

# **North America Green Hydrogen Market Forecast to 2030 – Regional Analysis – by Technology (Alkaline Electrolysis and PEM Electrolysis), Renewable Source (Wind Energy and Solar Energy), and End-Use Industry (Chemical, Power, Food & Beverages, Medical, Petrochemicals, and Others)**

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## **Abstracts**

The North America green hydrogen market is expected to grow from US\$ 1,291.07 million in 2022 to US\$ 29,410.58 million by 2030. It is estimated to grow at a CAGR of 47.8% from 2022 to 2030.

### **Rising Global Plans for Net-zero Emission by 2050 Fuels North America Green Hydrogen Market**

Green hydrogen is produced through the process of electrolysis using renewable energy sources. Green hydrogen has versatile applications in transportation, chemical, power, petrochemical, food & beverages, and other sectors. It can be used as a fuel for fuel cell electric vehicles, a feedstock for industrial processes, and a clean energy source for heating and power generation. With the rising need to decarbonize these sectors, the demand for green hydrogen as a clean, sustainable alternative fuel and energy source is growing significantly across the globe. Many countries and organizations have set ambitious decarbonization goals, aiming to achieve net-zero emissions by 2050 or earlier. Thus, the rising global plans for achieving net-zero emissions by 2050 are driving the green hydrogen market.

### **North America Green Hydrogen Market Overview**

The United States (US) produces ~10 million metric tons of hydrogen per year, mainly used in petroleum refining and ammonia production. However, hydrogen shows significant potential for zero-emission applications in various sectors, including chemical processes, clean energy systems, and transportation. Applications of hydrogen are

emerging in areas such as data centers, ports, steel manufacturing, and medium- to heavy-duty trucks, indicating a growing interest in hydrogen for sustainable solutions.

In January 2023, the department of energy (DOE) announced a US\$ 8 billion investment in Regional Clean Hydrogen Hubs (H2Hubs) as part of the Infrastructure Investment and Jobs Act. These H2Hubs will showcase the entire clean hydrogen value chain, promoting production, processing, delivery, storage, and end-use applications. The DOE's efforts align with the Biden Administration's ambitious targets of achieving a carbon-free electric grid by 2035 and transitioning to a net-zero emissions economy by 2050. The funding aims to accelerate advancements in hydrogen technology and infrastructure, driving progress toward a more sustainable and environmentally friendly future in the US.

Exhibit: North America Green Hydrogen Market Revenue and Forecast to 2030 (US\$ Million)

North America Green Hydrogen Market Segmentation

The North America green hydrogen market is segmented into technology, renewable source, end-use industry, and country.

Based on technology, the North America green hydrogen market is bifurcated into alkaline electrolysis and PEM electrolysis. The alkaline electrolysis segment accounted a larger share of the North America green hydrogen market in 2022.

By renewable source, the North America green hydrogen market is divided into wind energy and solar energy. The solar energy segment held a larger share of the North America green hydrogen market in 2022.

By end-use industry, the North America green hydrogen market is segmented into chemical, power, food and beverages, medical, petrochemicals, and others. In 2022, the power segment held a largest share of the North America green hydrogen market.

Based on country, the North America green hydrogen market is segmented into the US, Canada, and Mexico. The US dominated the North America green hydrogen market in 2022.

Air Products & Chemicals Inc, Cummins Inc, Engie SA, L'Air Liquide SA, Linde Plc, Nel ASA, Orsted AS, Siemens Energy AG, and Toshiba Energy Systems & Solutions Corp are some of the leading companies operating in the North America green hydrogen market.

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