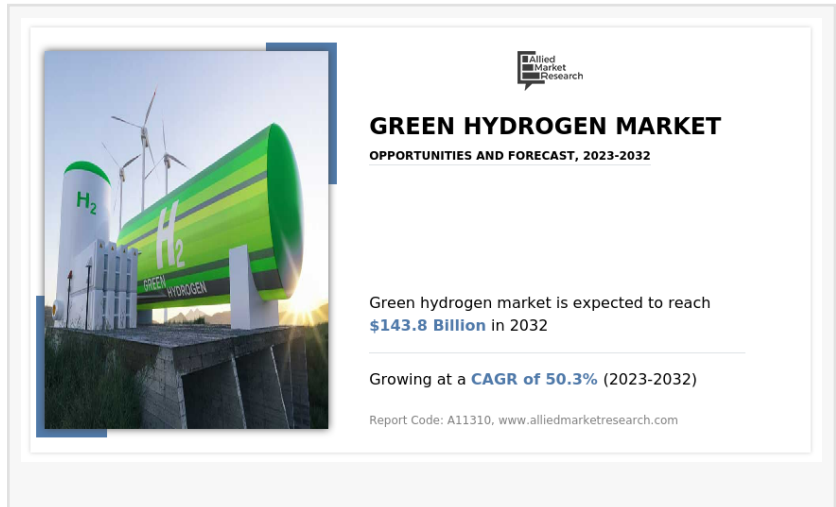


# Green Hydrogen Market Booms: From \$2.5 Billion in 2022 to \$143.8 Billion by 2032 Amid Global Clean Energy Push

*Government-backed decarbonization goals & game-changing applications in sectors such as transportation, power generation, food & beverage, and heavy industry.*

WILMINGTON, DE, UNITED STATES,  
June 17, 2025 /EINPresswire.com/ --

The [green hydrogen market](#) is witnessing unprecedented momentum, as global efforts to transition toward cleaner, sustainable energy systems gather pace. According to a recent report by Allied Market Research, the market was valued at \$2.5 billion in 2022 and is projected to soar to \$143.8 billion by 2032, growing at an exceptional CAGR of 50.3% from 2023 to 2032.



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The green hydrogen market is set to experience explosive growth, expanding from \$2.5 billion in 2022 to \$143.8 billion by 2032 at a staggering CAGR of 50.3%.”

*Allied Market Research*

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□ What is Green Hydrogen?

Green hydrogen—also referred to as renewable hydrogen—is produced via electrolysis powered by renewable energy sources such as solar, wind, or geothermal. Unlike grey or blue hydrogen, green hydrogen

does not emit carbon dioxide, making it an essential fuel in the global decarbonization strategy. One of the key technologies expected to grow rapidly in this market is the proton exchange membrane (PEM) [electrolyzer](#), especially as emerging economies experience accelerated industrial growth and energy needs.

□ Market Leaders & Regional Landscape

In 2023, Asia-Pacific emerged as the dominant region in terms of market share, followed by Europe and North America. Countries like India and China are playing a pivotal role due to rising investments, policy support, and strong energy demand. Prominent companies shaping the green hydrogen industry include:

Air Liquide

Shell plc

Enapter S.r.l.

Plug Power Inc.

Ballard Power Systems

Linde plc

Green Hydrogen Systems

Adani Green Energy Ltd.

Reliance Industries

GAIL (India) Limited

## □□ Key Market Drivers

### 1. □ Rapid Industrialization and Urbanization

As the global population grows and urbanizes, electricity demand is surging—especially in developing countries. Green hydrogen presents an effective solution to meet these energy needs while reducing dependence on fossil fuels.

### 2. □□ Food & Beverage Sector Growth

The food and beverage industry is projected to grow at a CAGR of 51.6%, heavily influencing green hydrogen demand due to its high energy consumption in processing, refrigeration, packaging, and transportation. Green hydrogen offers a clean alternative for energy-intensive operations where traditional electrification falls short.

### 3. □ Decarbonizing Heavy Industries

Industries such as chemical, petrochemical, and medical are expected to adopt green hydrogen on a larger scale, driven by carbon regulations and ESG mandates. As these sectors move toward [cleaner energy sources](#), green hydrogen offers both performance and environmental benefits.

#### 4. □ Transport & Power Generation

Electrification of the transportation and heating sectors is driving green hydrogen adoption. It provides a versatile energy source where batteries may not be viable, such as in heavy-duty vehicles, aviation, and long-duration energy storage.

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#### □ Innovation & Policy Backing

Significant R&D efforts are underway to improve electrolyzer durability, scale, and cost efficiency, further lowering barriers to adoption. Simultaneously, governments around the world are pushing for green hydrogen integration into national energy strategies. Carbon pricing mechanisms and low-carbon fuel mandates are encouraging industries to switch to hydrogen-based solutions.

In the United States, for example, only 1% of the 10 million metric tons of hydrogen produced annually is green hydrogen. The U.S. Department of Energy (DOE) aims to increase this figure dramatically by 2030 and beyond, with investments targeting:

10 million tons of clean hydrogen/year by 2030

\$8 billion investment in hydrogen hubs across the U.S. by 2026

250x increase in electrolyzer production capacity

#### □ Challenges & Opportunities

Despite its promise, the green hydrogen market faces high production and installation costs, limited electrolyzer infrastructure, and scaling challenges. As of 2023, the U.S. had only 42 operating electrolyzers with a combined capacity of about 3,000 tons/year—far short of national targets.

However, as technological breakthroughs, public-private partnerships, and international collaboration increase, these hurdles are expected to diminish. The transition to green hydrogen is not only environmentally urgent—it also holds economic opportunity, energy security, and job creation potential.

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## □ Conclusion

With global pressure mounting to reduce carbon emissions and switch to sustainable fuels, green hydrogen is positioned to transform global energy systems. Its applications span across industries, transportation, and power sectors, offering flexibility, scalability, and sustainability. As costs continue to fall and infrastructure expands, green hydrogen could soon become the backbone of the clean energy revolution.

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Pawan Kumar, the CEO of Allied Market Research, is leading the organization toward providing high-quality data and insights. We are in professional corporate relations with various companies and this helps us in digging out market data that helps us generate accurate research data tables and confirms utmost accuracy in our market forecasting. Each and every data presented in the reports published by us is extracted through primary interviews with top officials from leading companies of domain concerned. Our secondary data procurement methodology includes deep online and offline research and discussion with knowledgeable professionals and analysts in the industry.

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