

**Blue Hydrogen Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Technology (Steam Methane Reforming, Gas Partial Oxidation, Auto Thermal Reforming), By Transportation Mode (Pipeline, Cryogenic Liquid Tankers), By Application (Chemicals, Refinery, Power Generation, Others) By Region & Competition, 2020-2030F**

Market Report | 2025-12-09 | 189 pages | TechSci Research

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**Report description:**

**Market Overview**

The Global Blue Hydrogen Market, valued at USD 18.22 Billion in 2024, is projected to experience robust expansion with a CAGR of 19.29% to reach USD 52.51 Billion by 2030. Blue hydrogen is defined as hydrogen produced from natural gas through processes like steam methane reforming, with the concomitant capture, utilization, and storage of carbon dioxide emissions. The market's expansion is driven by a global imperative for industrial decarbonization, the implementation of stringent emissions regulations, and the increasing integration of carbon capture, utilization, and storage technologies into existing hydrogen production facilities.

**Key Market Drivers**

The global imperative for decarbonization and the associated stringent climate policies represent a fundamental driver for the blue hydrogen market. Governments worldwide are increasingly implementing strategies to reduce industrial emissions and transition to lower-carbon energy carriers, positioning blue hydrogen as a viable solution given its established production pathways.

**Key Market Challenges**

The substantial capital expenditure required for carbon capture infrastructure poses a significant impediment to the growth of the Global Blue Hydrogen Market. The high upfront investment associated with designing, constructing, and integrating carbon capture, utilization, and storage technologies into hydrogen production facilities creates considerable financial barriers for project developers. These elevated initial costs often render blue hydrogen projects less competitive against other energy alternatives,

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thereby hindering their widespread adoption and scalability.

#### Key Market Trends

The blue hydrogen market is experiencing a notable shift towards specialized low-carbon derivatives and advanced production methods. A significant trend involves the growing focus on blue ammonia and methanol production for export markets. These carriers offer efficient transportation of hydrogen over long distances and leverage existing infrastructure for global trade, opening new avenues for decarbonization in hard-to-abate sectors.

#### Key Market Players

- [ ] Air Products and Chemicals, Inc.
- [ ] Equinor ASA
- [ ] Shell plc
- [ ] TotalEnergies SE
- [ ] Siemens AG
- [ ] Linde plc
- [ ] Mitsubishi Heavy Industries, Ltd.
- [ ] General Electric Company
- [ ] Iberdrola S.A.
- [ ] RWE Aktiengesellschaft

#### Report Scope:

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

#### - [ ] Global Blue Hydrogen Market, By Technology:

- o Steam Methane Reforming
- o Gas Partial Oxidation
- o Auto Thermal Reforming

#### - [ ] Global Blue Hydrogen Market, By Transportation Mode:

- o Pipeline
- o Cryogenic Liquid Tankers

#### - [ ] Global Blue Hydrogen Market, By Application:

- o Chemicals
- o Refinery
- o Power Generation
- o Others

#### - [ ] Global Blue Hydrogen Market, By Region:

- o North America
  - [ ] United States
  - [ ] Canada
  - [ ] Mexico
- o Europe
  - [ ] France
  - [ ] United Kingdom
  - [ ] Italy
  - [ ] Germany
  - [ ] Spain
- o Asia Pacific
  - [ ] China
  - [ ] India
  - [ ] Japan

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- 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 Blue Hydrogen Market.

#### Available Customizations:

Global Blue 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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