

Floating Offshore Wind Market Forecasts to 2034 – Global Analysis By Component (Turbines, Floating Platforms, Mooring & Anchoring Systems, Dynamic Cables & Electrical Infrastructure and Operations & Maintenance Services), Water Depth, Technology, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Floating Offshore Wind Market is accounted for \$11.5 billion in 2026 and is expected to reach \$38.1 billion by 2034 growing at a CAGR of 16.2% during the forecast period. Floating offshore wind power consists of wind turbines mounted on buoyant structures that are secured to the seabed using mooring lines, allowing installation in deep ocean areas unsuitable for fixed foundations. By operating farther offshore, these systems capture stronger and steadier wind flows, resulting in higher energy output. This renewable technology reduces dependence on fossil fuels and limits land occupation, supporting global climate goals. It is gaining attention in countries with deep coastal zones like Japan, Norway, and the United States. Although costs and technical challenges remain significant, continuous innovation in design and infrastructure is accelerating its commercial viability worldwide.

According to the International Renewable Energy Agency, Global floating offshore wind capacity reached 185 MW by 2023, with more than 11 GW of projects in the pipeline. IRENA projects floating wind could supply up to 15% of total offshore wind capacity by 2050, enabling deployment in deep water regions unsuitable for fixed foundations.

Market Dynamics:

Driver:

Strong demand for clean energy transition

A key factor driving the floating offshore wind industry is the worldwide move toward cleaner and more sustainable energy systems. Governments are actively pursuing net-zero emissions targets and encouraging alternatives to fossil fuels, boosting renewable energy expansion. Floating offshore wind technology allows power generation in deep sea regions unsuitable for fixed turbines, unlocking vast ocean resources. Strict environmental regulations, climate policies, and financial incentives are further supporting its growth. Additionally, rising global electricity needs driven by urbanization and electrification is strengthening demand. This positions floating offshore wind as an important contributor to global efforts to reduce carbon emissions effectively.

Restraint:

High initial capital and installation costs

A major limitation for the floating offshore wind industry is the very high upfront investment and installation expenses. Building floating structures, anchoring systems, and deep-sea infrastructure demands far greater funding than traditional wind projects. The need for specialized ships, advanced engineering solutions, and expert labor further raises overall project costs. In addition, investors often perceive higher risks, which increase financing costs and slow funding availability. These financial challenges make large-scale deployment difficult, particularly in emerging markets. Even though the technology offers long-term energy benefits, the heavy initial expenditure continues to hinder its rapid commercialization and global expansion.

Opportunity:

Expansion into deep-water offshore regions

A significant growth opportunity for floating offshore wind is the ability to access deep ocean areas that remain largely unused for energy production. Conventional fixed-bottom turbines are restricted to shallow waters, but floating platforms allow deployment in much deeper seas with stronger and steadier wind conditions. This greatly enhances electricity generation potential. Nations with deep coastal waters, including Japan, Norway, and the United States, stand to gain considerable advantages. With rising global demand for clean energy, utilizing these offshore deep-water zones presents a strong pathway for expanding renewable capacity and supporting long-term industry

development.

Threat:

Extreme weather and environmental risks

A major threat to the floating offshore wind industry is the exposure to severe weather and difficult ocean conditions. Offshore turbines must withstand storms, heavy waves, strong winds, and corrosion caused by saltwater, all of which can harm equipment and disrupt performance. Maintaining stability in such unpredictable environments increases the chances of technical failures and operational interruptions. Climate change is also making weather patterns more extreme, adding further uncertainty. These harsh conditions raise maintenance expenses and pose safety concerns for workers. As a result, investor confidence may decline, slowing the expansion of floating offshore wind projects in high-risk marine areas.

Covid-19 Impact:

The COVID-19 crisis affected the floating offshore wind industry in both negative and positive ways. At the beginning, global lockdowns interrupted supply chains, delayed production of essential equipment, and slowed installation work. Restrictions on movement also prevented workers from reaching offshore sites, leading to project delays and maintenance issues. However, the pandemic strengthened global focus on renewable energy as part of economic recovery strategies. Governments introduced stimulus programs and green recovery funding that supported long-term offshore wind development. Although the sector experienced temporary setbacks and cost increases, it recovered steadily and continued its growth trajectory after restrictions were lifted worldwide.

