

# Green Hydrogen Market Size, Share, Growth Drivers, Regional Analysis and Forecast, 2025-2032

*Key companies covered in green hydrogen market report are Air Liquide, Linde, NTPC, JSW Energy, Plug Power, Bharat Petroleum, Larsen and Toubro, and Others.*

NY, UNITED STATES, May 5, 2025 /EINPresswire.com/ -- The global [green hydrogen market](#) is witnessing significant growth, driven by rising demand for renewable energy solutions and widespread decarbonization initiatives across various sectors. Green hydrogen, produced through the electrolysis of water powered by renewable energy sources like wind and solar, is emerging as a pivotal element in the global transition to sustainable energy. It offers a zero-emission alternative to traditional hydrogen production methods that rely on fossil fuels. Green hydrogen is poised to play a crucial role in decarbonizing sectors such as heavy industry, transportation, and power generation.



Green Hydrogen Market

Fortune Business Insights™ mentioned this in a report titled “Green Hydrogen Market Size, Industry Share, Growth, Trends, and Forecast, 2025-2032.”

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Report Scope:

□ Base Year: 2024

□ Historical Data: 2019-2023

□ Years Considered for the Study: 2019-2032

□ □□□□□□□ □□□□□□: By Technology (PEM Electrolyzer, and Alkaline Electrolyzer), By Application (Automotive, Chemical, Power, Industrial, Marine, and Others).

#### Segmentation Analysis:

The green hydrogen market is segmented by technology and application, each playing a critical role in shaping industry trends. From a technology perspective, the market is primarily divided into Proton Exchange Membrane (PEM) electrolyzers and Alkaline electrolyzers. PEM electrolyzers are gaining popularity due to their compact size, high purity hydrogen output, and fast response times, making them suitable for renewable energy integration and transportation uses. However, they tend to be more expensive due to their reliance on precious metals like platinum. On the other hand, alkaline electrolyzers are a more established and cost-effective technology, widely used in large-scale industrial applications such as chemical manufacturing, though they offer lower hydrogen purity and slower dynamic response.

By application, the green hydrogen market spans a wide array of sectors. The automotive sector is a rapidly growing application area, especially for fuel cell electric vehicles (FCEVs), driven by the global push for zero-emission transport. In the chemical industry, green hydrogen serves as a sustainable feedstock in ammonia and methanol production, replacing carbon-intensive grey hydrogen. The power sector leverages green hydrogen for energy storage and grid stabilization, enabling better integration of renewable energy sources. In industrial applications, hydrogen is used for process heating and as a reducing agent in sectors such as steel manufacturing. The marine sector is also emerging as a promising application area, with hydrogen being explored as a clean fuel alternative for ships to meet international maritime emission standards.

#### Report Coverage:

The report offers:

Major growth drivers, restraining factors, opportunities, and potential challenges for the market.

Comprehensive insights into regional developments.

List of major industry players.

Key strategies adopted by the market players.

The latest industry developments include product launches, partnerships, mergers, and acquisitions.

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#### List of Key Players Present in the Report:

- Air Liquide (France)
- Linde (U.K.)
- NTPC (India)
- Reliance Industries Limited (India)
- JSW Energy (India)

- Plug Power - (U.S.)
- Bharat Petroleum (India)
- Gail (India)
- Siemens Energy (Germany)
- Adani Group (India)
- Larsen and Toubro (India)

#### Market Growth Drivers:

##### □ 1. Global Decarbonization Goals

Countries around the world are committing to net-zero emissions targets. Green hydrogen plays a vital role in achieving these goals by helping reduce carbon emissions, especially in sectors that are difficult to decarbonize, such as heavy industry and long-haul transport.

##### □ 2. Declining Renewable Energy Costs

The falling costs of renewable energy sources like wind and solar make green hydrogen production more affordable. This improves its competitiveness with grey and blue hydrogen.

##### □□ 3. Government Policies and Incentives

Governments are rolling out supportive regulations, subsidies, and tax incentives to accelerate the green hydrogen sector. These include funding for pilot projects, tax credits for producers, and national hydrogen strategies.

##### □ 4. Technological Advancements

Innovation in electrolysis technologies (like PEM and alkaline electrolyzers) and hydrogen storage solutions is reducing costs and improving scalability, making green hydrogen more accessible.

##### □ 5. Industrial and Transportation Demand

Green hydrogen is gaining traction as a clean energy alternative in industrial processes and transportation, particularly in fuel cell electric vehicles and shipping, where electrification is less feasible.

##### □ 6. Strategic National Initiatives

Several countries are implementing large-scale national strategies to boost green hydrogen production and export capacity, aiming to become leaders in the global hydrogen economy.

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#### □ Regional Analysis: Green Hydrogen Market

##### 1. Europe

Europe leads the green hydrogen market, driven by strong government policies, carbon neutrality goals, and major funding under initiatives like the EU Hydrogen Strategy. Countries like Germany, France, and the Netherlands are heavily investing in green hydrogen infrastructure

and cross-border hydrogen networks.

## 2. Asia-Pacific

Asia-Pacific is rapidly expanding, with Japan, South Korea, China, and India making major strides. Japan and South Korea are pioneers in hydrogen mobility, while China and India are investing in green hydrogen for industrial use and power generation to reduce fossil fuel dependence.

## 3. North America

The U.S. and Canada are growing players in the market. The U.S. supports green hydrogen through federal tax credits and clean energy programs. California is especially active, with numerous hydrogen mobility projects. Canada is focusing on both domestic use and export, especially to Europe.

## 4. Middle East & Africa

Countries like Saudi Arabia and UAE are investing in mega green hydrogen projects (e.g., NEOM) to diversify away from oil and become global hydrogen exporters. These regions benefit from abundant solar resources, ideal for low-cost hydrogen production.

## 5. Latin America

Chile and Brazil are emerging as potential hubs due to vast renewable energy resources. Chile, in particular, has ambitious plans to become a top green hydrogen exporter by 2030,

## Recent Major Developments in the Market

February 2025: Finland's first hyper-sustainable hydrogen facility by P2X Solutions inaugurated commercial production at Harjavalta in Finland, a landmark occasion for the hydrogen landscape in Europe.

February 2025: The U.S. Treasury Department came forward with guidelines for tax breaks on clean hydrogen production by businesses such as Plug Power and Bloom Energy.

## Related Reports-

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[Masterbatch Market](#) Size, Share, Growth, 2032

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