

# Hydrogen Storage Market to Reach USD 6.8 Bn by 2031 at 23% CAGR | Air Liquide, Air Products

*The global hydrogen storage market is estimated to be valued at USD 1.6 Bn in 2024 and is expected to reach USD 6.8 Bn by 2031,*

BURLINGAME, CALIFORNIA, UNITED STATES, July 23, 2024  
/EINPresswire.com/ -- Market Overview:

Hydrogen storage technologies allow for the safe, efficient, and portable storage of hydrogen for a wide range of end-use applications such as

transportation, portable power, and backup power generation. Hydrogen can be stored physically or chemically. Physical storage includes compressed gas storage tanks and cryogenic liquid hydrogen storage tanks. Chemical storage incorporates metal hydrides and chemical hydrogen storage materials.

Market Dynamics:

The global hydrogen storage market is expected to witness significant growth, owing to increasing demand for clean fuel to meet carbon emission regulations. Hydrogen offers significant environmental benefits compared to fossil fuels as it only emits water vapor and warm air as by-products. Furthermore, many countries are promoting hydrogen as an alternative fuel and have developed roadmaps to deploy commercial hydrogen infrastructure, especially for use in fuel cell vehicles. Additionally, continuous technological advancements have led to improved storage capacity and efficiency of hydrogen storage systems. For instance, nanotechnology-based approaches are being developed to enhance hydrogen storage in materials. Such advancements are expected to increase adoption of hydrogen-based solutions across various end-use industries.



Hydrogen Storage Market Trend

## Hydrogen Storage Market Drivers

### Increasing adoption of fuel cell vehicles

The adoption of fuel cell electric vehicles (FCEVs) is increasing at a notable rate globally as they provide zero emission transportation. FCEVs use hydrogen as fuel which is stored onboard in high-pressure tanks or metal hydride beds. Many automakers like Toyota, Hyundai, Honda are launching new FCEV models and expanding their production. Government incentives and initiatives in countries to develop hydrogen refueling infrastructure is also encouraging more people to buy FCEVs. This rising demand for fuel cell vehicles will positively influence the hydrogen storage market in the coming years.

## Hydrogen Storage Market Opportunity

### Growing demand from industrial sectors

Apart from the transportation sector, hydrogen also has large applications as an energy carrier in many industrial verticals including chemicals, oil refining, steel production among others. It helps industries switch to cleaner fuels and reduces carbon emissions. The industrial demand for hydrogen is consistently rising worldwide. This promising industrial demand can boost the hydrogen storage market, as industries would need robust large-scale hydrogen storage solutions as their hydrogen requirements grow. Technology providers may tap into this lucrative opportunity through innovative storage solutions.

## Hydrogen Storage Market Trends

### Advent of solid-state hydrogen storage technologies

Research on developing advanced solid-state hydrogen storage materials and technologies is gaining momentum globally. They have potential to offer higher storage densities compared to conventional high-pressure gas or liquid hydrogen storage. Novel methods under research include hydrogen storage in nanostructures, metalorganic frameworks, boron-nitrogen-carbon compounds and complex hydrides. Some promising candidates have demonstrated hydrogen densities meeting DOE targets. If commercialized, solid-state storage can emerge as a disruptive trend remodeling the hydrogen infrastructure. This may significantly increase adoption of hydrogen fuels.

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Top Companies Included in This Report:

- Air Liquide
- Air Products and Chemicals Inc.
- Hexagon Purus
- Worthington Industries Inc.
- Linde plc
- Luxfer Holdings PLC
- Chart Industries
- INOXVA
- HBank Technologies Inc.
- Pragma Industries

Market Segmentation:

By Product Type:

- By Form: Physical Storage , Material-based Storage
- By Type: Cylinder , Merchant/Bulk , Onsite , On-Board

By Applications:

- By Application: Oil Refineries , Chemicals , Industrial , Automotive & Transportation , Others (Metalworking, etc.)

Key Regions/Countries are Classified as Follows:

- » North America (U.S., Canada, Mexico)
- » Europe (Germany, U.K., France, Italy, Russia, Spain, Rest of Europe)
- » Asia-Pacific (China, India, Japan, Singapore, Australia, New Zealand, Rest of APAC)
- » South America (Brazil, Argentina, Rest of SA)
- » Middle East & Africa (Turkey, Saudi Arabia, Iran, UAE, Africa, Rest of MEA)

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The report offers insights on the following topics:

Chapter 1: Study Coverage

Chapter 2: Executive Summary

Chapter 3: Competitor Landscape of the Hydrogen Storage Market Market by Players

Chapter 4: Market Size of the Hydrogen Storage Market Market by Type and Application

Chapter 5: Global and Regional Analysis

Chapter 6: Company Profiles, Recent Developments, and Investments

Chapter 7: Analysis of Market Opportunities, Challenges, Risks, and Influencing Factors

Chapter 8: Analysis of Value Chain and Sales Channels, including notable product developments

Chapter 9: Research Findings and Conclusion

Chapter 10: Methodology/Research Approach

Ultimately, the Hydrogen Storage Market Market report serves as a reliable source for acquiring market research to significantly enhance your business. It furnishes essential insights into regional economic conditions, product pricing, profitability, capacity, production, supply, demand, market growth rate, and forecasts. Additionally, the report includes a SWOT analysis, investment feasibility analysis, and return on investment analysis for new projects within the Hydrogen Storage Market industry.

Should the aforementioned report not meet your precise requirements, we offer customized research tailored to comprehensively address your specific business needs. Our customized research will encompass all the pertinent business information necessary to assist you in making strategic and profitable business decisions.

Author Bio:

Priya Pandey is a dynamic and passionate editor with over three years of expertise in content editing and proofreading. Holding a bachelor's degree in biotechnology, Priya has a knack for making the content engaging. Her diverse portfolio includes editing documents across different industries, including food and beverages, information and technology, healthcare, chemical and materials, etc. Priya's meticulous attention to detail and commitment to excellence make her an invaluable asset in the world of content creation and refinement.

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