The floating platforms segment is expected to be the largest during the forecast period

The floating platforms segment is expected to account for the largest market share during the forecast period as they are essential for deploying turbines in deep-sea locations where traditional foundations cannot be used. They act as the primary structural base that keeps wind turbines stable and operational in open ocean conditions. Growing offshore wind installations and improvements in platform engineering, including semi-submersible, spar-buoy, and tension-leg designs, are strengthening their demand. These systems provide durability, balance, and reliable performance even in challenging marine environments. As offshore wind projects

expand into deeper waters worldwide, the need for advanced and efficient floating platform technologies continues to rise steadily.

The independent power producers (IPPs) segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the independent power producers (IPPs) segment is predicted to witness the highest growth rate because they are increasingly investing in renewable energy projects. These companies are expanding their involvement in offshore wind development to diversify energy assets and secure long-term revenue through power purchase agreements. Their financial strength and adaptability enable quicker adoption of advanced technologies and large-scale projects. Rising demand for clean energy, along with favorable policy support from governments, is further boosting their growth. As the global energy landscape becomes more competitive, IPPs are becoming major contributors to the rapid expansion of floating offshore wind installations.

Region with largest share:

During the forecast period, the Europe region is expected to hold the largest market share because of its early focus on offshore wind development strong regulatory support and extensive coastal resources. Major countries such as the United Kingdom, Norway and Netherlands are actively developing large scale projects supported by ambitious clean energy and emissions reduction targets. The region also benefits from advanced maritime infrastructure efficient supply chains and consistent government backing for offshore wind initiatives Strong regulatory systems and significant investments from both public and private sectors reinforce its leadership position As a result it remains the global leader in installations and capacity growth of floating offshore wind sector

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR, driven by increasing energy demand rapid industrial growth and strong policy incentives for renewable energy adoption. Major economies including China Japan South Korea and Australia are investing heavily in offshore wind capacity to reduce emissions and diversify energy mix. The region's extensive coastline deep water sites and improving offshore engineering capabilities provide strong development potential. Rising foreign direct investments along with supportive regulatory environments are further accelerating project deployment. Consequently, Asia Pacific is becoming the

fastest growing hub for floating offshore wind expansion worldwide

Key players in the market

Some of the key players in Floating Offshore Wind Market include Aker Solutions, BW Ideol, Equinor ASA, GE Vernova, Goldwind, Hexicon AB, Mingyang Smart Energy Group Co., Ltd., Ocean Winds, Ørsted A/S, Principle Power, RWE, Saipem SpA, SBM Offshore, Shell, Siemens Gamesa Renewable Energy, Technip Energies, Vestas Wind Systems A/S and X1 Wind.

Key Developments:

In June 2026, Aker Solutions has secured a sizeable contract with Tussa Energi to supply all electromechanical equipment for the Tussa II hydropower plant, located in the Volda region of western Norway. The contract is part of a major capacity expansion project developed by Tussa Energi. The existing facility will be modernized after the new plant is commissioned, and kept in operation as additional capacity.

In December 2025, GE Vernova has signed an agreement with Greenvolt Power to supply onshore wind turbines for the Gurbanesti wind farm in Călărași county, Romania. The contractual scope covers the supply, installation, and commissioning of 42 units of 6.1MW, 158m rotor turbines. This marks the second major onshore wind agreement for GE Vernova Romania within two months, following an earlier announcement to deliver another 42 turbines for the Ialomița wind farm in the country.

In September 2024, X1 Wind has signed a memorandum of understanding (MoU) with mooring line manufacturer FibreMax. X1 Wind's floating wind solution features passive weathervaning and self-orientation capabilities, achieved through the integration of a Single Point Mooring (SPM) system with a small tension leg platform (TLP) mooring system.

Components Covered:

Turbines

Floating Platforms

Mooring & Anchoring Systems

Dynamic Cables & Electrical Infrastructure

Operations & Maintenance Services

Water Depths Covered:

Transitional Water (60-200m)

Deep Water (>200m)

Technologies Covered:

Semi-submersible

Spar-buoy

Tension-leg Platform (TLP)

End Users Covered:

Utilities

Independent Power Producers (IPPs)

Oil & Gas Companies Diversifying

Regions Covered:

North America

United States

Canada

Mexico

Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

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)

Regional Segmentation

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

Competitive Benchmarking

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