportation systems, and refueling stations. If any of these components develop slowly or unevenly, the availability of hydrogen fuel for fleet operations may be affected. In several regions, hydrogen distribution networks remain underdeveloped, creating reliability concerns for transportation operators. Without consistent fuel supply and strong infrastructure support, logistics companies and transit agencies may delay investments in hydrogen vehicles.

Covid-19 Impact:

The hydrogen-powered commercial and bus fleets market experienced both challenges and opportunities during the COVID-19 pandemic. Initially, restrictions on movement, supply chain interruptions, and reduced manufacturing activity slowed the production of hydrogen vehicles and delayed infrastructure development projects. Declining public transit ridership also reduced immediate demand for new bus deployments. Despite these setbacks, the pandemic encouraged governments to prioritize environmentally sustainable recovery plans. Many countries integrated hydrogen technologies into their clean energy and transportation policies to promote long-term resilience and emission reduction.

The heavy-duty trucks segment is expected to be the largest during the forecast period

The heavy-duty trucks segment is expected to account for the largest market share during the forecast period because they require high power output and long operational range for freight transport. These vehicles play a crucial role in logistics, cargo distribution, and long-distance transportation, where reliable performance and quick refuelling are important for maintaining efficiency. Hydrogen fuel cell systems support

these requirements by offering longer driving ranges and faster refuelling compared to many alternative technologies. As companies aim to lower emissions in freight and logistics activities, hydrogen-powered heavy-duty trucks are increasingly considered a practical option for supporting cleaner transportation while maintaining productivity in demanding commercial fleet operations.

The hydrogen refueling infrastructure segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the hydrogen refueling infrastructure segment is predicted to witness the highest growth rate as the deployment of hydrogen-powered vehicles increases. The expansion of commercial hydrogen trucks and buses is creating a strong requirement for dependable and widely available refueling facilities. Governments, energy providers, and private sector participants are investing in hydrogen fueling stations, storage systems, and distribution networks to support growing transportation demand. Establishing refueling infrastructure along key freight routes and urban transit networks will enhance vehicle accessibility and operational reliability.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share because of strong policy backing, extensive hydrogen mobility programs, and increasing adoption of sustainable transportation solutions. Nations including China, Japan, and South Korea are heavily investing in hydrogen infrastructure, fuel production, and the deployment of fuel cell vehicles. Many cities across the region are integrating hydrogen buses into their public transit systems to address air quality concerns and lower emissions. Additionally, regional automotive manufacturers are focusing on fuel cell vehicle innovation, strengthening the region's leadership in hydrogen-powered trucks and bus fleet development.

Region with highest CAGR:

Over the forecast period, the Europe region is anticipated to exhibit the highest CAGR because of strict environmental regulations, ambitious emission reduction goals, and rising investments in hydrogen technologies. The European Union is supporting hydrogen development through various programs aimed at advancing clean mobility and expanding fueling infrastructure. Nations including Germany, France, and Netherlands are implementing hydrogen-powered buses and trucks in transit and freight operations. Collaborative projects among governments, energy firms, and automotive

manufacturers are accelerating technology adoption. With expanding infrastructure and supportive policies, Europe is expected to experience strong growth in hydrogen-powered fleet deployment.

Key players in the market

Some of the key players in Hydrogen-Powered Commercial and Bus Fleets Market include Hyundai, Geely, Foton, Nanjing Golden Dragon, Yutong, Feichi Bus, Zhongtong Bus, Hyzon Motors, Xiamen Golden Dragon, Yunnan Wulong, Dongfeng Motor, Renault Group, Wrightbus, Tata Motors, Gillig, Daimler Buses, New Flyer and Solaris Bus & Coach.

Key Developments:

In February 2026, Renault Group, Volvo Group and CMA-CGM have made an agreement to make a strategic change to the business model of Flexis. This strategic move reaffirms the parties' commitment to innovation and collaboration and reflects their strong and positive relationship.

In September 2025, Daimler Buses has announced a new collaboration with Otokar Otomotiv ve Savunma Sanayi A.?. for the expansion of bus production capacities in Turkey. The partnership will see the Turkish bus manufacturer build Mercedes-Benz Conecto city buses for Daimler at its plant in Sakarya.

In August 2025, Hyundai Motor Company and General Motors announced plans for their first five co-developed vehicles, marking a significant milestone in their previously announced strategic collaboration. The two companies will co-develop four vehicles for the Central and South American market, including a compact SUV, car and pick-up, as well as a mid-size pick-up, all with the flexibility to use either internal combustion or hybrid propulsion systems.

Vehicle Types Covered:

Heavy-Duty Trucks

Medium-Duty Commercial Vehicles

City Transit Buses

Shuttle Vehicles

Powertrains Covered:

Fuel Cell Electric Vehicles

Hydrogen Internal Combustion Engines

Hybrid Hydrogen Systems

Fuel & Infrastructures Covered:

Gaseous Hydrogen

Liquid Hydrogen

Hydrogen Refueling Infrastructure

Applications Covered:

Public Transport

Freight & Logistics

Specialized Fleets

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL HYDROGEN-POWERED COMMERCIAL AND BUS FLEETS MARKET, BY VEHICLE TYPE

- 5.1 Heavy-Duty Trucks
- 5.2 Medium-Duty Commercial Vehicles
- 5.3 City Transit Buses
- 5.4 Shuttle Vehicles

