

# Global Hydrogen Market (by Production Process, Application & Region): Insights & Forecast with Potential Impact of COVID-19 (2023-2027)

https://marketpublishers.com/r/G667E8924FB6EN.html

Date: July 2023 Pages: 111 Price: US\$ 1,800.00 (Single User License) ID: G667E8924FB6EN

# **Abstracts**

The global hydrogen market is expected to record a value of US\$206.65 billion in 2027, progressing at a CAGR of 6.09%, over the period 2023-2027. The market experienced growth accruing to several factors such as rising consumption of agricultural fertilizers, escalating demand in metallurgical industries, mounting concerns regarding carbon emissions worldwide, surging demand for electricity generation and upswing in margarine demand. However, the market growth would be challenged by high cost of hydrogen production & transportation, storage of hydrogen and health effects of hydrogen. A few notable trends may include expanding demand from oil refineries, rapid expansion of aerospace industry, surging production of hydrogen fuel cell electric vehicles, growing demand of hydrochloric acid and upsurge in pharmaceutical industry.

The global hydrogen market is categorized on the basis of production process and application. According to production process, the market can be split into natural gas steam reforming, coal gasification, oil partial oxidation and water electrolysis. The global hydrogen market can be bifurcated into ammonia production, petroleum refinery, methanol production, transportation, power generation and others, in term of application.

The fastest growing regional market is Asia Pacific owing to increasing consumption of agricultural fertilizers on account of growing population, rising number of petrochemical complexes and refineries in the region, upsurge in pharmaceutical industry, expansion in China's aerospace industry and surging investments by government for the development of hydrogen plants.

#### Scope of the report:



The report provides a comprehensive analysis of the global hydrogen market segmented on the basis of production process, application and region.

The major regional and country markets (Asia Pacific, Europe, North America, Middle East & Africa and Central & South America, along with the U.S.) have been analyzed.

The market dynamics such as growth drivers, market trends and challenges are analyzed in-depth.

The company profiles of leading players (Linde PLC, Air Liquide S.A., Air Products and Chemicals, Inc., Taiyo Nippon Sanso Corporation, Messer Group GmbH and Nel ASA) are also presented in detail.

Key Target Audience:

Hydrogen Manufacturers

**Energy Sector** 

End Users (Automobile Industry, Oil and Gas Industry, Steel Industry, etc.)

Consulting and Advisory Firms

Investment Banks

Government Bodies & Regulating Authorities



# Contents

### 1. MARKET OVERVIEW

- 1.1 Introduction
- 1.2 Properties of Hydrogen
- 1.3 Major Types of Hydrogen
- 1.4 Sources of Hydrogen
- 1.5 Storage of Hydrogen
- 1.6 Production Process of Hydrogen
- 1.7 Application of Hydrogen

## 2. IMPACT OF COVID-19

- 2.1 Decline in Electricity Demand
- 2.2 Decreased Demand from Automotive Industry
- 2.3 Reduction in Semiconductor Market Revenue

## 3. GLOBAL MARKET ANALYSIS

- 3.1 Global Hydrogen Market by Value
- 3.2 Global Hydrogen Market Forecast by Value
- 3.3 Global Hydrogen Market by Production Process
- 3.3.1 Global Natural Gas Steam Reforming Hydrogen Market by Value
- 3.3.2 Global Natural Gas Steam Reforming Hydrogen Market Forecast by Value
- 3.3.3 Global Coal Gasification Hydrogen Market by Value
- 3.3.4 Global Coal Gasification Hydrogen Market Forecast by Value
- 3.3.5 Global Oil Partial Oxidation Hydrogen Market by Value
- 3.3.6 Global Oil Partial Oxidation Hydrogen Market Forecast by Value
- 3.3.7 Global Water Electrolysis Hydrogen Market by Value
- 3.3.8 Global Water Electrolysis Hydrogen Market Forecast by Value
- 3.4 Global Hydrogen Market by Application
- 3.4.1 Global Ammonia Production Hydrogen Market by Value
- 3.4.2 Global Ammonia Production Hydrogen Market Forecast by Value
- 3.4.3 Global Petroleum Refinery Hydrogen Market by Value
- 3.4.4 Global Petroleum Refinery Hydrogen Market Forecast by Value
- 3.4.5 Global Methanol Production Hydrogen Market by Value
- 3.4.6 Global Methanol Production Hydrogen Market Forecast by Value
- 3.4.7 Global Transportation Hydrogen Market by Value



