

White (Natural) Hydrogen Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Source (Serpentinization of Olivine and Pyroxene Ultramafic Rocks (Containing Peridotite, Dunite, or Kimberlite), Volcanic Activity and Magma Crystallization, Hydrothermal Vents, Degassing Primordial Hydrogen, Others), By End-User (Oil and Gas, Industrial Feedstock, Mobility, Power Generation, Others), By Region and Competition, 2020-2030F

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Report description:

Market Overview

The Global White (Natural) Hydrogen Market, valued at USD 3.72 Billion in 2024, is projected to experience robust expansion with a CAGR of 9.39% to reach USD 6.38 Billion by 2030. White (natural) hydrogen, also known as geologic or gold hydrogen, is molecular hydrogen naturally generated within the Earth's crust through various geological processes, primarily water-rock reactions involving iron-rich minerals. This naturally occurring gas is distinct from industrially produced hydrogen, offering a potentially low-carbon energy source without human intervention in its formation.

Key Market Drivers

The growth of the Global White (Natural) Hydrogen Market is significantly influenced by two primary factors: the imperative for global decarbonization and the increasing discovery of abundant natural reserves. Decarbonization goals across industries and nations are creating a substantial pull for low-carbon energy sources, with natural hydrogen offering a direct, inherently low-emission alternative to conventionally produced hydrogen.

Key Market Challenges

The immaturity of infrastructure presents a significant impediment to the widespread adoption and commercial scalability of the

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global white hydrogen market. Current deficiencies in advanced extraction methods, dedicated pipeline networks, and storage facilities directly restrict the movement of this naturally occurring gas from its geological sources to end-use applications. Without robust infrastructure, the economic viability of new white hydrogen projects is diminished, as producers face challenges in efficiently transporting and distributing the gas, thereby limiting market reach and hindering large-scale integration into the broader energy system.

Key Market Trends

The strategic repurposing of legacy fossil fuel infrastructure represents a pivotal trend for the Global White (Natural) Hydrogen Market. This approach leverages existing assets such as wells and pipelines, significantly reducing the need for new infrastructure and lowering upfront capital expenditure. Project developers can expedite market entry by converting these established networks.

Key Market Players

- Helios Chemicals Sdn Bhd
- Natural Hydrogen Energy LLC
- Koloma Inc.
- Hydroma Inc.
- H2AU Pty Limited
- FDE (Francaise De l'Energie)
- Gold Hydrogen Ltd
- HyTerra Limited
- Repsol
- TotalEnergies SE

Report Scope:

In this report, the Global White (Natural) Hydrogen Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

-□ Global White (Natural) Hydrogen Market, By Source:

- o Serpentinization of Olivine and Pyroxene Ultramafic Rocks (Containing Peridotite, Dunite, or Kimberlite)
- o Volcanic Activity and Magma Crystallization
- o Hydrothermal Vents
- o Degassing Primordial Hydrogen
- o Others

-□ Global White (Natural) Hydrogen Market, By End-User:

- o Oil and Gas
- o Industrial Feedstock
- o Mobility
- o Power Generation
- o Others

-□ Global White (Natural) Hydrogen Market, By Region:

- o North America
 - United States
 - Canada
 - Mexico
- o Europe
 - France
 - United Kingdom
 - Italy
 - Germany
 - Spain
- o Asia Pacific

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- India
- Japan
- Australia
- South Korea
- o South America
- Brazil
- Argentina
- Colombia
- o Middle East & Africa
- South Africa
- Saudi Arabia
- UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies presents in the Global White (Natural) Hydrogen Market.

Available Customizations:

Global White (Natural) Hydrogen Market report with the given market data, Tech Sci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

-□Detailed analysis and profiling of additional market players (up to five).

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