

North America Green Ammonia Market Report and Forecast 2024-2032

Market Report | 2024-05-02 | 195 pages | EMR Inc.

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Report description:

North America Green Ammonia Market Report and Forecast 2024-2032 Market Outlook

According to the report by Expert Market Research (EMR), the North America green ammonia market size reached a value of USD 81 billion in 2023. Aided by the increasing focus on decarbonisation, renewable energy integration, and sustainable agriculture practices, the market is projected to further grow at a CAGR of 53.7% between 2024 and 2032 to reach a value of USD 4,870.01 million by 2032.

Green ammonia refers to ammonia produced through renewable energy sources, such as wind, solar, or hydroelectric power, rather than traditional fossil fuels. Unlike conventional ammonia production, which relies on natural gas as a primary feedstock and emits significant greenhouse gases, green ammonia production involves the electrolysis of water to produce hydrogen, which is then combined with nitrogen extracted from the air to produce ammonia.

The North America green ammonia market growth is underpinned by several key drivers. The urgent need to reduce carbon emissions, mitigate climate change, and transition to a low-carbon economy has propelled governments, industries, and consumers to embrace renewable energy solutions and sustainable practices, driving demand for green ammonia as a clean, renewable fuel and chemical feedstock.

Moreover, the growing adoption of renewable energy technologies, such as wind and solar power, coupled with advancements in electrolyser technology and ammonia synthesis processes, has reduced the cost and improved the efficiency of green ammonia production, making it increasingly competitive with conventional ammonia production methods. Additionally, the expanding applications of green ammonia in sectors such as energy storage, transportation, and agriculture, consequently driving up the North America green ammonia market share.

The market is characterised by a wave of technological innovations and advancements aimed at enhancing production efficiency, scalability, and cost-effectiveness. Leading companies and research institutions are investing in research and development initiatives to develop novel electrolyser technologies, catalysts, and process optimisations to improve the performance and economics of green ammonia production.

Furthermore, the integration of green ammonia production with renewable energy projects, such as offshore wind farms and solar parks, enables the co-location of production facilities with abundant renewable energy resources, minimising transmission losses

and enhancing overall energy efficiency. Additionally, the development of advanced storage and transportation solutions for green ammonia, such as ammonia carriers and hydrogen carriers, facilitates its deployment as a versatile energy carrier and chemical feedstock, leading to North America green ammonia market development.

Based on the analysis of the North America green ammonia market, the use of proton exchange membrane (PEM) technology is expected to increase due to the growing awareness of its benefits. In addition to its compact design, PEM electrolysers offer exceptional efficiency and high current densities at low voltages. Moreover, government subsidies aimed at promoting green and clean energy production, along with increased research and development efforts in fuel cell initiatives, are expected to support the growth of this technology.

The marine transportation sector has emerged as the leading sector for green ammonia, accounting for a significant portion of the market share. The rising demand for environmentally sustainable fuel alternatives, driven by the global energy crisis and environmental degradation, has created opportunities for green ammonia applications in this sector. As a result, there has been a shift in demand from traditional energy sources to renewable alternatives.

As per the North America green ammonia market analysis, the North America green ammonia market reflects diverse trends and dynamics across different geographical regions. The United States and Canada emerge as key markets for green ammonia, driven by factors such as abundant renewable energy resources, supportive government policies, and strong industrial and agricultural sectors.

Additionally, emerging markets such as Mexico are witnessing rapid growth in green ammonia adoption, fuelled by factors such as energy security concerns, environmental sustainability goals, and increasing investments in renewable energy infrastructure.

Moreover, cross-border collaborations and partnerships among North American countries facilitate knowledge sharing, technology transfer, and project development, driving innovation and growth in the regional green ammonia market.

Market Segmentation []

The market can be divided based on the technology, end-use, and region

Market Breakup by Technology

- Alkaline Water Electrolysis
- -∏Proton Exchange Membrane

Market Breakup by End-Use

- -□Fertiliser
- Chemical and Petrochemicals
- -∏Utilities
- Marine Transport
- -[Others

Market Breakup by Region

- -⊓United States of America
- -[Canada

Competitive Landscape

The EMR report looks into the market shares, plant turnarounds, capacities, investments, and mergers and acquisitions, among other major developments, of the leading companies operating in global North America green ammonia market. Some of the major players explored in the report by Expert Market Research are as follows:

- -□CF Industries Inc.
- -∏Yara International
- ITM Power PLC
- Nel Hydrogen
- -∏Excel Group
- -□LSB Industries
- -∏Iberdrola S.A.
- -□OCI Global
- Greenfield Nitrogen LLC

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-∏Others

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*We at Expert Market Research always strive to provide you with the latest information. The numbers in the article are only indicative and may be different from the actual report.

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