

Ocean Wave & Tidal Energy Market Forecasts to 2034 – Global Analysis By Type (Oscillating Water Column (OWC) Systems, Point Absorber Devices, Attenuator-Based Wave Energy Converters, Tidal Stream Generators, Tidal Barrage Systems, Dynamic Tidal Power Systems and Overtopping Wave Energy Devices), Component, Location, Application, End User and By Geography

<https://marketpublishers.com/r/OB22C9783BF1EN.html>

Date: March 2026

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: OB22C9783BF1EN

Abstracts

According to Statistics MRC, the Global Ocean Wave & Tidal Energy Market is accounted for \$1.3 billion in 2026 and is expected to reach \$11.6 billion by 2034 growing at a CAGR of 31.4% during the forecast period. Ocean wave and tidal energy harness the natural movement of water to generate electricity. Waves and tides carry immense power, and specialized systems capture this energy through turbines or floating devices. Unlike fossil fuels, it is renewable and predictable, making it a reliable source of clean energy. This technology reduces carbon emissions while providing coastal regions with sustainable power. Though still developing, ocean energy holds promise as a significant contributor to future energy grids, complementing wind and solar resources.

Market Dynamics:

Driver:

Growing marine renewable investments

Rising capital allocation toward marine-based clean energy projects is accelerating momentum in the Ocean Wave & Tidal Energy Market. Governments and private investors are diversifying renewable portfolios beyond solar and wind to harness predictable ocean resources. Fueled by decarbonization targets and coastal energy security strategies, pilot and demonstration projects are expanding. Public funding programs and innovation grants are supporting technology maturation. Strategic collaborations between utilities and marine engineering firms further strengthen commercialization pathways. Consequently, growing marine renewable investments act as a primary market growth engine.

Restraint:

High offshore installation costs

Elevated capital expenditure associated with offshore deployment remains a critical market restraint. Complex marine engineering, subsea cabling, and specialized vessels significantly increase project costs. Maintenance operations in harsh ocean environments add further operational expenditure. Limited large-scale commercialization restricts economies of scale benefits. Additionally, financing challenges persist due to perceived technology risks. Therefore, high offshore installation and lifecycle costs constrain widespread adoption.

Opportunity:

Hybrid offshore renewable parks

Integration of wave and tidal systems within hybrid offshore renewable parks presents substantial growth opportunities. Co-locating technologies with offshore wind farms optimizes grid connectivity and infrastructure utilization. Spurred by multi-source energy optimization strategies, developers seek to enhance capacity factors and revenue diversification. Shared transmission assets reduce incremental capital costs. Energy storage integration further strengthens grid reliability. As offshore renewable clusters expand, hybrid parks create scalable commercial prospects.

Threat:

Offshore wind cost competitiveness

Declining levelized cost of energy (LCOE) for offshore wind poses a significant

competitive threat. Offshore wind benefits from technological maturity, large-scale deployment, and strong policy backing. Investors often prioritize wind projects due to established supply chains and predictable returns. Wave and tidal technologies face commercialization uncertainty and longer development cycles. Additionally, subsidy frameworks frequently favor wind energy. Consequently, offshore wind cost competitiveness challenges market penetration.

Covid-19 Impact:

The COVID-19 pandemic disrupted marine construction schedules and delayed demonstration projects. Supply chain bottlenecks affected turbine component manufacturing and offshore logistics. Investment decisions were temporarily postponed amid economic uncertainty. However, green recovery packages and stimulus funding revitalized renewable energy commitments. Governments reinforced long-term climate goals, benefiting marine energy research. Post-pandemic infrastructure acceleration has gradually restored project pipelines.

The oscillating water column (OWC) systems segment is expected to be the largest during the forecast period

The oscillating water column (OWC) systems segment is expected to account for the largest market share during the forecast period. OWC technology offers relatively mature design frameworks and adaptable shoreline deployment options. Its mechanical simplicity enhances operational reliability compared to emerging concepts. Influenced by pilot project success rates, developers favor OWC configurations for scalability. Integration with existing coastal infrastructure further supports adoption. As commercialization advances, OWC systems maintain segment leadership.

