Floating Wind Solutions
Leveraging the Established Global Offshore Supply Chain

Conference Program

Floating Wind Solutions, Conference & Exhibition
The Westin Houston, Memorial City
28-29 June 2021

Organized by
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The mission of the Floating Wind Solutions Conference & Exhibition is to showcase the many capabilities of the established Global Offshore Supply Chain and create a platform for bridging Supply and Demand while facilitating development of this industry. Floating Wind Solutions’ mission is to utilize this platform to bring together the many critical players within the Wind and Offshore industries enabling accelerated adoption of Floating Wind Energy globally. This premier event’s primary goal is to accelerate the Energy Transition, by focusing on the industrialization and commercialization of Floating Wind Energy. A world class Advisory Board of industry experts supervise the conference content safeguarding the program; FWS along with our Advisory Board and other stakeholders are committed to the principles of this mission. The FWS 2021 Conference program excels in a strong line-up of subject matter experts from all over the globe showcasing proven know-how, experience and technology, readily available to the industry.

FWS’s first edition was originally planned for February 2021, however due to Covid pandemic delayed to June 2021. FWS has the ambition to be a true Global event, planned to return to Houston in Quarter 1 of 2022.

**FWE - Quest Floating Wind Energy**

In 2018, Quest launched a SaaS business Q FWE – Quest Floating Wind Energy, LLC, a company focused on Economics & Finance, Technology and Market Intelligence within the alternative energy landscape of offshore wind, specifically floating wind energy. Based on over a 100-years of combined experience in all relevant aspects and disciplines of the Global Energy Industry, 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 across offshore wind encompassing Floating and Bottom-fixed.

The mission is to unite, educate and expand the global offshore floating wind industry leveraging Quest Offshore’s resources and vast experience to bring together the various disciplines and services within this burgeoning sector. Over the past 3.5 years, Q FWE has gained hundreds of subscribers and thousands of followers and is recognized as the leading provider of market intelligence in the Floating Wind Energy industry.

Quest Offshore possesses expert knowledge of the entire Energy Value Chain with decades of experience empowering our clients with Clarity, Insight and Vision. Quest is dedicated to providing market expertise, strategy & advisory and technical conferences to our Offshore Energy clients including MCE Deepwater Development, the leading deepwater oil & gas event in Europe, now in its 17th year. In addition Quest owns and organizes the Deepwater Executive Summit and the Global Offshore Brazil Summit. Quest was the managing partner of the premier edition of OTC Brasil and was the creator of numerous other Offshore Energy events, such as Subsea Houston, Marine Construction Houston, DeepGulf and the Offshore Risk Forum.

For more information please contact Andrew Chadderdon

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William Cooper  
Managing Director

Bruno Geschier  
Chief Sales & Marketing Officer

Alla Weinstein  
Founder & CEO
BW Indol

Hans-Petter Oevervik  
Chief Commercial Officer

Jon Halliburton  
Managing Director

David Bloom  
Representative

Hannah Konig  
Head of Wind and Maritime

Leif Delp  
Head of Floating Offshore Wind Technology

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Director, Business Development

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Floating Offshore Wind Department Manager

Yuan Leyni  
Floating Wind Substructures Director

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Principal Engineer

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Business Development Manager Renewables

Kirsty Townsend  
Senior Director, Digital and Innovation
Ostend

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Head of Offshore Wind Business Development - West Coast

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Vice President Business Development