6 GLOBAL HYDROGEN-POWERED COMMERCIAL AND BUS FLEETS MARKET, BY POWERTRAIN

- 6.1 Fuel Cell Electric Vehicles
- 6.2 Hydrogen Internal Combustion Engines
- 6.3 Hybrid Hydrogen Systems

7 GLOBAL HYDROGEN-POWERED COMMERCIAL AND BUS FLEETS MARKET, BY FUEL & INFRASTRUCTURE

- 7.1 Gaseous Hydrogen
- 7.2 Liquid Hydrogen
- 7.3 Hydrogen Refueling Infrastructure

8 GLOBAL HYDROGEN-POWERED COMMERCIAL AND BUS FLEETS MARKET, BY APPLICATION

- 8.1 Public Transport
- 8.2 Freight & Logistics
- 8.3 Specialized Fleets

9 GLOBAL HYDROGEN-POWERED COMMERCIAL AND BUS FLEETS MARKET, BY GEOGRAPHY

- 9.1 North America
 - 9.1.1 United States
 - 9.1.2 Canada

- 9.1.3 Mexico
- 9.2 Europe
 - 9.2.1 United Kingdom
 - 9.2.2 Germany
 - 9.2.3 France
 - 9.2.4 Italy
 - 9.2.5 Spain
 - 9.2.6 Netherlands
 - 9.2.7 Belgium
 - 9.2.8 Sweden
 - 9.2.9 Switzerland
 - 9.2.10 Poland
 - 9.2.11 Rest of Europe
- 9.3 Asia Pacific
 - 9.3.1 China
 - 9.3.2 Japan
 - 9.3.3 India
 - 9.3.4 South Korea
 - 9.3.5 Australia
 - 9.3.6 Indonesia
 - 9.3.7 Thailand
 - 9.3.8 Malaysia
 - 9.3.9 Singapore
 - 9.3.10 Vietnam
 - 9.3.11 Rest of Asia Pacific
- 9.4 South America
 - 9.4.1 Brazil
 - 9.4.2 Argentina
 - 9.4.3 Colombia
 - 9.4.4 Chile
 - 9.4.5 Peru
 - 9.4.6 Rest of South America
- 9.5 Rest of the World (RoW)
 - 9.5.1 Middle East
 - 9.5.1.1 Saudi Arabia
 - 9.5.1.2 United Arab Emirates
 - 9.5.1.3 Qatar
 - 9.5.1.4 Israel
 - 9.5.1.5 Rest of Middle East

9.5.2 Africa

9.5.2.1 South Africa

9.5.2.2 Egypt

9.5.2.3 Morocco

9.5.2.4 Rest of Africa

10 STRATEGIC MARKET INTELLIGENCE

10.1 Industry Value Network and Supply Chain Assessment

10.2 White-Space and Opportunity Mapping

10.3 Product Evolution and Market Life Cycle Analysis

10.4 Channel, Distributor, and Go-to-Market Assessment

11 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

11.1 Mergers and Acquisitions

11.2 Partnerships, Alliances, and Joint Ventures

11.3 New Product Launches and Certifications

11.4 Capacity Expansion and Investments

11.5 Other Strategic Initiatives

12 COMPANY PROFILES

12.1 Hyundai

12.2 Geely

12.3 Foton

12.4 Nanjing Golden Dragon

12.5 Yutong

12.6 Feichi Bus

12.7 Zhongtong Bus

12.8 Hyzon Motors

12.9 Xiamen Golden Dragon

12.10 Yunnan Wulong

12.11 Dongfeng Motor

12.12 Renault Group

12.13 Wrightbus

12.14 Tata Motors

12.15 Gillig

12.16 Daimler Buses

12.17 New Flyer

12.18 Solaris Bus & Coach

List Of Tables

LIST OF TABLES

Table 1 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Vehicle Type (2023-2034) (\$MN)

Table 3 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Heavy-Duty Trucks (2023-2034) (\$MN)

Table 4 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Medium-Duty Commercial Vehicles (2023-2034) (\$MN)

Table 5 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By City Transit Buses (2023-2034) (\$MN)

Table 6 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Shuttle Vehicles (2023-2034) (\$MN)

Table 7 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Powertrain (2023-2034) (\$MN)

Table 8 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Fuel Cell Electric Vehicles (2023-2034) (\$MN)

Table 9 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Hydrogen Internal Combustion Engines (2023-2034) (\$MN)

Table 10 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Hybrid Hydrogen Systems (2023-2034) (\$MN)

Table 11 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Fuel & Infrastructure (2023-2034) (\$MN)

Table 12 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Gaseous Hydrogen (2023-2034) (\$MN)

Table 13 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Liquid Hydrogen (2023-2034) (\$MN)

Table 14 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Hydrogen Refueling Infrastructure (2023-2034) (\$MN)

Table 15 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Application (2023-2034) (\$MN)

Table 16 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Public Transport (2023-2034) (\$MN)

Table 17 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By Freight & Logistics (2023-2034) (\$MN)

Table 18 Global Hydrogen-Powered Commercial and Bus Fleets Market Outlook, By

Specialized Fleets (2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

I would like to order

Product name: Hydrogen-Powered Commercial and Bus Fleets Market Forecasts to 2034 – Global Analysis By Vehicle Type (Heavy-Duty Trucks, Medium-Duty Commercial Vehicles, City Transit Buses and Shuttle Vehicles), Powertrain, Fuel & Infrastructure, Application and By Geography

Product link: <https://marketpublishers.com/r/H1FC1D420115EN.html>

Price: US\$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/H1FC1D420115EN.html>