The power generation equipment segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the power generation equipment segment is predicted to witness the highest growth rate. Technological advancements in turbines, generators, and control systems are enhancing conversion efficiency. Propelled by R&D investments, equipment optimization reduces maintenance frequency and improves output stability. Modular designs enable flexible deployment across varied marine conditions. Growing demand for high-efficiency energy capture solutions supports expansion. Consequently, power generation equipment represents the fastest-growing component within the market.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share. Strong policy frameworks supporting marine energy demonstration projects drive regional leadership. The United States and Canada are investing in coastal renewable infrastructure. Presence of advanced marine engineering expertise enhances project feasibility. Additionally, supportive research institutions foster innovation. As renewable diversification strategies intensify, North America sustains dominant market contribution.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. Expanding coastal industrialization and rising electricity demand stimulate marine energy exploration. Governments in China, South Korea, and Australia are funding tidal and wave pilot projects. Propelled by energy diversification and carbon neutrality commitments, regional investment is accelerating. Strategic public-private partnerships strengthen commercialization potential. Therefore, Asia Pacific emerges as the fastest-growing regional market.

Key players in the market

Some of the key players in Ocean Wave & Tidal Energy Market include Orbital Marine Power Ltd., Minesto AB, SIMEC Atlantis Energy Ltd., Carnegie Clean Energy Limited, CorPower Ocean AB, AW-Energy Oy, Ocean Power Technologies, Inc., Eco Wave Power Global AB, Sinn Power GmbH, Naval Energies, Andritz Hydro GmbH, Voith GmbH & Co. KGaA, GE Renewable Energy, Siemens Energy AG, HydroQuest SAS, Sabella SAS, Sustainable Marine Energy Ltd., and Principle Power, Inc.

Key Developments:

In February 2026, Minesto AB advanced ocean energy by scaling from single-kite operations to array-based tidal kite systems, enabling larger deployments, improved efficiency, and commercial viability for renewable tidal power projects across Europe.

In January 2026, Orbital Marine Power Ltd. progressed its O2 floating tidal turbine platform, expanding testing capacity in Orkney Islands, demonstrating reliable tidal stream energy generation, and reinforcing leadership in sustainable marine energy

innovation worldwide.

In December 2025, Eco Wave Power Global AB expanded its wave energy pilot in Portugal, integrating nearshore converters with grid-connected systems, supporting renewable baseload power, and showcasing scalable, sustainable solutions for coastal energy infrastructure development.

Types Covered:

Oscillating Water Column (OWC) Systems

Point Absorber Devices

Attenuator-Based Wave Energy Converters

Tidal Stream Generators

Tidal Barrage Systems

Dynamic Tidal Power Systems

Overtopping Wave Energy Devices

Components Covered:

Power Generation Equipment

Structural Infrastructure

Control & Monitoring Systems

Locations Covered:

Nearshore Installations

Offshore Installations

Estuarine & River Tidal Systems

Coastal Infrastructure Projects

Hybrid Marine Renewable Parks

Pilot & Demonstration Projects

Applications Covered:

Utility-Scale Power Generation

Remote & Island Electrification

Offshore Oil & Gas Platform Power

Desalination Plant Integration

Hydrogen Production Integration

Defense & Maritime Applications

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

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

Contents

1 EXECUTIVE SUMMARY

- 1.1 Market Snapshot and Key Highlights
- 1.2 Growth Drivers, Challenges, and Opportunities
- 1.3 Competitive Landscape Overview
- 1.4 Strategic Insights and Recommendations

