

North America Hydrogen Trucks Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025-2034

<https://marketpublishers.com/r/N73B478CEFABEN.html>

Date: February 2025

Pages: 150

Price: US\$ 3,250.00 (Single User License)

ID: N73B478CEFABEN

Abstracts

North America Hydrogen Trucks Market was valued at USD 139.7 million in 2024 and is projected to grow at a CAGR of 44.6% from 2025 to 2034. The region is actively working to reduce reliance on fossil fuels, driving demand for fuel-cell trucks.

Government agencies are implementing policies to lower emissions, encouraging the adoption of alternative energy vehicles. Stricter fuel efficiency regulations from the National Highway Traffic Safety Administration (NHTSA) are reinforcing the shift toward zero-emission transportation. Additionally, regulatory bodies are continuously setting new emission standards to curb pollution levels.

State governments are promoting alternative fuels, including hydrogen, natural gas, and biofuels, to reduce the environmental impact of the transportation sector. Incentive programs across 47 states and the District of Columbia are supporting alternative fuel vehicle deployment, stimulating market expansion. A well-established hydrogen refueling and charging infrastructure further supports the increasing adoption of fuel cell electric trucks, with government-backed investments in new fueling stations and rebates enhancing accessibility. Technological advancements in fuel cell systems and expanding initiatives to accelerate fuel cell vehicle (FCEV) adoption are expected to propel market growth.

In 2024, the heavy-duty truck (HDT) segment accounted for USD 139.7 million and is set for significant expansion. Heavy-duty trucks are a major source of greenhouse gas emissions, and transitioning to hydrogen fuel cells can significantly reduce their carbon footprint. Hydrogen-powered trucks offer comparable refueling times and driving ranges to diesel counterparts, easing infrastructure deployment challenges. The rising demand for cargo transportation, fueled by e-commerce growth and long-haul logistics, is driving

the need for fuel cell-equipped HDTs. Manufacturers are ramping up production to meet the growing demand for sustainable heavy-duty trucks.

The logistics and distribution sector dominated the market, holding an 80% share in 2024. Rising fuel costs are prompting logistics companies to explore hydrogen-powered fleets for long-haul operations. Fuel cell trucks provide an advantage over battery-electric vehicles due to their extended range and faster refueling, making them ideal for transporting goods over long distances. Companies continue investing in research and development to enhance fuel cell truck performance and efficiency.

The market is segmented by range, including below 250 miles, 250–500 miles, and above 500 miles. The below 250 miles category is experiencing notable growth, driven by increasing consumer preference for zero-emission vehicles and rising expenditure on sustainable transportation. Businesses are also incorporating fuel cell vehicles for short-distance operations in ports and airports, further boosting demand in this segment.

Retail and e-commerce held a 60% market share in 2024, fueled by the need for sustainable logistics solutions. Major retailers are adopting hydrogen fuel cell trucks to maintain efficient supply chains while meeting environmental goals. Advancements in hydrogen refueling infrastructure are improving accessibility, supporting widespread integration of these vehicles into logistics operations.

The US dominated the North America hydrogen trucks market in 2024, generating USD 131.3 million and accounting for over 90% of revenue. Government initiatives, including tax incentives, grants, and subsidies, are facilitating hydrogen truck adoption. The expansion of hydrogen refueling stations across key freight corridors is addressing infrastructure challenges, making hydrogen-powered freight transportation a viable alternative to diesel. Leading corporations are investing in hydrogen fuel cell trucks to align with sustainability targets, strengthening market demand. Ongoing advancements in fuel cell technology are enhancing vehicle efficiency and reducing costs, further solidifying hydrogen trucks as a competitive solution in the transportation sector.

Contents

CHAPTER 1 METHODOLOGY & SCOPE

- 1.1 Research design
 - 1.1.1 Research approach
 - 1.1.2 Data collection methods
- 1.2 Base estimates and calculations
 - 1.2.1 Base year calculation
 - 1.2.2 Key trends for market estimates
- 1.3 Forecast model
- 1.4 Primary research & validation
 - 1.4.1 Primary sources
 - 1.4.2 Data mining sources
- 1.5 Market definitions

CHAPTER 2 EXECUTIVE SUMMARY

- 2.1 Industry 360° synopsis, 2021 - 2034

CHAPTER 3 INDUSTRY INSIGHTS

- 3.1 Industry ecosystem analysis
- 3.2 Supplier landscape
 - 3.2.1 Raw material supplier
 - 3.2.2 Component supplier
 - 3.2.3 Manufacturer
 - 3.2.4 Service provider
 - 3.2.5 Distributor
 - 3.2.6 End use
- 3.3 Profit margin analysis
- 3.4 Cost breakdown analysis
- 3.5 Technology & innovation landscape
- 3.6 Key news & initiatives
- 3.7 Regulatory landscape
- 3.8 Impact forces
 - 3.8.1 Growth drivers
 - 3.8.1.1 Government incentives accelerating hydrogen truck adoption
 - 3.8.1.2 Expansion of hydrogen refueling infrastructure

- 3.8.1.3 Rising focus on zero-emission freight solutions
- 3.8.1.4 Increasing investments by logistics and fleet operators
- 3.8.2 Industry pitfalls & challenges
 - 3.8.2.1 High initial cost of hydrogen trucks
- 3.9 Growth potential analysis
- 3.10 Porter's analysis
- 3.11 PESTEL analysis

CHAPTER 4 COMPETITIVE LANDSCAPE, 2024

- 4.1 Introduction
- 4.2 Company market share analysis
- 4.3 Competitive positioning matrix
- 4.4 Strategic outlook matrix

CHAPTER 5 MARKET ESTIMATES & FORECAST, BY VEHICLE, 2021 - 2034 (\$MN & UNITS)

- 5.1 Key trends
- 5.2 Light-duty
- 5.3 Medium-duty
- 5.4 Heavy-duty

CHAPTER 6 MARKET ESTIMATES & FORECAST, BY APPLICATION, 2021 - 2034 (\$MN & UNITS)

- 6.1 Key trends
- 6.2 Logistics & distribution
- 6.3 Municipal services
- 6.4 Construction & mining
- 6.5 Agriculture
- 6.6 Long-haul freight

CHAPTER 7 MARKET ESTIMATES & FORECAST, BY RANGE, 2021 - 2034 (\$MN & UNITS)

- 7.1 Key trends
- 7.2 Below 250 miles
- 7.3 250–500 miles

7.4 Above 500 miles

CHAPTER 8 MARKET ESTIMATES & FORECAST, BY END USE, 2021 - 2034 (\$MN & UNITS)

8.1 Key trends

8.2 Fleet operators

8.3 Retail & e-commerce

8.4 Municipalities & government agencies

8.5 Construction & mining

CHAPTER 9 MARKET ESTIMATES & FORECAST, BY REGION, 2021 - 2034 (\$MN & UNITS)

9.1 Key trends

9.2 U.S.

9.3 Canada

CHAPTER 10 COMPANY PROFILES

10.1 Daimler

10.2 Honda

10.3 Hyundai

10.4 Hyzon

10.5 Navistar

10.6 Nikola

10.7 PACCAR

10.8 SCANIA

10.9 Symbio

10.10 Volvo

I would like to order

Product name: North America Hydrogen Trucks Market Opportunity, Growth Drivers, Industry Trend Analysis, and Forecast 2025-2034

Product link: <https://marketpublishers.com/r/N73B478CEFABEN.html>

Price: US\$ 3,250.00 (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/N73B478CEFABEN.html>