

Offshore Wind Market Size to Grow from USD 39.97 Billion in 2024 to USD 79.05 Billion by 2034, at an 8.9% CAGR

The global offshore wind market size was approximately USD 39.97 billion in 2024 and is projected to reach around USD 79.05 billion by 2034

PUNE, MAHARASHTRA, INDIA, September 25, 2025 / EINPresswire.com/ -- The global offshore wind market size was valued at USD 39.97 billion in 2024 and is projected to reach USD 79.05 billion by 2034, growing at a CAGR of 8.90%



between 2025 and 2034. This growth is driven by increasing global investments in renewable energy, supportive government policies, technological advancements in wind turbines, and rising demand for clean electricity.



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1. Introduction

Offshore wind energy involves generating electricity from wind turbines installed in oceans, seas, or large lakes. Unlike onshore wind, offshore installations benefit from higher wind speeds and more consistent energy output, making them highly efficient for large-scale renewable

energy production.

The market is propelled by the global energy transition, aiming to reduce carbon emissions and reliance on fossil fuels. Key initiatives in Europe, Asia-Pacific, and North America are boosting offshore wind capacity installation.

Key Insights:

As per the analysis shared by our research analyst, the global offshore wind market is estimated to grow annually at a CAGR of around 8.90% over the forecast period (2025-2034) In terms of revenue, the global offshore wind market size was valued at around USD 39.97 billion in 2024 and is projected to reach USD 79.05 billion by 2034.

The offshore wind market is projected to grow significantly due to surging global demand for renewable energy, rising concerns about energy security, and the expansion of offshore grid infrastructure.

Based on installation, the fixed structure segment is expected to lead the market, while the floating structure segment is expected to grow considerably.

Based on capacity, the above 5 MW segment is the dominating segment, while the 3 MW to 5 MW segment is projected to witness sizeable revenue over the forecast period.

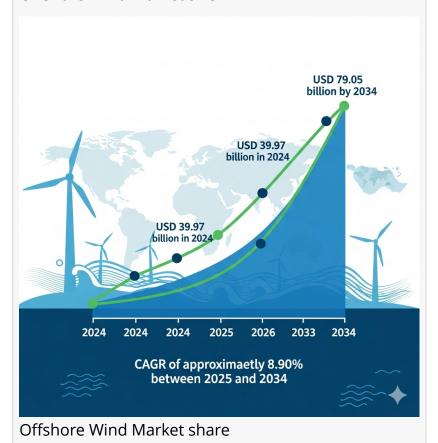
Based on water depth, the shallow water (<30 M Depth) segment is expected to lead the market compared to the transitional water (30-60 M Depth) segment.

Based on region, Europe is projected to

dominate the global market during the estimated period, followed by the Asia Pacific.







2. Market Dynamics

2.1 Growth Drivers

Government Policies and Incentives: Subsidies, tax credits, and renewable energy targets in Europe, Asia-Pacific, and the U.S.

Technological Advancements: Larger turbine capacities, floating wind technologies, and improved grid integration enhancing efficiency.

Rising Energy Demand: Growing electricity consumption and the need for clean energy sources

globally.

Environmental Awareness: Global commitment to decarbonization and reducing greenhouse gas emissions.

Corporate Renewable Energy Adoption: Increasing investment by corporations in renewable power procurement.

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2.2 Market Challenges

High Capital Expenditure: Offshore wind farms require significant initial investments in turbines, infrastructure, and installation.

Environmental and Regulatory Approvals: Complex permitting processes and environmental impact assessments.

Maintenance & Operational Costs: Harsh offshore environments increase maintenance complexity.

Grid Integration Issues: Balancing intermittent power generation with existing electricity grids.

2.3 Opportunities

Floating Offshore Wind Technology: Unlocks deep-water locations and increases potential installation areas.

Emerging Markets: Asia-Pacific and Latin America are investing heavily in offshore wind infrastructure.

Hybrid Renewable Projects: Combining offshore wind with solar or storage systems for improved reliability.

Green Hydrogen Production: Offshore wind-driven electrolyzers for hydrogen generation.

3. Market Segmentation

3.1 By Turbine Type

Fixed-Bottom Turbines

Floating Turbines

3.2 By Application

Utility-Scale Power Generation

Independent Power Producers (IPPs)

3.3 By End-User

Government and Public Utilities

Private Energy Companies

Corporates & Industrial Consumers

3.4 By Region

Europe

Asia-Pacific North America Latin America Middle East & Africa

4. Regional Analysis

Europe: Largest market due to early adoption, supportive policies, and technological leadership in offshore wind installations, particularly in the UK, Germany, and the Netherlands.

Asia-Pacific: Fastest-growing market driven by China, Taiwan, Japan, and South Korea's investment in large-scale offshore wind projects.

North America: Growth led by U.S. East Coast projects and Canada's emerging offshore wind initiatives.

Latin America: Early-stage development with potential in Brazil and Chile.

Middle East & Africa: Growing interest in renewable energy infrastructure, though adoption is slower compared to Europe and Asia-Pacific.

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5. Competitive Landscape

Key players in the global offshore wind market include:

Ørsted A/S

Vestas Wind Systems A/S

Siemens Gamesa Renewable Energy

GE Renewable Energy

Mingyang Smart Energy Group

China Longyuan Power Group Corporation

Envision Energy

Senvion (Siemens Spin-Off)

Nordex SE

RWE Renewables

These companies focus on technological innovation, strategic partnerships, offshore project development, and expansion into emerging markets.

6. Key Market Trends

Floating Wind Turbines: Allow deep-water installations and access to untapped offshore resources.

Turbine Size and Efficiency Improvements: Multi-megawatt turbines increase energy yield per unit.

Hybrid and Integrated Energy Solutions: Offshore wind coupled with storage or hydrogen production.

Digitalization & Predictive Maintenance: IoT and AI solutions for operational efficiency. Sustainability & ESG Focus: Increasing interest in environmentally friendly and socially

responsible offshore projects.

7. Future Outlook

By 2034, the global offshore wind market is expected to witness strong growth, driven by technological innovations, supportive renewable energy policies, and global decarbonization targets. Emerging economies will play a significant role in expanding offshore wind capacity.

8. Conclusion

The global offshore wind market is projected to grow from USD 39.97 billion in 2024 to USD 79.05 billion by 2034, at a CAGR of 8.90%. The market's growth reflects accelerating adoption of renewable energy, increasing offshore capacity, and innovations in floating wind technology. Companies investing in advanced turbine designs, floating technologies, and digital solutions will be well-positioned to capture significant opportunities in the coming decade.

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