2 RESEARCH FRAMEWORK

- 2.1 Study Objectives and Scope
- 2.2 Stakeholder Analysis
- 2.3 Research Assumptions and Limitations
- 2.4 Research Methodology
 - 2.4.1 Data Collection (Primary and Secondary)
 - 2.4.2 Data Modeling and Estimation Techniques
 - 2.4.3 Data Validation and Triangulation
 - 2.4.4 Analytical and Forecasting Approach

3 MARKET DYNAMICS AND TREND ANALYSIS

- 3.1 Market Definition and Structure
- 3.2 Key Market Drivers
- 3.3 Market Restraints and Challenges
- 3.4 Growth Opportunities and Investment Hotspots
- 3.5 Industry Threats and Risk Assessment
- 3.6 Technology and Innovation Landscape
- 3.7 Emerging and High-Growth Markets
- 3.8 Regulatory and Policy Environment
- 3.9 Impact of COVID-19 and Recovery Outlook

4 COMPETITIVE AND STRATEGIC ASSESSMENT

- 4.1 Porter's Five Forces Analysis
 - 4.1.1 Supplier Bargaining Power
 - 4.1.2 Buyer Bargaining Power
 - 4.1.3 Threat of Substitutes
 - 4.1.4 Threat of New Entrants

- 4.1.5 Competitive Rivalry
- 4.2 Market Share Analysis of Key Players
- 4.3 Product Benchmarking and Performance Comparison

5 GLOBAL OCEAN WAVE & TIDAL ENERGY MARKET, BY TYPE

- 5.1 Oscillating Water Column (OWC) Systems
- 5.2 Point Absorber Devices
- 5.3 Attenuator-Based Wave Energy Converters
- 5.4 Tidal Stream Generators
- 5.5 Tidal Barrage Systems
- 5.6 Dynamic Tidal Power Systems
- 5.7 Overtopping Wave Energy Devices

6 GLOBAL OCEAN WAVE & TIDAL ENERGY MARKET, BY COMPONENT

- 6.1 Power Generation Equipment
 - 6.1.1 Turbines & Rotors
 - 6.1.2 Generators & Alternators
 - 6.1.3 Hydraulic & Mechanical Systems
- 6.2 Structural Infrastructure
 - 6.2.1 Foundations & Mooring Systems
 - 6.2.2 Subsea Cables & Grid Connection
- 6.3 Control & Monitoring Systems
 - 6.3.1 SCADA Systems
 - 6.3.2 Remote Monitoring Platforms

7 GLOBAL OCEAN WAVE & TIDAL ENERGY MARKET, BY LOCATION

- 7.1 Nearshore Installations
- 7.2 Offshore Installations
- 7.3 Estuarine & River Tidal Systems
- 7.4 Coastal Infrastructure Projects
- 7.5 Hybrid Marine Renewable Parks
- 7.6 Pilot & Demonstration Projects

8 GLOBAL OCEAN WAVE & TIDAL ENERGY MARKET, BY APPLICATION

- 8.1 Utility-Scale Power Generation

- 8.2 Remote & Island Electrification
- 8.3 Offshore Oil & Gas Platform Power
- 8.4 Desalination Plant Integration
- 8.5 Hydrogen Production Integration
- 8.6 Defense & Maritime Applications

9 GLOBAL OCEAN WAVE & TIDAL ENERGY MARKET, BY GEOGRAPHY

- 9.1 North America
 - 9.1.1 United States
 - 9.1.2 Canada
 - 9.1.3 Mexico
- 9.2 Europe
 - 9.2.1 United Kingdom
 - 9.2.2 Germany
 - 9.2.3 France
 - 9.2.4 Italy
 - 9.2.5 Spain
 - 9.2.6 Netherlands
 - 9.2.7 Belgium
 - 9.2.8 Sweden
 - 9.2.9 Switzerland
 - 9.2.10 Poland
 - 9.2.11 Rest of Europe
- 9.3 Asia Pacific
 - 9.3.1 China
 - 9.3.2 Japan
 - 9.3.3 India
 - 9.3.4 South Korea
 - 9.3.5 Australia
 - 9.3.6 Indonesia
 - 9.3.7 Thailand
 - 9.3.8 Malaysia
 - 9.3.9 Singapore
 - 9.3.10 Vietnam
 - 9.3.11 Rest of Asia Pacific
- 9.4 South America
 - 9.4.1 Brazil
 - 9.4.2 Argentina

