

Europe Green Ammonia Market- Industry Size, Share, Trends, Opportunity, and Forecast, 2018-2028 Segmented By Production Method (Alkaline Water Electrolysis, Proton Exchange Membrane, and Solid Oxide Electrolysis), By End Use (Power Generation, Transportation, Fertilizers, Others) By Region and Competition

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## **Abstracts**

Europe Green Ammonia market is anticipated to grow appreciably at the rate in the forecasted period. The European ammonia sector uses almost 10 billion cubic meters (BCM) of natural gas annually, primarily as a feedstock, to make fertilizers because they play a vital factor in helping guarantee food security for their people.

Green ammonia is an emerging technology that has the potential to revolutionize the energy and agriculture industries by providing a clean and efficient source of energy. The European Union (EU) has recognized the importance of this technology and has set ambitious targets to increase the production and use of green ammonia.

Green ammonia is produced through a process called electrolysis, which uses renewable electricity to split water into hydrogen and oxygen. The hydrogen is then combined with nitrogen to create ammonia, which can be used as a fertilizer or fuel. Unlike conventional ammonia, which is made from fossil fuels and emits greenhouse Green Ammonia, green ammonia is produced using renewable energy and emits no carbon dioxide. As a fuel, green ammonia is a clean source of energy that can be used to power cars, trucks, and ships, as well as generate electricity. In agriculture, green ammonia can be used as a fertilizer, providing plants with the nitrogen they need to grow without the harmful effects of conventional fertilizers. Apart from these, green



ammonia can be easily transported and stored, which makes it a versatile energy source. All these factors make the green ammonia market a flourishing market in the upcoming years.

Growing technological Efforts to lessen Climate Change Effects are Market Driving factors.

Climate change is one of the most significant challenges facing the world today, and Europe has been a leader in addressing this challenge by setting ambitious climate targets and promoting the development of clean energy technologies such as green ammonia. Green ammonia is used in different technology for the processing or production of fuels and products. During production, green ammonia emits no carbon dioxide, unlike conventional ammonia production, which is responsible for significant greenhouse gas emissions. By replacing conventional ammonia with green ammonia, Europe can significantly reduce its carbon footprint and help combat climate change. Hence, European Union has also recognized the potential of green ammonia and has set ambitious targets to increase its production and use. The European Union's Green Deal aims to make Europe climate-neutral by 2050 and to reduce greenhouse gas emissions by at least 55% by 2030. To achieve these goals, the European Union has placed a target of producing 10 million tons of renewable hydrogen by 2030, which will be used to produce green ammonia in Europe. Therefore, the Europe Green Ammonia Market is going to hold an impressive market share to fulfill their sustainability goals.

Growing Demand for Renewable Energy Based Products is Driving the Market Growth

Renewable energy and green ammonia are closely linked in Europe, as the production of green ammonia requires renewable energy sources such as wind and solar power. The development of renewable energy has played a critical role in making green ammonia production more feasible and cost-effective. For the production of green ammonia, wind power is one of the most common sources of renewable energy. Wind turbines can be used to generate electricity to power the electrolysis process used to produce green ammonia. In Europe, countries such as Denmark, Germany, and the Netherlands are leading the way in wind energy production, making them well-positioned to produce green ammonia using wind power. Solar power is another key source of renewable energy used in green ammonia production. Solar panels can be used to generate electricity to power the electrolysis process, and concentrated solar power (CSP) can be used to generate high-temperature heat for the Haber-Bosch process used to produce ammonia. Europe has a significant solar energy potential, particularly in Southern Europe, which could be harnessed for green ammonia



production.

Rising Sustainable agriculture and Products are Driving the Market Demand.

