

United Kingdom Green Ammonia Market By Production Method (Alkaline Water Electrolysis, Proton Exchange Membrane, and Solid Oxide Electrolysis), By End Use (Power Generation, Transportation, Fertilizers, Others), By Region, Competition Forecast & Opportunities, 2018-2028F

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Abstracts

United Kingdom Green Ammonia Market is anticipated to grow at a significant rate in the forecast period, 2024-2032. Ammonia is a chemical compound made of nitrogen and hydrogen atoms. It is widely used in the agriculture and chemical industries, as well as in refrigeration and cleaning products. However, the traditional process for producing ammonia involves high energy consumption and greenhouse gas emissions, which have led to the development of 'green ammonia' as an alternative. According to the United Kingdom Government, the UK reduced its power sector emissions by over 70 percent between 1990 and 2019 and generates more electricity from offshore wind than any other country.

The chemical industry is one of the largest consumers of nitrogen, with ammonia being a key feedstock to produce a wide range of chemicals, including fertilizers, plastics, and pharmaceuticals. The use of green ammonia provides a sustainable and low-carbon alternative to traditional ammonia, helping to reduce the environmental impact of the chemical industry. According to the European Chemical Industry Council or Cefic, chemicals, and pharmaceuticals were the UK's second-largest manufacturing sector in 2021, trailing only machinery and transport equipment, with exports exceeding USD54 billion and value added to the economy of USD30.7 billion. The demand for green ammonia in the chemical industry in the UK is being driven by a range of factors, including government regulations and policies aimed at reducing greenhouse gas

emissions and promoting sustainable practices in the industry. The UK government has set ambitious targets for reducing greenhouse gas emissions, to achieve net-zero emissions by 2050. To achieve this target, the government has implemented a range of policies and regulations to encourage the development of low-carbon technologies, including green ammonia.

Green ammonia is quickly gaining traction as a sustainable and low-carbon alternative to traditional bunker fuels in the shipping industry in the United Kingdom (UK). As one of the largest emitters of greenhouse gases, the shipping industry is under increasing pressure to reduce its carbon footprint and transition to more sustainable fuels. As per Maritime UK, the shipping sector contributes USD11 billion to GDP and is crucial to the economy. In addition, it contributes USD2.75 billion in taxes to the UK government, which sustains 240,000 jobs. One of the key policies driving the adoption of green ammonia in the shipping industry is the International Maritime Organization's (IMO) target of reducing greenhouse gas emissions from the shipping sector by at least 50% by 2050 compared to 2008 levels. The use of green ammonia can help shipping companies to meet these targets and reduce their carbon footprint. The shipping industry in the UK is increasingly recognizing the benefits of using green ammonia as a sustainable and low-carbon alternative to traditional bunker fuels. The use of green ammonia can help shipping companies to reduce their carbon footprint, comply with government regulations, and meet the growing demand for sustainable transportation. As the demand for sustainable and low-carbon transportation options continues to grow, the use of green ammonia is poised to become an increasingly important component of the shipping industry in the UK. With government support and a growing awareness of the benefits of sustainable practices, the shipping industry is helping to create a more sustainable and resilient transportation sector in the UK.

Green ammonia is produced using renewable energy sources such as wind, solar, or hydropower, which can help reduce the carbon footprint of the ammonia industry. The growing demand for sustainable and environmentally friendly practices has created a significant market for green ammonia. According to the International Renewable Energy Agency (IRENA), ammonia production accounted for around 45% of global hydrogen consumption or around 33 million tonnes (Mt) of hydrogen in 2020.

Increasing demand for renewable energy

The shift towards renewable energy sources has been a major driver for the green ammonia market in the UK. With the increasing demand for sustainable energy solutions, green ammonia production can play a vital role in providing a clean energy

source for various applications. The growing interest in green ammonia is mostly a result of the rising demand for renewable energy. Renewable energy is taking on more significance in the global energy mix as nations strive to cut their greenhouse gas emissions and shift to low-carbon economies. In many regions of the world, such as the United Kingdom, the renewable energy sources like wind and solar power are already economically competitive with conventional fossil fuels, and their costs are still falling. This makes using renewable energy for industrial purposes like the manufacturing of ammonia progressively more viable, especially in areas with an abundance of renewable resources. Another benefit of producing green ammonia with renewable energy is that it can be done in remote areas without access to conventional energy.