- 3.4.8 Global Transportation Hydrogen Market Forecast by Value
- 3.4.9 Global Power Generation Hydrogen Market by Value
- 3.4.10 Global Power Generation Hydrogen Market Forecast by Value
- 3.5 Global Hydrogen Market by Region
- 3.6 Global Hydrogen Demand by Volume
- 3.7 Global Hydrogen Demand Forecast by Volume
- 3.8 Global Hydrogen Demand by Type
- 3.8.1 Global Pure Hydrogen Demand by Volume
- 3.8.2 Global Pure Hydrogen Demand Forecast by Volume
- 3.8.3 Global Pure Hydrogen Demand Volume by Application
- 3.8.4 Global Pure Hydrogen Demand Volume Forecast by Application
- 3.8.5 Global Mixed Hydrogen Demand by Volume
- 3.8.6 Global Mixed Hydrogen Demand Forecast by Volume
- 3.8.7 Global Mixed Hydrogen Demand Volume by Application
- 3.8.8 Global Mixed Hydrogen Demand Volume Forecast by Application
- 3.9 Global Hydrogen Production by Volume
- 3.10 Global Hydrogen Production Forecast by Volume
- 3.11 Global Hydrogen Production Volume by Generation System
- 3.11.1 Global Captive Hydrogen Production Forecast by Volume
- 3.11.2 Global Merchant Hydrogen Production Forecast by Volume
- 3.12 Global Hydrogen Production Volume by Region

#### 4. REGIONAL MARKET ANALYSIS

- 4.1 Asia Pacific
- 4.1.1 Asia Pacific Hydrogen Market Forecast by Value
- 4.1.2 Asia Pacific Hydrogen Production Forecast by Volume

4.2 Europe

- 4.2.1 Europe Hydrogen Market Forecast by Value
- 4.2.2 Europe Hydrogen Production Forecast by Volume
- 4.3 North America
- 4.3.1 North America Hydrogen Market Forecast by Value
- 4.3.2 North America Hydrogen Production Forecast by Volume
- 4.3.3 The U.S. Hydrogen Market Forecast by Value
- 4.3.4 The U.S. Hydrogen Market by Production Technology
- 4.4 Middle East & Africa
  - 4.4.1 Middle East & Africa Hydrogen Market by Value
- 4.4.2 Middle East & Africa Hydrogen Production Forecast by Volume
- 4.5 Central & South America



- 4.5.1 Central & South America Hydrogen Market Forecast by Value
- 4.5.2 Central & South America Hydrogen Production Forecast by Volume

## **5. MARKET DYNAMICS**

- 5.1 Growth Drivers
  - 5.1.1 Rising Consumption of Agricultural Fertilizer
  - 5.1.2 Escalating Demand in Metallurgical Industries
  - 5.1.3 Mounting Concerns Regarding Carbon Emissions Worldwide
  - 5.1.4 Surging Demand for Electricity Generation
  - 5.1.5 Upswing in Margarine Demand
  - 5.1.6 Expanding Production Capacity of Methanol
  - 5.1.7 Increasing Demand from Electronic Applications
- 5.2 Key Trends & Developments
  - 5.2.1 Expanding Demand from Oil Refineries
  - 5.2.2 Rapid Expansion of Aerospace Industry
  - 5.2.3 Surging Production of Hydrogen Fuel Cell Electric Vehicles
  - 5.2.4 Upsurge in Pharmaceutical Industry
  - 5.2.5 Growing Demand for Hydrochloric Acid
  - 5.2.6 Increasing Hydrogen Demand

#### 5.3 Challenges

- 5.3.1 High Cost of Hydrogen Production & Transportation
- 5.3.2 Storage of Hydrogen
- 5.3.3 Health Effects of Hydrogen

## 6. COMPANY PROFILES

- 6.1 Linde PLC
- 6.1.1 Business Overview
- 6.2 Air Liquide S.A.
- 6.2.1 Business Overview
- 6.3 Air Products and Chemicals, Inc.
- 6.3.1 Business Overview
- 6.4 Taiyo Nippon Sanso Corporation
- 6.4.1 Business Overview
- 6.5 Messer Group GmbH
- 6.5.1 Business Overview
- 6.6 Nel ASA
  - 6.6.1 Business Overview



Global Hydrogen Market (by Production Process, Application & Region): Insights & Forecast with Potential Impac...