Sustainable agriculture and the green ammonia market are closely connected, as green ammonia can be used as a sustainable fertilizer to support sustainable agriculture practices. Sustainable agriculture aims to reduce the environmental impact of agricultural practices while promoting the long-term viability of the agricultural sector. Conventional fertilizers used in agriculture are often produced using fossil fuels, which results in significant greenhouse gas emissions. Green ammonia, on the other hand, is produced using renewable energy and waste streams such as carbon dioxide, resulting in significantly lower greenhouse gas emissions. By using green ammonia as a fertilizer, sustainable agriculture practices can reduce the carbon footprint of the agricultural sector. Furthermore, sustainable agriculture practices aim to maintain and improve soil health, which is critical for crop growth and long-term agricultural sustainability. Green ammonia can contribute to soil health by providing essential nutrients such as nitrogen, which is essential for plant growth. By using green ammonia as a fertilizer, sustainable agriculture practices can improve soil health and promote the long-term viability of agricultural production. Apart from these, green ammonia can be produced using renewable energy and waste streams, creating a closed-loop system that reduces waste and promotes resource efficiency. Sustainable agriculture practices also aim to promote closed-loop systems by reducing waste and promoting resource efficiency. By using green ammonia as a fertilizer, sustainable agriculture practices can contribute to the development of a circular economy in which resources are used more efficiently. Hence, the green ammonia market and sustainable agriculture practices are interconnected, with the growth of one supporting the growth of the other. By promoting the development of sustainable agriculture practices and the green ammonia market, Europe can play a leading role in promoting sustainable development and addressing the global challenges of climate change and resource depletion. Therefore, the Europe Green Ammonia Market is going to hold an impressive market share in the coming period to fulfill the demand for sustainable fertilizer and products by farmers.

Favorable Government Efforts are Driving the Demand for Europe Green Ammonia Market

The EU's plan for green ammonia includes several initiatives, such as they will support the development of renewable energy sources, such as wind and solar power, which will be used to power the electrolysis process. Second, it will provide funding for research and development to improve efficiency and reduce the costs of green



ammonia production. Moreover, European Union will promote the use of green ammonia in the agriculture and transport sectors. Apart from these, the European Union is committed to making green ammonia a key component of its energy and climate policies. By investing in research and development and supporting the development of renewable energy sources, the EU is paving the way for a cleaner, more sustainable future. As green ammonia technology continues to evolve and improve, it is likely that it will play an increasingly important role in meeting Europe's energy and climate goals as the strong will of the governments is expected to increase the production and demand of green ammonia in Europe for the forecast period and in the future.

## Recent Developments

In February 2023, CEPSA EP SA and Fertiberia SA formed a tactical alliance to boost green hydrogen production and decarbonize the industry in Huelva. This collaboration will help Fertiberia SA to accelerate the growth of its green ammonia production.

The consortium of companies led by ThyssenKrupp is planning to build a new plant in the city of Duisburg, Germany, and is expected to begin operations in 2025. The plant will have a production capacity of 1,000 tons of green ammonia per day, making it one of the largest green ammonia plants in Europe. The green ammonia will be produced in the plant using renewable energy sources, such as wind and solar power, and will emit significantly lower greenhouse gas emissions compared to traditional ammonia production methods.

## Market Segmentation

Europe green ammonia market is segmented based on the production method, enduse, and country. Based on the production method, the market is divided into alkaline water electrolysis, proton exchange membrane, and solid oxide electrolysis. Based on the end use, the market is divided into power generation, transportation, fertilizers, and others.

#### Company Profiles

Yara International ASA, Haldor Topsoe Holding A/S, ThyssenKrupp AG, Siemens Energy AG, BASF SE, ACME Group, GKN Ammonia Ltd., Fertiglobe plc, NEL Hydrogen AS, and Green Hydrogen Systems A/S are some of the key players of



Europe Green Ammonia Market.

Report Scope:

In this report, Europe Green Ammonia market has been segmented into the following categories, in addition to the industry trends, which have also been detailed below:

Europe Green Ammonia Market, By Production Method:

Alkaline Water Electrolysis

Proton Exchange Membrane

Solid Oxide Electrolysis

Europe Green Ammonia Market, By End Use:

**Power Generation** 

Transportation

**Fertilizers** 

Others

Europe Green Ammonia Market, By Country:

France

Germany

United Kingdom

Italy

Spain

Finland



Greece

Portugal		
Bulgaria		
Netherland		
Competitive landscape		
Company Profiles: Detailed analysis of the major companies in Europe Green Ammonia market.		
Available Customizations:		
With the given market data, TechSci 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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