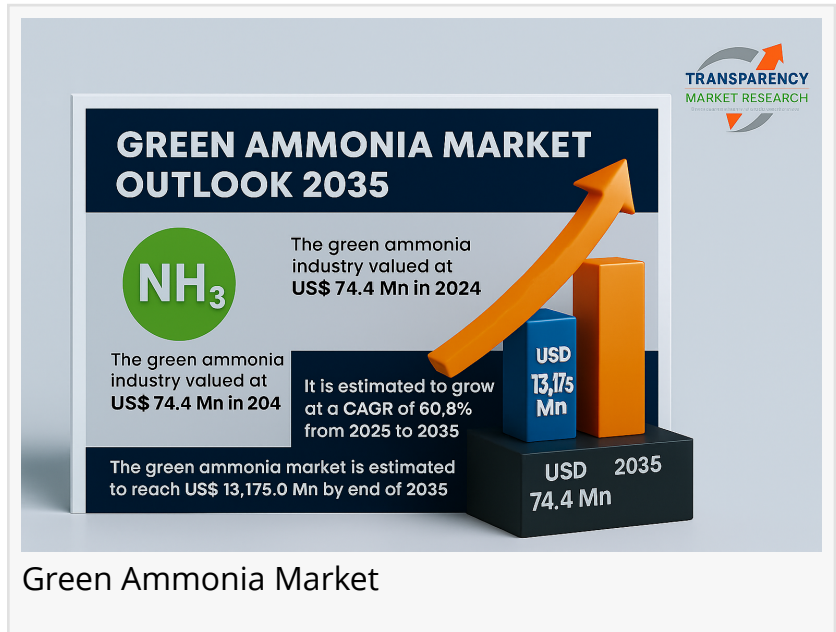


Green Ammonia Market Set for Explosive Growth, Projected to Reach \$13 Billion by 2035 | Transparency Market Research Inc

Global Green Ammonia Market Outlook 2035: Decarbonization Efforts Fueling a 60.8% CAGR as Industry Pivots to Sustainable Energy and Fertilizers

WILMINGTON, DE, UNITED STATES, October 10, 2025 /EINPresswire.com/ -- The global push for deep decarbonization across energy, shipping, and agriculture is setting the stage for phenomenal growth in the [Green Ammonia Market](#). A new market outlook report projects that the industry, valued at US\$ 74.4 million in 2024, is poised for an explosive expansion, with a Compound Annual Growth Rate (CAGR) of 60.8% from 2025 to 2035. This remarkable trajectory is forecast to propel the green ammonia market to a staggering valuation of US\$ 13,175.0 million by the end of 2035.



Green Ammonia Market

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The data underscores a critical shift away from 'grey' ammonia, which is produced using carbon-intensive fossil fuels, toward a sustainable, zero-carbon alternative. Green ammonia, synthesized using hydrogen derived from water electrolysis powered by renewable energy sources like wind and solar, is emerging as a lynchpin technology in the global energy transition.

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The forecasted growth rate of over 60% reflects not just increased demand, but a fundamental industry restructuring driven by technological maturity, escalating climate mandates, and significant governmental and corporate investment.

The journey to over \$13 billion in market value is powered by several key factors:

Global Decarbonization Mandates: Governments worldwide are implementing stricter environmental regulations, carbon taxes, and subsidies to accelerate the transition to low-carbon economies. These initiatives are making conventional, high-emission ammonia production economically unattractive and creating a compelling business case for green alternatives.

The Rise of Sustainable Agriculture: With ammonia being the foundational ingredient for nitrogen fertilizers—essential for feeding the global population—the pressure to decarbonize the agricultural sector is immense. Green ammonia provides a carbon-neutral fertilizer solution, aligning with sustainable farming practices and corporate environmental, social, and governance (ESG) goals.

Energy and Shipping Sector Adoption: Beyond fertilizers, green ammonia is gaining traction as a vital zero-carbon fuel and hydrogen carrier. Its ease of liquefaction and storage compared to pure hydrogen makes it an ideal medium for transporting clean energy across vast distances. Crucially, the maritime industry is increasingly adopting it as a bunker fuel to meet the International Maritime Organization's (IMO) stringent emission targets for global shipping, a sector notoriously difficult to abate.

Technological Advancements and Cost Reductions: Ongoing innovations in electrolysis technology, particularly in Alkaline Water Electrolysis (AWE) and next-generation Solid Oxide Electrolysis (SOE), are improving efficiency and driving down the capital costs of green hydrogen production. This, combined with the declining cost of renewable energy, is making green ammonia cost-competitive with its fossil-fuel-derived counterpart.

Applications Driving Exponential Demand

The versatile nature of green ammonia is opening up markets beyond its traditional use, firmly positioning it as a cornerstone of the future clean energy matrix.