# **List Of Figures**

#### LIST OF FIGURES

Properties of Hydrogen Major Types of Hydrogen Sources of Hydrogen Types of Hydrogen Storage Production Process of Hydrogen Percentage Change in Electricity Demand in Selected Regions (2016 to 2020) Global Car (Internal Combustion + Electrified) Sales (2016-2023) Decline in Semiconductor Market Revenue (2019 v/s 2020) Global Hydrogen Market by Value (2018-2022) Global Hydrogen Market Forecast by Value (2023-2027) Global Hydrogen Market by Production Process (2022) Global Natural Gas Steam Reforming Hydrogen Market by Value (2018-2022) Global Natural Gas Steam Reforming Hydrogen Market Forecast by Value (2023-2027) Global Coal Gasification Hydrogen Market by Value (2018-2022) Global Coal Gasification Hydrogen Market Forecast by Value (2023-2027) Global Oil Partial Oxidation Hydrogen Market by Value (2018-2022) Global Oil Partial Oxidation Hydrogen Market Forecast by Value (2023-2027) Global Water Electrolysis Hydrogen Market by Value (2018-2022) Global Water Electrolysis Hydrogen Market Forecast by Value (2023-2027) Global Hydrogen Market by Application (2022) Global Ammonia Production Hydrogen Market by Value (2018-2022) Global Ammonia Production Hydrogen Market Forecast by Value (2023-2027) Global Petroleum Refinery Hydrogen Market by Value (2018-2022) Global Petroleum Refinery Hydrogen Market Forecast by Value (2023-2027) Global Methanol Production Hydrogen Market by Value (2018-2022) Global Methanol Production Hydrogen Market Forecast by Value (2023-2027) Global Transportation Hydrogen Market by Value (2018-2022) Global Transportation Hydrogen Market Forecast by Value (2023-2027) Global Power Generation Hydrogen Market by Value (2018-2022) Global Power Generation Hydrogen Market Forecast by Value (2023-2027) Global Hydrogen Market by Region (2022) Global Hydrogen Demand by Volume (2018-2022) Global Hydrogen Demand Forecast by Volume (2023-2027) Global Hydrogen Demand by Type (2022) Global Pure Hydrogen Demand by Volume (2018-2022)



Global Pure Hydrogen Demand Forecast by Volume (2023-2027) Global Pure Hydrogen Demand Volume by Application (2018-2022) Global Pure Hydrogen Demand Volume Forecast by Application (2023-2027) Global Mixed Hydrogen Demand by Volume (2018-2022) Global Mixed Hydrogen Demand Forecast by Volume (2023-2027) Global Mixed Hydrogen Demand Volume by Application (2018-2022) Global Mixed Hydrogen Demand Volume Forecast by Application (2023-2027) Global Hydrogen Production by Volume (2018-2022) Global Hydrogen Production Forecast by Volume (2023-2027) Global Hydrogen Production Volume by Generation System (2022) Global Captive Hydrogen Production Forecast by Volume (2021-2027) Global Merchant Hydrogen Production Forecast by Volume (2021-2027) Global Hydrogen Production Volume by Region (2022) Asia Pacific Hydrogen Market Forecast by Value (2021-2027) Asia Pacific Hydrogen Production Forecast by Volume (2021-2027) Europe Hydrogen Market Forecast by Value (2021-2027) Europe Hydrogen Production Forecast by Volume (2021-2027) North America Hydrogen Market Forecast by Value (2021-2027) North America Hydrogen Production Forecast by Volume (2021-2027) The U.S. Hydrogen Market Forecast by Value (2021-2027) The U.S. Hydrogen Market by Production Technology (2021-2027) Middle East & Africa Hydrogen Market by Value (2021-2027) Middle East & Africa Hydrogen Production Forecast by Volume (2021-2027) Central & South America Hydrogen Market Forecast by Value (2021-2027) Central & South America Hydrogen Production Forecast by Volume (2021-2027) Global Consumption of Agricultural Fertilizer (2017-2022) Global Stainless Steel Production (2017-2022) Global Carbon Emissions (2015-2040) Global Electricity Generation by Renewable Sources (2018-2050) Global Margarine Market (2017-2022) Global Production Capacity of Methanol (2018-2024) Global Semiconductor Industry Revenue (2016-2024) Global Oil Refinery Market (2019-2025) Global Aerospace Industry (2017-2022) Global Production of Hydrogen Fuel Cell Electric Vehicle (2017-2027) Global Pharmaceutical Market Forecast (2017-2023) Global Hydrochloric Acid Market (2019-2024) Global Hydrogen Demand by Segments (2015-2050)



# **List Of Tables**

#### LIST OF TABLES

Physical Properties of Hydrogen



#### I would like to order

Product name: Global Hydrogen Market (by Production Process, Application & Region): Insights & Forecast with Potential Impact of COVID-19 (2023-2027) Product link: <u>https://marketpublishers.com/r/G667E8924FB6EN.html</u> Price: US\$ 1,800.00 (Single User License / Electronic Delivery) If you want to order Corporate License or Hard Copy, please, contact our Customer

Service: info@marketpublishers.com

# Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <u>https://marketpublishers.com/r/G667E8924FB6EN.html</u>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name: Last name: Email: Company: Address: City: Zip code: Country: Tel: Fax: Your message:

\*\*All fields are required

Custumer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <u>https://marketpublishers.com/docs/terms.html</u>

To place an order via fax simply print this form, fill in the information below and fax the completed form to +44 20 7900 3970



Global Hydrogen Market (by Production Process, Application & Region): Insights & Forecast with Potential Impac...