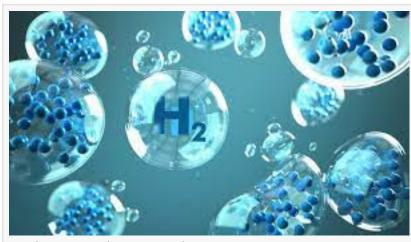


Hydrogen Market Analysis, Competitive Landscape, Growth Factors, Revenue & Forecasts, 2023-2032

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WILMINGTON, DELAWARE, UNITED STATES, July 9, 2024 / EINPresswire.com/ -- Allied Market Research has recently published a comprehensive report titled "Hydrogen Market by Delivery Mode, Type, End Use, and Region: Global Opportunity Analysis and Industry Forecast, 2023-



Hydrogen Industry Analysis

2032". The global hydrogen market, valued at \$155.9 billion in 2022, is projected to reach \$292.0 billion by 2032, growing at a CAGR of 6.5% during the forecast period.

Hydrogen plays a pivotal role in both the chemicals and oil & gas industries, sourced through various methods and classified into three primary types: blue hydrogen, grey hydrogen, and green hydrogen.

Grey hydrogen is derived from fossil fuels without carbon capture or storage processes. Blue hydrogen, on the other hand, involves extracting hydrogen from natural gas with integrated carbon capture and storage (CCS) technology. Green hydrogen represents a sustainable form, produced without emitting carbon during its generation process.

One of the most notable applications of hydrogen is in fuel cells, where its chemical energy is converted directly into electricity. These cells find extensive use in warehouse logistics, backup power generation, public transportation (like buses), unmanned aerial vehicles, boats, submarines, and more.

Hydrogen is highly favored as a fuel due to several key advantages. Electrolysis enables the conversion of renewable energy into hydrogen, facilitating efficient energy storage and grid stabilization. This stored energy can be utilized at times of peak demand or when renewable sources are unavailable, contributing to grid stability.

In power generation, hydrogen is prominently employed for renewable energy storage. Unlike other energy storage methods, hydrogen can be stored for extended periods without significant energy loss, making it a reliable option for maintaining grid stability.

Moreover, when hydrogen reacts with oxygen in fuel cells, the only byproducts produced are electricity, water, and heat. Since hydrogen lacks carbon, this process generates no CO2 emissions, supporting efforts to reduce greenhouse gases. This shift from fossil fuels to hydrogen in gas turbines, fuel cells, boilers, and engines enables power and heat generation without direct CO2 emissions.

Notably, industries are increasingly adopting hydrogen technologies like hydrogen gas turbines, exemplified by Mitsubishi Heavy Industries' (MHI) brand Mitsubishi Power, which incorporates hydrogen co-firing and aims for complete hydrogen firing. These advancements demonstrate a proactive approach towards reducing environmental impact while enhancing energy efficiency.

Key drivers of market growth include the increasing adoption of hydrogen in power generation and its use in electric vehicles for fuel cells. However, the market faces challenges such as high production costs. On the upside, there are significant opportunities driven by the rising demand for clean energy solutions.

The report segments the market by delivery mode (captive, merchant), type (blue hydrogen, grey hydrogen, green hydrogen), end use (refining, power generation, transportation, food processing, others), and region. Notably, the merchant segment is expected to grow rapidly, driven by diverse applications in various industries. Green hydrogen, which emits no carbon during production, is forecasted to experience the fastest growth among hydrogen types.

Regionally, Asia-Pacific led the market in 2022 and is anticipated to maintain its dominance, supported by renewable energy potential and substantial government initiatives. Key players in the global hydrogen market include Indian Oil Corporation Ltd., Reliance Industries Ltd., Shell PLC, and others, who are employing strategic initiatives to enhance their market presence.

For a comprehensive analysis, strategic actions of market players, and detailed operational segments, the complete report provides valuable insights and is essential for stakeholders and investors in the hydrogen sector.

https://www.alliedmarketresearch.com/hydrogen-market/purchase-options

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