Green Hydrogen Market anticipated to surpass US$7.446 billion by 2030 at a CAGR of 6.71%

The green hydrogen market is anticipated to grow at a CAGR of 6.71% from US$5.382 billion in 2025 to US$7.446 billion by 2030.

NOIDA, UTTAR PRADESH, INDIA, November 20, 2024 /EINPresswire.com/ -- According to a new study published by Knowledge Sourcing Intelligence, the green hydrogen market is projected to grow at a CAGR of 6.71% between 2025 and 2030 to reach US$7.446 billion by 2030.

Hydrogen is a flammable gas, which is used for various purposes like powering vehicles, to generate electricity and heat. Hydrogen is a colorless, tasteless, and odorless non-toxic gas which is also the lightest element. Generally, there are various types of hydrogens, like green hydrogen, grey hydrogen, and brown hydrogen among others, color-coded according to the mode of their production.

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> *Knowledge Sourcing Intelligence*

Green hydrogen or renewable hydrogen is generally obtained by the process of electrolysis of water. To mark the hydrogen green, this process should be completely attained using renewable sources, like solar panels or photolytic.

One of the major drivers for the green hydrogen market is the increasing demand for renewable energy sources. Hydrogen is a gas that can be attained through various renewable and non-renewable processes like water electrolysis and steam-methane reforming. Because of its flammable nature, the gas found its use in various industries like automotive, power, and heat supply. Various countries are investing in developing their hydrogen infrastructure to reduce the usage of non-renewable energy. For instance, Germany in March 2023, planned to build a 17GW to 21GW powerplant in the nation to boost the nation's power generation output. Green hydrogen plays an important role for nations or regions that rely heavily on non-renewable sources for power and heat generation, like Europe. Various research institutes and organizations are working to develop new and efficient ways to produce green hydrogen.

For instance, in January 2024, a research team from the Technion Faculty of Materials Science and Engineering presented a new technology for the production of green hydrogen, using renewable energy. In this process, hydrogen and oxygen are produced in two separate cells, unlike the conventional E-TAC process, where the hydrogens and oxygens are produced in the same cell but in different stages. Similarly, Panasonic in April 2024, launched their new 10kW pure hydrogen fuel cell generator, under their Green Impact initiative, for the European, Australian, and Chinese markets. The H2 KIBOU of Panasonic has a maximum power generation capacity of 10kW with continuous power generation capability for 7 days.

Access sample report or view details: https://www.knowledge-sourcing.com/report/green-hydrogen-market

The green hydrogen market, based on the technology is segmented into three categories namely proton exchange membrane electrolyzer, alkaline electrolyzer, and solid oxide electrolyzer. Proton exchange membrane electrolyzer is anticipated to account for the major share of the green hydrogen market. Proton exchange membrane electrolyzer or PEM electrolysis is a process of electrolysis water in cells that is equipped with solid polymer electrolytes. With an electrical efficiency of about 80%, this process does not release any harmful greenhouse gases and is also identified as a key global energy transition enabler.

The green hydrogen market, based on the distribution channel is segmented into two categories, pipeline and cargo distribution methods. The pipeline distribution channel is expected to attain maximum market share in the green hydrogen market as it is an efficient and fast mode of transportation. When distributing large volumes of hydrogen gas, the pipeline distribution channel system is the most viable method for the supplier, as it induces low-cost distribution, with lower maintenance cost than the cargo distribution channel.

The green hydrogen market by application is segmented into power generation, transportation, industry energy, industry feedstock, and others. The power generation industry is sure to attain the major share of the green hydrogen in the application segment, majorly because of the increasing consumption of energy globally and the country's goal to attain net zero in carbon emission. Green hydrogen gas is attained or produced through renewable means and does not emit any harmful greenhouse gases, which makes it the most suitable option for countries to switch to green hydrogen-fueled power generation than the conventional source.

Based on geography, the green hydrogen market is expanding significantly in Europe for various reasons. In countries like Germany, the United Kingdom, and France, there is a growing initiative from the authorities to switch to renewable and efficient methods of power generation. The majority of the European nations still depend on non-renewable fuels like coal for power generation, which emits greenhouse gases and increases pollution. Various countries like Germany have started the shift to green hydrogen-ready gas-fired power generation plants in the nations. The use of green hydrogen for power generation can be beneficial for such

countries, as the gas is highly efficient, and is also produced through a renewable process.

As a part of the report, the major players operating in the green hydrogen market that have been covered are Green Hydrogen Systems, Ohmium, AES, ACWA Power, Acciona, Siemens Gamesa, Green Hydrigen International, Masdar, Plug Power, Fortescue.

The market analytics report segments the green hydrogen market is as follows:

- By Technology

o Proton Exchange Membrane Electrolyzer
o Alkaline Electrolyzer
o Solid Oxide Electrolyzer

- By Distribution Channel

o Pipeline
o Cargo

- By Application

o Power Generation
o Transportation
o Industry Energy
o Industry Feedstock
o Others

- By Geography

o North America

- United States
- Canada
- Mexico

o South America

- Brazil
- Argentina
- Others

o Europe

- United Kingdom
- Germany
- France
- Spain
- Others

o Middle East and Africa

- Saudi Arabia
- UAE
- Israel
- Others

o Asia Pacific

- Japan
- China
- India
- South Korea
- Indonesia
- Thailand
- Others

Companies Profiled:

- Green Hydrogen Systems
- Ohmium
- AES
- ACWA Power
- Acciona
- Siemens Gamesa
- Green Hydrigen International
- Masdar
- Plug Power
- Fortescue

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