Favorable Government Regulations and Policies

The United Kingdom has become an international leader in the production of green ammonia in recent years owing to encouraging laws and policies designed to cut greenhouse gas emissions and support renewable energy sources. To attain net-zero emissions by the year 2050, the United Kingdom government has set challenging goals for reducing greenhouse gas emissions. One of the key policies driving the development of green ammonia in the UK is the Renewable Transport Fuel Obligation (RTFO). The RTFO requires transport fuel suppliers to demonstrate that a certain percentage of their fuel comes from renewable sources, including green ammonia. This has created a market for green ammonia as a transport fuel, providing an alternative to traditional fossil fuels. In addition to the RTFO, the UK government has also implemented a range of other policies and incentives to encourage the development of green ammonia. For example, the government has established a Green Gas Levy to provide funding to produce green gas, including green ammonia.

Rising Use of Green Ammonia in Agriculture and Food Industry

The agriculture and food industry are major users of ammonia, with ammonia-based fertilizers playing a key role in the production of food crops. However, the traditional method of ammonia production is energy-intensive and emits significant amounts of carbon dioxide. This has led to growing interest in green ammonia, which is produced using renewable energy sources and has a significantly lower carbon footprint. Green ammonia is a key component of sustainable agriculture practices, as it provides a source of nitrogen for plants without contributing to greenhouse gas emissions. Nitrogen is a critical element for plant growth and is typically supplied to crops using synthetic fertilizers that are produced using fossil fuels. The agriculture and food industry in the United Kingdom (UK) is increasingly turning to green ammonia as a sustainable and low-

carbon source of fertilizer. Green ammonia is produced using renewable energy sources such as wind and solar power and has a significantly lower carbon footprint than traditional ammonia, which is produced using fossil fuels. The demand for green ammonia in the agriculture and food industry in the UK is being driven by a range of factors, including consumer demand for sustainable and organic food, and government regulations and policies aimed at reducing greenhouse gas emissions and promoting sustainable agriculture practices. Consumers are increasingly demanding sustainably produced food and are willing to pay a premium for products that are produced using sustainable and low-carbon practices. The use of green ammonia in agriculture provides a way for farmers to meet this demand, and to differentiate their products in a jammed market.

Market Segmentation

United Kingdom Green Ammonia Market is segmented into Production Method, End Use, Region, and Company. Based on Production Method, the market is divided into Alkaline Water Electrolysis, Proton Exchange Membrane, and Solid Oxide Electrolysis. Based on End Use, the market is divided into Power Generation, Transportation, Fertilizers, and Others. Based on Region, the market is segmented into Scotland, South-East, London, South-West, East-Anglia, Yorkshire & Humberside, and East Midlands and Rest of the United Kingdom.

Company Profiles

ATOME Energy PLC, Siemens Energy Limited, Eneus Energy Limited, Yara International ASA, Haldor Topsoe Holding A/S, ThyssenKrupp AG, ITM Power plc, RWE AG, HIIROC Limited and Scottish Power Ltd are some of the key players in the United Kingdom Green Ammonia Market.

Report Scope:

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

United Kingdom Green Ammonia Market, By Production Method:

Alkaline Water Electrolysis

Proton Exchange Membrane

Solid Oxide Electrolysis

United Kingdom Green Ammonia Market, By End Use:

Power Generation

Transportation

Fertilizers

Others

United Kingdom Green Ammonia Market, By Region:

Scotland

South-East

London

South-West

East-Anglia

Yorkshire & Humberside

East Midlands

Rest of United Kingdom

Competitive landscape

Company Profiles: Detailed analysis of the major companies in United Kingdom Green Ammonia Market.

Available Customizations:

United Kingdom Green Ammonia Market By Production Method (Alkaline Water Electrolysis, Proton Exchange Membran...

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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