Denis Matha  
Chief Consultant Floating Offshore Wind Team Lead

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Renewables Energy Director

Laurent Verdier  
Renewables Product Line Director

Carl-Petter Halvorsen  
Business Development Director

James Cotter  
General Manager Offshore Wind Americas

Kevin Banister  
Chief Development Officer, International

Thomas Agnevall  
Managing Director

Jean-Marc Latourmel  
Senior VP Business & Technology Offshore

Steve Rampton  
Vice President

Chris Barton  
Sr. Vice President Business Development – Capital Projects

Von Thompson  
Vice President Gulf of Mexico

Aker Offshore Wind is a Norwegian offshore wind developer striving to create a sustainable future – one driven by clean, green energy. We have the needed experience and technologies to shape new frontiers and unlock vast amounts of energy production with minimal environmental footprint. It’s the reason we are driving the industrialization of deep water and floating offshore wind and taking an early mover position in the development of large-scale deepwater wind farms across the globe. We have resources at our disposal to become a leading deep water independent power producer, including over five decades’ worth of expertise, industry-leading technology and powerful alliances. With value creation as our priority, we will grow value milestone by milestone and project by project, expanding capacity and reach on a solid platform of performance. We have operations in Norway and internationally. The company has a portfolio of development projects and prospects in Europe, North America and Asia. Aker Offshore Wind is listed on Euronext Growth in Oslo, Norway, under the ticker AOW.ME.

Our collaboration with the Aker group give us access to unparalleled competence and five decades worth of expertise and experience. More than 50 years’ experience designing, delivering and servicing offshore floating and deepwater facilities in harsh environments across the world.

- Experience from designing 160 floating structures (semisubmersibles, spar buoys, TLPs and ship shape) that are some of the most advanced in the world, including 60% of the world’s semisubmersible platforms and the largest semi-submersible in the world
- Access to unique deepwater jacket technologies to drive down costs and unlock acreage also on intermediate depths (50-70 m) where monopiles and floaters are often less optimal
- Unique subsea technologies (e.g., dynamic power cables) and world-class offshore project execution
- Innovation in installation and execution to reduce the need for large, specialty vessels

Large Norwegian construction site at Verdal

Aker offshore wind developer striving to create a sustainable future – one driven by clean, green energy.

Principle Power, actively supported by its owners, has achieved several industry firsts, including the world’s largest floating offshore turbine. Three 8.4 MW turbines located 20 kilometers off the coast of Viana do Castelo, Portugal was commissioned in the spring of 2020. The project was granted financing through the European Investment Bank (EIB), demonstrating that floating offshore wind is now a bankable technology.

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**Agenda 7**

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<td>Floater Production for Commercial Scale</td>
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<td>Special Session</td>
<td>Presentations and Discussion on ESG-related Subjects</td>
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**Registration & Badge Pick-up (in exhibition hall)**

**Continental Breakfast (in exhibition hall)**

**Early Morning Session**

**Power Cable Systems & Substations**

**Late Morning Session**

**De-Risking Projects: Management & Controls**

**Late Afternoon Session**

**Assembly & Installation**

**Operations & O&M Scenarios**

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**Continental Breakfast (in exhibition hall)**

**Keynote Session: State of Industry and the Path Forward**

**Cost Reducing Scenarios**

**Lunch followed by Coffee (in exhibition hall) sponsored by Acteon Group**

**Mooring Systems & Technology**

**Floater Production for Commercial Scale**

**Presentations and Discussion on ESG-related Subjects**

**Reception**

**Continental Breakfast (in exhibition hall)**
Floating Wind Solutions
Monday - June 28

Breakfast (in exhibition hall) - Sponsored by Techne Energies

Welcome & Introduction

By Paul Nilssen, CEO FWT

Keynote: Advancements in Digital Wind Energy Technology

Presenter: Johann Marquis, Aker Offshore wind

Floating wind technology is developing at a rapid pace and digital solutions are a significant contributor to driving down the levelized cost of energy (LCOE). This presentation will provide a brief overview of where we are as a floating offshore industry, where the significant cost reductions are expected to come from, and provide a real world example of how digital solutions are providing real value and driving down costs today.

Keynote: Going from Technology to Commercialisation

Presenter: Jeff Dewar, Equinor

The presentation will provide an overview of what it will take going from rather novel floating concepts and technology, which means going from floating wind demos/demo parks and move to commercial scale parks 50MW+ within a decade.

Topics to be covered will be Floating LiCo & cost reduction potential - optimized floaters solutions for mass production including mooring and dynamic systems solutions – how to mobilise supply chain and meet the demand beyond 2020 - what will it take to industrialise floating offshore wind?

