Hydrogen Generation Market Research Report - Global Forecast till 2023

Description:

Hydrogen Generation Market Research Report: Information by Generation and Delivery Type (Captive, Merchant), Storage (On-board, Underground, Power-to-Gas), Application (Petroleum Refinery, Ammonia Production, Power generation, and others), and Region – Global Forecast till 2023

Market Scenario

Hydrogen refers to the most abundantly available element in our universe. It is present in the atmosphere in the gaseous state. Hydrogen is usually produced when natural gas is heated with steam, which produces synthesis gas—a mixture of carbon monoxide and hydrogen. Similarly, hydrogen can also be produced by electrolyzing water. Other sources of hydrogen generation include biomass gasification where the plant matter is heated and reacted to produce hydrogen and carbon dioxide. The major factors driving the hydrogen generation market include growing demand to decarbonize energy end-use and shifting trend towards cleaner energy. Massive investments are taking place for energy systems transformation in cities across the globe for the Paris Agreement targets. China, the largest carbon dioxide emitter in the world plans to achieve a goal of 20 percent of its primary energy in renewable sources. Government regulation for desulphurization would also boost the growth of hydrogen generation market. Moreover, rising demand for clean fuel is projected to witness exponential increase every year, with rising pollution levels. Hydrogen could be an ideal energy carrier for transport sector to reduce the carbon emission. Increase in the production of electric vehicles would boost the demand for hydrogen generation as countries are investing in developing hydrogen fuel cell infrastructure such as fuel stations.

The global hydrogen generation market is projected to grow at a high rate during the forecast period, mainly due to the favorable government regulations and research and development activities of hydrogen. For instance, the Institution of Mechanical Engineers (IMechE) approached the government to set up support for the use of hydrogen to decarbonize the energy system across the power, heat, and transport sectors. Moreover, the UK has a strong track record for new energy developments, moving ahead to become the world leader in power-to-gas and hydrogen technology. These initiatives and developments would further accelerate the demand for hydrogen generation market.

Global hydrogen generation market has been segmented based on generation & delivery type, storage, application, and region. The global hydrogen generation market is further segmented based on generation and delivery type, including captive and merchant. Captive hydrogen is estimated to grow at a faster rate as it eliminates numerous problems linked to conveyance and distribution of hydrogen. Based on application, the market is classified into petroleum refinery, ammonia production, methanol production, transportation, power generation, and others. The transportation segment is expected to be the fastest growing application segment due to the growing demand for fuel cell based electric vehicles and buses especially in Asia Pacific and North America regions.

The global hydrogen generation market is expected to grow at ~7.80% CAGR during the forecast period.

Market Segmentation
Global Hydrogen Generation Market

Global hydrogen generation market is expected to witness substantial growth during the forecast period owing to increasing adoption of hydrogen and awareness toward importance of energy conservation are expected to boost the global market for hydrogen generation. Rising efforts to shift focus from fossil fuels to renewable fuels is expected to further propel the hydrogen generation market expansion. Countries around the globe are introducing stringent norms to reduce the use of unconventional fuels which leads to excessive greenhouse gas emissions. Asia Pacific holds the largest share in the hydrogen generation market due to increase demand for hydrogen fuel cell technology in automotive sector. With rising demand for fossil fuels in transportation operations and growing need to decarbonize energy end-use, hydrogen is expected to play a major role in the fuel transition of the region. Europe holds second position in the hydrogen generation market. The growing demand for reliable supply for various end-user industries, chiefly in the commercial sectors are anticipated to be the primary regional drivers.

Key Players

The key players of global hydrogen generation market are Praxair, Inc. (US), Air Liquide S.A. (France), Air Products and Chemicals, Inc. (US), Hydrogenics (Canada), Iwatani (Japan), Messer Group (Germany), Plug Power (US), Linde (US), Showa Denko (Japan), Ballard Power systems (Canada), and Fuelcell Energy (US), among others.

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