+357 96 030922
info@marketpublishers.com

Floating Offshore Wind Systems Market Forecasts to 2032 – Global Analysis By Component (Turbines, Floating structure, Mooring system, Dynamic cables and Substation), Platform Type, Turbine Capacity, Water Depth, Axis Orientation, Application, End User and By Geography

https://marketpublishers.com/r/F9A387C8FF0CEN.html
Date: April 2025
Pages: 200
Price: US$ 4,150.00 (Single User License)
ID: F9A387C8FF0CEN

Abstracts

According to Stratistics MRC, the Global Floating Offshore Wind Systems Market is accounted for $483.53 million in 2025 and is expected to reach $3287.76 million by 2032 growing at a CAGR of 31.5% during the forecast period. Floating Offshore Wind Systems are an innovative solution for tapping wind energy in deep-sea areas unsuitable for conventional fixed turbines. These systems rely on buoyant platforms secured to the ocean floor with mooring lines, allowing turbines to capture stronger and steadier winds far from the coast. Key benefits include minimized visual disruption, access to high-speed winds, and opportunities for large-scale electricity production. Technological improvements in platform design, materials, and upkeep have made floating wind increasingly economically viable. Around the world, multiple demonstration projects and operational farms are emerging, underscoring floating offshore wind's critical role in advancing global renewable energy and supporting the transition to a low-carbon future.

According to the U.S. Department of Energy's 2023 Offshore Wind Market Report, the U.S. had over 52 GW of offshore wind projects in the pipeline, with more than 17 GW classified as floating wind projects—highlighting a significant shift toward deep-water deployment.

Market Dynamics:

+357 96 030922
info@marketpublishers.com

Driver:

Increasing demand for renewable energy

Global efforts to shift toward low-carbon and sustainable energy sources are fueling the growth of the Floating Offshore Wind Systems market. With governments and industries aiming to cut greenhouse gas emissions, offshore wind has become a critical solution. Floating platforms allow turbines to operate in deep waters inaccessible to traditional foundations, widening the scope for energy production. Ambitious renewable energy targets and climate pledges are encouraging faster adoption of floating wind projects. As nations prioritize clean electricity generation, investments in floating offshore wind infrastructure are rising. The escalating global focus on sustainable energy strongly drives the market's expansion and technological development.

Restraint:

High capital and installation costs

A major challenge restraining the Floating Offshore Wind Systems market is the substantial initial investment required. Deploying floating turbines in deep waters involves costly platforms, mooring systems, and specialized installation vessels, which elevate project expenses compared to fixed offshore wind. Complex logistics, skilled workforce requirements, and long construction timelines further add to the financial burden. These high capital costs can limit participation, particularly in developing countries or regions with limited funding. Extended return-on-investment periods may discourage potential investors, slowing overall market expansion. Although technology improvements are gradually reducing expenses, the significant upfront capital requirement continues to act as a key restraint for large-scale floating wind adoption.

Opportunity:

Technological innovation and cost reduction

Technological progress is unlocking significant opportunities in the Floating Offshore Wind Systems market by reducing costs and enhancing efficiency. Advances in floating platform design, material engineering, and deployment methods are making projects more economically viable. Integration of monitoring technologies, predictive maintenance tools, and energy storage solutions improves reliability and operational

+357 96 030922
info@marketpublishers.com

performance. As innovations continue, floating wind increasingly competes with other renewable energy sources, enabling large-scale commercial applications and attracting investors. Partnerships between developers, technology providers, and governments further accelerate advancements. These developments lower financial hurdles and optimize performance, creating favorable conditions for wider adoption and expansion of floating offshore wind systems across global energy markets.

Threat:

Intense competition from other renewable sources

Floating Offshore Wind Systems are challenged by competition from other renewable technologies such as onshore wind, solar power, and hydropower. These established alternatives often benefit from lower costs, proven infrastructure, and mature supply chains, making them attractive for energy investors. In regions rich in solar or onshore wind resources, floating offshore wind may struggle to compete economically. Improvements in energy storage, efficiency, and grid integration further strengthen the position of competing renewables. The relative novelty and technical intricacies of floating wind can limit investor confidence and project deployment. This competitive pressure remains a significant threat to the growth and widespread adoption of floating offshore wind markets.

Covid-19 Impact:

The COVID-19 outbreak had a notable impact on the Floating Offshore Wind Systems market, disrupting supply chains, manufacturing processes, and project execution. Lockdowns and travel restrictions hindered offshore operations, limited workforce availability, and delayed installation schedules, causing many projects to be postponed. Economic uncertainty during the pandemic also led to deferred investments or scaled-down initiatives. Port congestion, transportation difficulties, and logistical issues further slowed progress. However, the crisis underscored the strategic importance of renewable energy in ensuring energy security and sustainability. As pandemic-related restrictions eased, the market began to recover, with a renewed emphasis on accelerating floating offshore wind development and advancing global renewable energy targets.

The turbines segment is expected to be the largest during the forecast period

The turbines segment is expected to account for the largest market share during the

+357 96 030922
info@marketpublishers.com

forecast period due to its central role in electricity generation and overall project performance. Advanced, high-capacity turbines are vital for optimizing energy production on floating platforms, making them a key focus for developers and financiers. Innovations in turbine technology—such as improved efficiency, larger rotor blades, and enhanced durability—increase their importance and impact on project success. The choice and efficiency of turbines affect both the cost-effectiveness and scalability of floating offshore installations. As a result, turbines dominate the market, receiving substantial investment, technological development, and strategic emphasis across the floating offshore wind sector.

