

Asia Pacific Liquid Hydrogen Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 110 pages | Mordor Intelligence

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Report description:

The Asia Pacific liquid hydrogen market is expected to register a CAGR of over 5% during the forecast period.

The market was negatively impacted by COVID-19 in 2020. Presently the market has now reached pre-pandemic levels.

Key Highlights

Over the medium term, increasing investments in liquid hydrogen projects are expected to drive the market's growth.

On the other hand, higher capital and production costs are expected to hamper the growth of the Asia Pacific liquid hydrogen market during the forecast period.

Nevertheless, adapting the latest technologies in liquid hydrogen production will likely create lucrative growth opportunities for the solar PV inverters market in the forecast period.

China dominates the market and will likely witness the highest CAGR during the forecast period. This growth is attributed to increasing investments and supportive government policies.

APAC Liquid Hydrogen Market Trends

Automotive Segment to Dominate the Market

Asia-Pacific's liquid hydrogen market is forecasted to grow substantially due to the rising demand for clean fuel in the automotive industry. Liquid hydrogen offers more significant advantages because of its storage and transportation qualities.

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In an automotive application, liquid hydrogen can be used as a secondary energy source without emitting any CO2 using new technologies like Proton Exchange Membrane fuel cells to produce electricity for an electric drive and a direct fuel for ICE (internal combustion engines).

As of September 2022, China has the most significant number of hydrogen fuel stations in any country worldwide. There are about 250 operational hydrogen refueling stations in the country. This was followed by Japan, with 161 such stations. Japan's position as the leading provider of hydrogen automotive fuel is unsurprising given that Japanese automakers Toyota and Honda are among only a handful of car manufacturers selling hydrogen cars to the public.

Furthermore, pollution all around the globe is increasing from vehicles and transportation over time. Pollution from fossil fuel-powered vehicles is emitted directly into the environment, which causes health risks.

According to a study, vehicles driven by diesel and gasoline account for around 30% of the carbon emission globally, and ~72% of the emission comes from road vehicles like cars, trucks, lorries, and other road vehicles.

As of March 2022, the Chinese government announced the country's first-ever long-term strategy for hydrogen vehicles. By 2025, the government strives to deliver 50,000 hydrogen fuel-cell vehicles on the road, more than six times the existing units of 8,000 in 2020.

Hence, the automotive industry is expected to dominate the market during the forecast period due to the above reasons.

China to Dominate the Market

China is dominating the liquid hydrogen market and is expected to continue further due to the rapidly undergoing economic changes.

Liquid hydrogen is a power source; hydrogen fuels rockets and powers life-support systems and computers in aerospace environments. Liquid hydrogen is also used for metal sintering and annealing.

Hydrogen demand in China is forecast to climb to over 90 million metric tons by 2060. In 2020, hydrogen use in the country was largely limited to the refining sector and ammonia production, amounting to a total use of some 24.5 million metric tons.

Forecasts suggest that technology advancement in numerous sectors could lead to an increased hydrogen use in the transportation and power sectors.

China is the world's second-largest national air travel market and the major aircraft manufacturer. Moreover, the aircraft parts and assembly manufacturing sector in China has been growing at a fast rate.

By 2040, Chinese airline companies are planning to have ~8,700 new airplanes, which would be worth USD 1.47 trillion. This is further expected to boost the market demand for liquid hydrogen.

In December 2021, Air Products announced the commencement of its first hydrogen fueling station in Shandong Province for fueling buses and trucks. The project aims to support China's "Hydrogen into Ten Thousand Homes" demonstration and green transportation. The company also accelerated several hydrogen production and application projects in the province to support the national project.

Therefore, owing to the above points, China is expected to dominate the Asia Pacific liquid hydrogen market during the forecast period.

APAC Liquid Hydrogen Market Competitor Analysis

The Asia Pacific liquid hydrogen market is moderately consolidated in nature. Some of the major players in the market (in no particular order) include Air Liquide S.A., Linde plc, Air Products and Chemicals Inc., Ballard Power Systems, and Iwatani Corporation.

Additional Benefits:

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The market estimate (ME) sheet in Excel format
3 months of analyst support

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