- 9.4.3 Colombia
- 9.4.4 Chile
- 9.4.5 Peru
- 9.4.6 Rest of South America
- 9.5 Rest of the World (RoW)
 - 9.5.1 Middle East
 - 9.5.1.1 Saudi Arabia
 - 9.5.1.2 United Arab Emirates
 - 9.5.1.3 Qatar
 - 9.5.1.4 Israel
 - 9.5.1.5 Rest of Middle East
 - 9.5.2 Africa
 - 9.5.2.1 South Africa
 - 9.5.2.2 Egypt
 - 9.5.2.3 Morocco
 - 9.5.2.4 Rest of Africa

10 STRATEGIC MARKET INTELLIGENCE

- 10.1 Industry Value Network and Supply Chain Assessment
- 10.2 White-Space and Opportunity Mapping
- 10.3 Product Evolution and Market Life Cycle Analysis
- 10.4 Channel, Distributor, and Go-to-Market Assessment

11 INDUSTRY DEVELOPMENTS AND STRATEGIC INITIATIVES

- 11.1 Mergers and Acquisitions
- 11.2 Partnerships, Alliances, and Joint Ventures
- 11.3 New Product Launches and Certifications
- 11.4 Capacity Expansion and Investments
- 11.5 Other Strategic Initiatives

12 COMPANY PROFILES

- 12.1 Orbital Marine Power Ltd.
- 12.2 Minesto AB
- 12.3 SIMEC Atlantis Energy Ltd.
- 12.4 Carnegie Clean Energy Limited
- 12.5 CorPower Ocean AB

- 12.6 AW-Energy Oy
- 12.7 Ocean Power Technologies, Inc.
- 12.8 Eco Wave Power Global AB
- 12.9 Sinn Power GmbH
- 12.10 Naval Energies
- 12.11 Andritz Hydro GmbH
- 12.12 Voith GmbH & Co. KGaA
- 12.13 GE Renewable Energy
- 12.14 Siemens Energy AG
- 12.15 HydroQuest SAS
- 12.16 Sabella SAS
- 12.17 Sustainable Marine Energy Ltd.
- 12.18 Principle Power, Inc.

List Of Tables

LIST OF TABLES

Table 1 Global Ocean Wave & Tidal Energy Market Outlook, By Region (2023-2034) (\$MN)

Table 2 Global Ocean Wave & Tidal Energy Market Outlook, By Type (2023-2034) (\$MN)

Table 3 Global Ocean Wave & Tidal Energy Market Outlook, By Oscillating Water Column (OWC) Systems (2023-2034) (\$MN)

Table 4 Global Ocean Wave & Tidal Energy Market Outlook, By Point Absorber Devices (2023-2034) (\$MN)

Table 5 Global Ocean Wave & Tidal Energy Market Outlook, By Attenuator-Based Wave Energy Converters (2023-2034) (\$MN)

Table 6 Global Ocean Wave & Tidal Energy Market Outlook, By Tidal Stream Generators (2023-2034) (\$MN)

Table 7 Global Ocean Wave & Tidal Energy Market Outlook, By Tidal Barrage Systems (2023-2034) (\$MN)

Table 8 Global Ocean Wave & Tidal Energy Market Outlook, By Dynamic Tidal Power Systems (2023-2034) (\$MN)

Table 9 Global Ocean Wave & Tidal Energy Market Outlook, By Overtopping Wave Energy Devices (2023-2034) (\$MN)

Table 10 Global Ocean Wave & Tidal Energy Market Outlook, By Component (2023-2034) (\$MN)

