Brochure of Report Highlights
Floating Wind Energy Report debuts at US Offshore Wind Event


This updated report (Volume Two) provides a comprehensive overview of the Global Floating Wind Energy market, from projects in place with CapEx estimates on all segments of the Supply Chain, along with forecast opportunities within each segment.

The reader gets far more than your typical “top-down” forecast as Quest employs their in-depth methodology (driven from Deep Data) which allows the reader to assess the impact of future growth by analyzing the benchmarks set forth in this report collectively, as well as across the Supply Chain.

$1,995 Single-User  $3,900 Multi-User

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Seven-Year Comparisons - Under Development, Planned & Possible
CapEx 2020-2026
Supply Chain Segment

- Total Addressable Market (mW) $44,566
- LCOE Est. ($/kWh) $14.30
- CapExPerUnit (million USD) $34.0
- CapExPerMW (million USD) $5.5

Region
- USA - Pacific $19,524
- USA - Atlantic $17,384
- N Europe $13,484
- S Europe $5,964

Hull Shape
- USA - Pacific $22,087
- USA - Atlantic $13,067

CapEx 2027-2033
Supply Chain Segment

- Total Addressable Market (mW) $18,105
- LCOE Est. ($/kWh) $109.4
- CapExPerUnit (million USD) $27.8
- CapExPerMW (million USD) $3.5

Region
- USA - Pacific $10,326
- USA - Atlantic $9,329

Hull Shape
- USA - Pacific $11,314

Northern Europe Projects in CapEx by Project Name
Under Development, Planned & Possible

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Country</th>
<th>Status</th>
<th>Volumetric</th>
<th>Turbine Type</th>
<th>Turbine Mw</th>
<th>CapExPerUnit (million USD)</th>
<th>CapExPerMW (million USD)</th>
<th>Developer</th>
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Charts, Tables and Graphs are sourced from our Q Vision Products Suite.

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Sample Charts, Graphs & Tables - Continued

Project CapEx by Developer
2020-2026 (million USD)

- Shell (combined with their acquisition of EOLFI) leads the most active developers globally with about 18% of the spend, $9.2 billion, for those projects scheduled to be Online from 2020 to 2026.
- About 16% of the project spend remains an available opportunity for developers and totals about $7.25 billion in CapEx.
- The second most active developer is EnBW which has a possible project of 100 units named Castle Wind offshore Morro Bay, California within the USA-Pacific region. It is our understanding that this project has yet to finalize their floater design selection.

Project Activity 2020-2026
Under Development, Planned & Possible

- Offshore Floating wind energy is a fast-moving market. Europe has been the “test bed” for Floating wind and the success of these projects will drive export of this technology to the USA and Asia well before 2025. Planned development of large-scale projects aided with ample financial backing will continue to drive efficiencies and lead to significantly reduced costs. We see this trend in turn making European projects more feasible buoyed by additional government support of long-term Floating wind energy developments.
Asia/Pacific Project CapEx
By Supply Chain Segment & Status | Under Development, Planned & Possible

- As a whole, the Asia/Pacific opportunity sees potentially 815 units by 2033 representing 5.5 GW of installed capacity.
- On par with Northern Europe, Asia/Pacific developers and their supply chain are leading the change towards improved project economics, more optimized CapEx per MW and ultimately lower LCoEs.

Mooring Activity by Status
Online 2017-2018

- The Online universe of nine recent 2017 to 2018 projects comprises 13 FTUs representing total installed mooring line lengths over 41,000 meters.
- Japan led the way early-on for Floating wind Demonstrators followed by the United Kingdom, France and Norway.
- Contracts and market shares for four of these projects are represented with installed mooring line lengths totaling 16,473 meters.
- As depicted bottom right, TechnipFMC led the mooring installation contractor segment with a 62% share of the work while McTaggart led the group of mooring contractors (top right) representing a 65% share of mooring line length related to their work on Equinor’s Hywind Scotland floater.

Mooring Systems: Design selection is fluid for most Planned projects and certainly for most Possible projects. However, FWE makes preliminary selections in order to drive our proprietary Q Vision CapEx model which is derived from a bottom-up perspective. Some selections are also based on the potential for Preferred Supplier Relationships (PSR).
About Q Vision

Q Vision provides instant access to real-time data for the world’s Fixed and Floating Wind Energy projects. Driven from Q FWE’s proprietary database, these Microsoft Power BI tools allow for dynamic analyses of relationships across Markets and Technologies, and an enhanced understanding of project Economics including LCoEs.

Q FWE’s Predictive Analytics and Market Expertise enable clients to see the consequence of change led from this rapidly accelerating market. Q FWE’s Subscription Products provide timely and actionable strategic market information. Data products refreshed weekly at a minimum, and within hours of important project updates.
Our Consultancy Practice - Capabilities and Methodology

Supporting Clients with Strategic Data-Driven Decisions

Client Directed Inquiries

Supply Chain Analysis

Primary Research

M&A Advisory

Quest Floating Wind Energy provides strategic advisory and consulting to end-clients within the global Energy and Financial sectors. Q FWE delivers highly focused market intelligence tools, products and services to the entirety of the Renewables Supply Chain related to offshore wind encompassing Floating and Bottom-fixed.

- Extensive project benchmarking of key metrics, CapEx & LCoE modeling and assessment
- Expert and technical market analysis utilizing a bottom-up / top-down approach
- Rigorous quantitative and qualitative research, vendor analysis and predictive analytics
  - M&A advisory and market evaluation
  - Actively develop and assist clients in sourcing niche financing alternatives
    - Market reviews, sizing and demand modeling
    - First source referencing (Market/Client/Customer)
  - Early project planning & feasibility studies
Number of FTUs by Region & Hull Type

- Semi: 1,213
- Barge: 186
- Semi-Spar: 82
- Spar: 613
- TLP: 3

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International, maintaining our global energy insight from hubs in Amsterdam and Houston with support from our representatives in Rio de Janeiro, New York and London

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