

# Global Electrolyzer Market Size, Share & Trend Analysis by Product, Capacity, Application, and Regional Forecasts 2022-2032

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## Abstracts

The Global Electrolyzer Market, valued at approximately USD 2.26 billion in 2023, is projected to expand at a robust CAGR of 65.9% during the forecast period 2024-2032. The surge in market demand stems from the increasing emphasis on reducing carbon emissions, promoting green energy solutions, and the widespread adoption of hydrogen technologies across diverse industries. Electrolyzers, pivotal in hydrogen production, play an instrumental role in decarbonization strategies and sustainable energy solutions.

Electrolyzers, comprising an anode, cathode, and membrane, are utilized in breaking down water into hydrogen and oxygen through electrolysis. The resultant hydrogen serves multiple applications, including industrial feedstock, power generation, and transportation. The increasing focus on green hydrogen, propelled by supportive government regulations and incentives, is expected to drive market growth further. For instance, initiatives such as subsidies, exemptions from grid fees, and grid service revenues underscore governmental commitment to this sector.

The market's growth trajectory is bolstered by advancements in technology, including solid oxide electrolyzers (SOEs) and proton exchange membrane (PEM) electrolyzers. Innovations such as Hysata's capillary technology, achieving 80% efficiency, and the integration of waste-heat utilization in SOE systems exemplify the industry's dedication to efficiency and sustainability. However, challenges like high initial costs, delayed equipment supply, and limited technological progress may impede growth to some extent.

The Asia-Pacific region dominates the market owing to its substantial industrial base,

strong government policies promoting renewable energy, and expanding infrastructure for electric vehicles and sustainable practices. Meanwhile, regions such as Europe and North America are experiencing steady growth driven by policy-driven incentives and significant investments in hydrogen technologies.

Major market players included in this report are:

Cummins, Inc.

Nel ASA

Siemens AG

Toshiba Corporation

Plug Power Inc.

ITM Power

Air Liquide

McPhy Energy

Bloom Energy

Iberdrola S.A.

The detailed segments and sub-segment of the market are explained below:

By Product:

Alkaline Electrolyzer

Proton Exchange Membrane (PEM) Electrolyzer

Solid Oxide (SOE) Electrolyzer

Anion Exchange Membrane (AEM) Electrolyzer

### By Capacity:

Less than 500 kW

500 kW to 2 MW

Above 2 MW

### By Application:

Power Generation

Transportation

Industrial Energy

Industrial Feedstock

Building Heat & Power

Others

### By Region: North America:

U.S.

Canada

Mexico

### Europe:

Germany

UK

France

Italy

Spain

Rest of Europe

Asia Pacific:

China

Japan

India

South Korea

Australia

Rest of Asia-Pacific

LAMEA:

Brazil

Saudi Arabia

South Africa

Rest of LAMEA

Years considered for the study are as follows:

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

#### Key Takeaways:

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional-level analysis for each market segment.

Detailed analysis of geographical landscapes with country-level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations for future market approaches.

Analysis of the competitive structure of the market.

Demand-side and supply-side analysis of the market.

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