Table 11 Global Ocean Wave & Tidal Energy Market Outlook, By Power Generation Equipment (2023-2034) (\$MN)

Table 12 Global Ocean Wave & Tidal Energy Market Outlook, By Turbines & Rotors (2023-2034) (\$MN)

Table 13 Global Ocean Wave & Tidal Energy Market Outlook, By Generators & Alternators (2023-2034) (\$MN)

Table 14 Global Ocean Wave & Tidal Energy Market Outlook, By Hydraulic & Mechanical Systems (2023-2034) (\$MN)

Table 15 Global Ocean Wave & Tidal Energy Market Outlook, By Structural Infrastructure (2023-2034) (\$MN)

Table 16 Global Ocean Wave & Tidal Energy Market Outlook, By Foundations & Mooring Systems (2023-2034) (\$MN)

Table 17 Global Ocean Wave & Tidal Energy Market Outlook, By Subsea Cables & Grid Connection (2023-2034) (\$MN)

Table 18 Global Ocean Wave & Tidal Energy Market Outlook, By Control & Monitoring

Systems (2023-2034) (\$MN)

Table 19 Global Ocean Wave & Tidal Energy Market Outlook, By SCADA Systems (2023-2034) (\$MN)

Table 20 Global Ocean Wave & Tidal Energy Market Outlook, By Remote Monitoring Platforms (2023-2034) (\$MN)

Table 21 Global Ocean Wave & Tidal Energy Market Outlook, By Location (2023-2034) (\$MN)

Table 22 Global Ocean Wave & Tidal Energy Market Outlook, By Nearshore Installations (2023-2034) (\$MN)

Table 23 Global Ocean Wave & Tidal Energy Market Outlook, By Offshore Installations (2023-2034) (\$MN)

Table 24 Global Ocean Wave & Tidal Energy Market Outlook, By Estuarine & River Tidal Systems (2023-2034) (\$MN)

Table 25 Global Ocean Wave & Tidal Energy Market Outlook, By Coastal Infrastructure Projects (2023-2034) (\$MN)

Table 26 Global Ocean Wave & Tidal Energy Market Outlook, By Hybrid Marine Renewable Parks (2023-2034) (\$MN)

Table 27 Global Ocean Wave & Tidal Energy Market Outlook, By Pilot & Demonstration Projects (2023-2034) (\$MN)

Table 28 Global Ocean Wave & Tidal Energy Market Outlook, By Application (2023-2034) (\$MN)

Table 29 Global Ocean Wave & Tidal Energy Market Outlook, By Utility-Scale Power Generation (2023-2034) (\$MN)

Table 30 Global Ocean Wave & Tidal Energy Market Outlook, By Remote & Island Electrification (2023-2034) (\$MN)

Table 31 Global Ocean Wave & Tidal Energy Market Outlook, By Offshore Oil & Gas Platform Power (2023-2034) (\$MN)

Table 32 Global Ocean Wave & Tidal Energy Market Outlook, By Desalination Plant Integration (2023-2034) (\$MN)

Table 33 Global Ocean Wave & Tidal Energy Market Outlook, By Hydrogen Production Integration (2023-2034) (\$MN)

Table 34 Global Ocean Wave & Tidal Energy Market Outlook, By Defense & Maritime Applications (2023-2034) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Rest of the World (RoW) Regions are also represented in the same manner as above.

I would like to order

Product name: Ocean Wave & Tidal Energy Market Forecasts to 2034 – Global Analysis By Type (Oscillating Water Column (OWC) Systems, Point Absorber Devices, Attenuator-Based Wave Energy Converters, Tidal Stream Generators, Tidal Barrage Systems, Dynamic Tidal Power Systems and Overtopping Wave Energy Devices), Component, Location, Application, End User and By Geography

Product link: <https://marketpublishers.com/r/OB22C9783BF1EN.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/OB22C9783BF1EN.html>