

Hydrogen Gas Market Sees Significant Growth Driven by Chemical Industry Demand and Sustainable Solutions

The growing emphasis on cleaner production methods and the shift toward sustainable chemical manufacturing are further fueling demand

VANCOUVER, BC, CANADA, May 13, 2025 /EINPresswire.com/ -- The global [hydrogen gas market](#) is experiencing remarkable growth, primarily driven by the increasing demand for hydrogen in the chemical industry. Hydrogen plays a crucial role in producing ammonia for fertilizers, methanol for plastics and adhesives, and in petroleum refining for desulfurization, which helps meet stringent environmental regulations. As industries focus more on reducing carbon emissions, hydrogen's role in cleaner production methods and sustainable manufacturing is becoming more critical.



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The market is further boosted by technological advancements in hydrogen production. New methods such as electrolysis, steam methane reforming (SMR) with carbon capture, and biomass gasification are making hydrogen production more efficient. Green hydrogen, in particular, is gaining traction due to its environmentally friendly production process. Innovations like proton exchange membrane (PEM) electrolyzers and solid oxide electrolyzers are improving the efficiency of these processes, making green hydrogen a viable option for industries.

The latest report, titled 'Global Hydrogen Gas Market,' comprises a profound analysis of the fundamental parameters contributing to the global Hydrogen Gas market scenario. The research report provides the reader with an in-depth interpretation of the Hydrogen Gas market dynamics, including the crucial drivers, opportunities, threats, and challenges. The report also describes the key business strategies, demand and supply ratios, leading regions, and the renowned market players, in a nutshell, offering a futuristic outlook of the overall Hydrogen Gas industry. The market intelligence report is a prototype of the 360° overview of the global Hydrogen Gas industry, shedding light on the estimated market value, share, growth trends,

gross revenue, competitive overview, prominent manufacturers and buyers, available product types, and end-use applications.

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In addition to technological progress, government subsidies, investments in hydrogen infrastructure, and supportive policies are helping expand the market. Hydrogen storage and fuel cell technology advancements are also contributing to the growing adoption of hydrogen-based solutions, further establishing hydrogen as a key player in the global energy transition.

Noteworthy projects, such as Unigel's green hydrogen and green ammonia plant in Brazil and the 'Humber Hydrogen Hub' in the United Kingdom, highlight the increasing commitment to large-scale hydrogen production. In July 2022, Unigel began construction of a plant in Brazil with a planned capacity of 10,000 tons of green hydrogen and 60,000 tons of green ammonia annually. In the UK, Air Products and VPI signed an agreement to develop an 800 MW low-carbon hydrogen production facility.

Hydrogen Gas Market Drivers

The hydrogen gas market is also being fueled by the growing demand for fuel cell vehicles (FCVs). FCVs, which use hydrogen to produce electricity with water as the only byproduct, provide a clean alternative to traditional vehicles. Governments are supporting FCVs by offering subsidies, tax credits, and investing in hydrogen refueling infrastructure to help reduce carbon emissions. Leading automakers, including Toyota, Hyundai, and Honda, are expanding their FCV offerings, and advancements in hydrogen production and storage technologies are making these vehicles increasingly viable.

In June 2024, Wartsila launched the world's first large-scale hydrogen-ready engine power plant. This development is expected to further drive demand for hydrogen gas as industries and consumers embrace sustainable transportation and energy solutions.

Hydrogen Gas Market Restraints

Despite the promising growth, the hydrogen gas market faces challenges, particularly due to the high production costs. Hydrogen is primarily produced through steam methane reforming (SMR), electrolysis, and coal gasification, which involve high capital and operational costs. Electrolysis, a cleaner method, is particularly expensive due to the high price of renewable electricity needed for production.

Additionally, the costs associated with storage, transportation, and infrastructure development present significant barriers to widespread adoption. Hydrogen production's reliance on fossil fuels further adds to pricing volatility. Until production methods become more economical, high

costs will continue to limit the market's full potential in transportation, industry, and energy sectors.

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Hydrogen Gas Market Segment Insights

The hydrogen gas market is segmented based on distribution, including pipelines, high-pressure tube trailers, and cylinders. In 2024, pipelines led the market, holding the largest share. This is due to their ability to efficiently distribute hydrogen, making large-scale adoption more feasible and cost-effective. The use of pipelines is also supported by government policies promoting hydrogen as a clean energy source and growing investments in green hydrogen production.

Cylinders are expected to see the fastest growth in the coming years. This growth is driven by the increasing demand for hydrogen in industrial, energy, and transportation applications. Cylinders play a crucial role in safely storing and transporting hydrogen, and advancements in high-pressure cylinder technology, along with the development of refueling stations, are supporting market expansion.

Competitive Terrain:

The global Hydrogen Gas industry is highly consolidated owing to the presence of renowned companies operating across several international and local segments of the market. These players dominate the industry in terms of their strong geographical reach and a large number of production facilities. The companies are intensely competitive against one another and excel in their individual technological capabilities, as well as product development, innovation, and product pricing strategies.

The Leading Market Contenders Listed In The Report Are:

Aditya Birla Chemicals

Air Liquide

Air Products and Chemicals Inc.

BASF SE

Equinor ASA

Gujarat Alkalies and Chemicals Limited

Gulf Cryo

Linde PLC

Lords Chloro Alkali Limited

Matheson Tri-Gas Inc.

Messer SE & Co. KGaA

PAO NOVATEK

Taiyo Nippon Sanso Corporation

Universal Industrial Gases Inc.

Hydrogen Gas Market Segmentation Analysis

Distribution Outlook (Revenue, USD Billion; 2020-2033)

Pipelines

High-pressure Tube Trailers

Cylinders

Application Outlook (Revenue, USD Billion; 2020-2033)

Ammonia

Methanol

Refining

Direct Reduced Iron (DRI)

Fuel Cell Vehicles (FCV)

Other Applications (Glass, Welding, Power Generation, etc.)

Regional Segmentation:

North America

Latin America

Europe

Middle East & Africa

Asia Pacific

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Report Highlights:

Besides offering a vivid depiction of the global Hydrogen Gas business sphere and its fundamental operations, the latest report provides the industrial chain analysis and list down the current and future market trends and growth opportunities.

The report includes information on the present and historical market scenarios, which helps forecast the market conditions over the next eight years (2020-2027).

The report scrutinizes the salient factors influencing the growth of the market in the near future.

The strategic marketing recommendations, crucial information related to the new market entrants, and expansion plans of various businesses are poised to provide the reader with a competitive edge in the market.

Key Benefits of the Report:

Comprehensive analysis of the competitive scenario and its changing dynamics

Analytical data with detailed SWOT analysis and Porter's Five Forces analysis

In-depth 8 year analysis of the Global Hydrogen Gas Market

Critical assessment of the key market segments

Comprehensive analysis of the drivers, restraints, trends, and opportunities

Detailed regional analysis and extensive company profiling

Extensive assessment of current and emerging trends of the market

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