The Fertilizer Industry: Core Demand

Historically, the agricultural sector has consumed the vast majority of globally produced ammonia. As the world population grows, so does the demand for fertilizers to ensure food security. Green ammonia directly addresses the agricultural sector's large carbon footprint, providing a clean pathway to sustain high crop yields without contributing to greenhouse gas

emissions from the production process. Companies like Yara International and CF Industries are at the forefront of this transition, heavily investing in large-scale green ammonia projects.

Energy Storage and Fuel: A New Frontier

The unique properties of ammonia as an energy carrier are unlocking its massive potential in the energy sector:

Hydrogen Carrier: Ammonia (NH_3) is an excellent medium for transporting hydrogen (H_2). It has a higher volumetric hydrogen density than liquid hydrogen and can be stored at much warmer temperatures (-33°C vs. -253°C). This makes international trade of green hydrogen, via the form of green ammonia, significantly more cost-effective and practical.

Marine Fuel: The push to decarbonize deep-sea shipping is perhaps the single largest new market driver. Ammonia is a zero-carbon fuel when combusted, although concerns around NO_x emissions are being addressed through engine and after-treatment technology. Major players like MAN Energy Solutions are developing ammonia-fueled engines to serve this burgeoning demand.

Power Generation: Green ammonia can be used in gas turbines and fuel cells for power generation, offering a scalable solution for long-duration energy storage and balancing intermittent renewable energy grids.

Challenges and Opportunities for Market Leaders

While the market outlook is overwhelmingly positive, the industry must overcome significant hurdles to realize its full potential. The primary challenge remains the high capital expenditure (CAPEX) associated with building new, large-scale green ammonia facilities, particularly the cost of electrolyzers and the infrastructure required for massive renewable energy generation. Furthermore, ensuring a consistent and reliable supply of competitively priced renewable energy remains critical for operational efficiency.

The burgeoning market, however, offers immense opportunities for technology providers and project developers.

Technological Innovation: Continued R&D into highly efficient electrolysis, advanced catalysts for the low-temperature Haber-Bosch process, and innovative ammonia cracking technologies are vital. Companies like Siemens Energy and Nel ASA are critical in developing and deploying these advanced technologies.

Strategic Partnerships: The complexity of these massive projects—integrating renewable power generation, hydrogen production, and ammonia synthesis—requires strategic alliances. Partnerships between energy majors, technology firms, and end-users (like shipping lines and

fertilizer producers) are becoming the norm to secure long-term offtake agreements and finance these capital-intensive ventures.

Global Project Development: The Asia-Pacific region, driven by strong industrial demand and governmental support in countries like India, is expected to be the fastest-growing market. Meanwhile, Europe and North America are leveraging strong policy frameworks, such as the EU's hydrogen strategy, to build extensive green hydrogen and ammonia hubs.

Analysis of Key Players in Green Ammonia Market

ACME Group
CF Industries
Kenya Nut Company
Stamicarbon
Iberdrola, S.A.
Siemens Energy
Yara International ASA
Fraunhofer IGB
Unigel
KBR Inc.
First Ammonia
Starfire Energy
ENGIE
Uniper SE
Greenko Group
Allied Green Ammonia Pty Ltd
Others

The Green Ammonia Market is experiencing dynamic regional growth driven by diverse factors.

Asia-Pacific (APAC) is the dominant and fastest-growing region, fueled by enormous agricultural demand for sustainable fertilizers to ensure food security, coupled with rapid industrialization. Strong government support and significant investment in large-scale production facilities position APAC as a key consumer and producer.

Europe is driven primarily by stringent environmental regulations, particularly the push to decarbonize heavy industry and the maritime sector. Policies like the EU's carbon pricing and RFNBO mandates are accelerating the adoption of green ammonia as a crucial hydrogen carrier and clean fuel.

The Middle East & Africa (MEA) region is emerging as a global leader in low-cost production and export. Its primary competitive advantage is the vast abundance of low-cost solar and wind energy, which is being leveraged through massive investments to diversify local economies and

establish the region as a major global clean energy supplier.

North America is also seeing substantial growth, driven by supportive government funding and tax incentives that encourage large-scale domestic production to meet both local industrial demand and global export opportunities.

Conclusion

The green ammonia market's projected growth from US\$ 74.4 million to over US\$ 13 billion by 2035, underpinned by a 60.8% CAGR, signifies more than just a chemical industry trend; it marks an epochal moment in the global energy transition. Green ammonia is evolving from a niche product to an indispensable, multi-faceted commodity essential for decarbonizing food production, maritime transport, and long-term energy storage. The convergence of climate necessity, government policy, and technological maturity is creating a hyper-growth environment, cementing green ammonia's role as a cornerstone of the net-zero future. The next decade will be defined by the scale, speed, and success of these transformative projects.

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Our data repository is continuously updated and revised by a team of research experts, so that it always reflects the latest trends and information. With a broad research and analysis capability, Transparency Market Research employs rigorous primary and secondary research techniques in

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