

# **Global Hydrogen Energy Storage Market**

Market Research Report | 2025-04-08 | 89 pages | BCC Research

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### **Report description:**

Description

#### Report Scope

The global hydrogen energy storage (HES) technology market is segmented by storage technology and end use. This report provides a market analysis for the leading countries, such as the U.S., Canada, China, Japan, Germany, France and the U.K., where the opportunity for hydrogen energy storage is gaining momentum in the global market. The regional HES analysis covers North America, Europe, Asia-Pacific and the Rest of the World (including South America, the Middle East and Africa). The study also covers leading players with company overviews, financial information, product types and key developments. The report includes patent analysis, regulations and a competitive landscape, which enables the reader to understand the business environment more precisely. In its scope, the report only considers hydrogen generated from renewables or low-emission hydrogen stored for later use, such as mobility or that used in fuel cells to generate electricity, commonly called green hydrogen. This report is an easy-to-understand format; tables and figures are included to illustrate historical, current and future market scenarios. The base year is 2023; 2024 is an estimated year and market values are forecasted for five years through 2029. All market values are in millions of dollars (\$).

Report Includes

- In-depth analysis of the global markets for hydrogen energy storage technology

- Analyses of global market trends, with revenue data for 2023, estimates for 2024, forecasts for 2025, 2028, and projected CAGRs through 2029

- Estimate of the current market size and revenue prospects, accompanied by a market share analysis by storage technology, end-user sector and region

- Facts and figures pertaining to the current market dynamics, technological advances, regulations, and the impact of macro-economic factors

- Insights derived from the Porter's Five Forces model, as well as analysis of latest patent grants and publications
- Analysis of the industry structure, including companies' market shares, strategic alliances, M&A activity, venture fundings and

investment outlook

- Profiles of the market leaders

### **Executive Summary**

Summary:

This report provides an overview of the global hydrogen energy storage market. It provides analysis of the market based on storage form, technology, and end-user segments. The report includes patent analysis, an ESG development chapter, and industry competitive landscape.

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Technical Challenges Associated with Hydrogen Storage High Investment Cost in Hydrogen Infrastructure Development Opportunities in the Market Development of Light-Weight Storage Tanks Growing Emphasis on Developing Hydrogen Infrastructure Chapter 4 Emerging Technologies and Developments Overview Key Emerging Technologies for Hydrogen Energy Storage Use of Nanotechnology in Storage Tanks Hybrid Water Electrolyzers **High-Efficiency Electrolysis Catalysts** Advanced Manufacturing Methods **Chapter 5 Market Segmentation Analysis** Segmentation Breakdown Hydrogen Energy Storage Market by Storage Technology Key Takeaways Liquefaction Compression Material-Based Hydrogen Energy Storage Market by End Use Key Takeaways Mobility Power Others Geographic Breakdown Hydrogen Energy Storage Market by Region Key Takeaways North America Europe Asia-Pacific Rest of the World (RoW) Chapter 6 Competitive Intelligence Key Players in the Hydrogen Energy Storage Market Linde PLC Engie SA Air Liquide Plug Power Inc. Energy Vault Inc. Strategy Analysis Key Developments Chapter 7 Appendix Methodology **Research Steps** References Abbreviations **Company Profiles** AIR LIQUIDE

ENERGY VAULT INC. ENGIE FUELCELL ENERGY INC. GKN HYDROGEN HDF ENERGY HPS HOME POWER SOLUTIONS AG HYDROGEN IN MOTION INC. HYGREEN ENERGY IWATANI CORP. LAVO LINES PLC MAHYTEC PLUG POWER INC. POWER TO HYDROGEN STORELECTRIC LTD.



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