The semi-submersible segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the semi-submersible segment is predicted to witness the highest growth rate, owing to its versatility, stability, and compatibility with diverse water depths. These platforms can accommodate high-capacity turbines and offer easier transportation and installation compared to spar-buoy or TLP designs. Their structural advantages enable reliable performance in challenging offshore conditions while optimizing operational costs. Continuous technological improvements and the rising focus on deep-water wind energy projects further accelerate the adoption of semi-submersible platforms. As floating offshore wind deployment grows worldwide, semi-submersible solutions are increasingly favored for new projects, driving rapid market expansion and heightened industry investment.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share due to its supportive renewable energy policies, mature offshore wind infrastructure, and strong commitment to reducing carbon emissions. Key nations including the UK, France, and Norway have pioneered floating wind initiatives, developing pilot projects and commercial installations in deep-water areas. Robust government support, regulatory incentives, and significant research and development investments have further fueled market expansion. Europe’s extensive coastal areas and high wind energy potential create favorable conditions for floating offshore wind deployment. Consequently, the region leads globally in terms of installed capacity, technological advancements, and market investments, solidifying its position as the largest contributor to floating offshore wind growth.

Region with highest CAGR:

+357 96 030922
info@marketpublishers.com

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, fueled by rising energy requirements, government support, and increased renewable energy investments. Nations such as China, Japan, and South Korea are actively pursuing floating wind projects in deep-water zones unsuitable for conventional turbines. Accelerating urbanization, industrial growth, and the demand for low-carbon electricity are key drivers of adoption. Pilot projects and international technological partnerships are further promoting deployment across the region. Consequently, Asia-Pacific is emerging as the fastest-growing market for floating offshore wind, attracting substantial investment, fostering technological innovation, and rapidly expanding the region’s renewable energy capacity and infrastructure.

Key players in the market

Some of the key players in Floating Offshore Wind Systems Market include Vestas, ?rsted, Vattenfall, BW Ideol AS, Equinor ASA, RWE, Northland Power, EDF Renewables North America, Marubeni Offshore Wind Development (MOWD), SBM Offshore, Technip Energies, SSE Renewables, Modec, X1 Wind and Atlantic Shores Offshore Wind LLC.

Key Developments:

In January 2025, Vattenfall has signed a purchase power agreement (PPA) with the chemicals group LyondellBasell (LYB), providing fossil free electricity from the Nordlicht 1 offshore wind farm off the German coast. The agreement includes the supply of electricity from the Nordlicht 1 offshore wind farm over a period for 15 years, starting in 2028.

In September 2024, ?rsted signs agreement with Equinor for carbon removal credits. ?rsted will sell carbon dioxide removal (CDR) credits amounting to 330,000 tonnes of CO2 to Equinor over a ten-year period. This is part of ?rsted's CO2 capture and storage project, '?rsted Kalundborg CO2 Hub', which will capture 430,000 tonnes of biogenic CO2 annually from two of ?rsted's biomass-fired CHP plants from 2026.

In September 2024, Vestas has signed a conditional order agreement with Inch Cape Offshore Limited, an equal joint venture between ESB and Red Rock Renewables, for the 1.1 GW Inch Cape project in Scotland. The agreement is for the supply, installation, and commissioning of 72 V236-15.0 MW wind turbines for the Inch Cape Offshore Wind project. The scope of the service contract includes a long-term comprehensive service

+357 96 030922
info@marketpublishers.com

agreement followed by a tailor-made operational support agreement.

Components Covered:

- Turbines
- Floating structure
- Mooring system
- Dynamic cables
- Substation

Platform Types Covered:

- Semi-submersible
- Spar-buoy
- Tension-leg platform (TLP)

Turbine Capacities Covered:

- ? 2 MW
- 2 to 5 MW
- 5 to 8 MW
- 8 to 10 MW
- 10 to 12 MW
- 12 MW

+357 96 030922
info@marketpublishers.com

Water Depths Covered:

- Shallow water (? 30 m)
- Transitional depth (>30 m to 50 m)
- Deep water (> 50 m)

Axis Orientations Covered:

- Horizontal Axis
- Vertical Axis

Applications Covered:

- Pre-commercial Pilot
- Commercial Utility-scale
- Hybrid Wind-to-X

End Users Covered:

- Grid-connected
- Off-grid

Regions Covered:

- North America
  - US
  - Canada

+357 96 030922
info@marketpublishers.com

- Mexico

Europe

- Germany
- UK
- Italy
- France
- Spain
- Rest of Europe

Asia Pacific

- Japan
- China
- India
- Australia
- New Zealand
- South Korea
- Rest of Asia Pacific

South America

- Argentina
- Brazil

+357 96 030922
info@marketpublishers.com

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:
- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

+357 96 030922
info@marketpublishers.com

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

+357 96 030922
info@marketpublishers.com

Contents

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

+357 96 030922
info@marketpublishers.com

13 KEY DEVELOPMENTS

14 COMPANY PROFILING

+357 96 030922
info@marketpublishers.com

List Of Tables

LIST OF TABLES

+357 96 030922
info@marketpublishers.com

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

+357 96 030922
info@marketpublishers.com

I would like to order

Product name: Floating Offshore Wind Systems Market Forecasts to 2032 – Global Analysis By Component (Turbines, Floating structure, Mooring system, Dynamic cables and Substation), Platform Type, Turbine Capacity, Water Depth, Axis Orientation, Application, End User and By Geography

Product link: https://marketpublishers.com/r/F9A387C8FF0CEN.html

Price: US$ 4,150.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:
info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page https://marketpublishers.com/r/F9A387C8FF0CEN.html