Keynote: The Importance of Return on Experience when Dealing with Interface Management and Responsibility Transfer among Project Stakeholders

Presenter: Bruno Geurken, BW Wind

As highlighted on numerous occasions by the European Investment Bank as well as other key financial institutions across the globe, the bankruptcy / insolvency of commercial-scale floating offshore wind projects is still highly – if not exclusively - dependent on the proven track record of floating wind technologies benefiting from several years of operation of full-scale assets. Beyond the obvious screening, power production and O&M track records, cost reduction capabilities, financial institutions (incl. insurers) will also gauge the maturity and experience of the interface management, risks transfer and contractual set-up. All these parameters are becoming an integral part of the contractual interfaces in normal floating wind contracts worldwide. The presentation will analyse the experience of different Floating Wind Projects and the lessons learned to avoid potential issues in project development.

Panel Discussion

Cost Reduction Scenarios

Session Chair: Henrik Bodskovbly, Nexans - Denis Matha, Ramboll

Translating O&G Cost-Saving Experiences into Floating Wind

Reviewer: Alastair Wood, Wood Group

The results of a series of cross disciplinary workshops are presented that identify how to translate Total Expenditure (TOTE) cost saving lessons from 40 years of oil and gas floating operations in hostile environments across economic, safe and reliable floating wind developments. The change in culture, technology, installation methods and operating strategy that would be needed to drive down floating wind energy costs are examined in terms of floaters and infrastructure and cost models.

Panel Discussion

Finance in Floating Wind

Reviewer: Randy McMan, Director, Green Growth

The presentation will provide an overview of the current state of the floating offshore wind market, anticipated growth of the market, current state of floating wind project development financing and observations on expected construction financing for floating wind projects. Topics covered: Current state of floating wind development globally, anticipated growth of floating wind, Expectations for cost competitiveness of floating wind - Current state of development financing for floating wind - including浮财和-结构 - Expectations for construction financing for floating wind, including characteristics of initial projects likely to secure financing.

Panel Discussion

Analyses of 18 Floater Designs, Steel and Concrete

Presenter: Issac Parete, developers

This presentation shows a Developer’s reasoning behind floating wind and the internal approach to reviewing and weighing different technology. It provides an overview of floating wind designs in steel, concrete and hybrid, looking at each design’s characteristics, Technology Readiness Levels (TRL) and evaluation of projects’ CapEx in which these designs have been applied. The presentation provides an insight of the available technology and potential markets in various regions. It also compares floating wind to bottom fixed applied technology.

Session Chair: Nicolas Meunier, DNV

Cross-over from O&G Mooring Experience to Floating Wind

Reviewer: Thomas Agnarsson, Statoil Offshore

The presentation will briefly review the installation of oil & gas mooring systems from the early eighties into present time, with focus on various anchor types in varying soil conditions and water depths. The technology developed over the years is now applicable to floating wind mooring systems as well, although some key differences need special attention. Delegates, new to floating wind moorings, and without any oil & gas mooring system experience will benefit from this general overview on shallow and deep water moorings and anchors.

Transition Site Opportunities for Early FOWT Deployments

Reviewer: Paul Molby, TPI Mohn

FOWT deployment in shallow waters where existing fixed bottom wind farms could be expanded. The presentation will discuss solutions for mooring of FOWT platforms in 30 to 50m water depth using state of the art mooring technologies. Suitable sites will be evaluated using CFD analyses with mooring systems modelled. How one mooring solutions enable the deployment of FOWT platforms in shallow waters. What environmental conditions FOWT platforms can be moored in. The type of mooring components which are required. And how to identify and investigate transition site opportunities.

Mooring System Redundancies & Maintenance Considerations

Reviewer: Arne Siddokk, Techne Energies

The design margin and redundancies of critical elements of the mooring system required for different types of FOWT to ensure appropriate system reliability and certainty for commercial wind farms development and operations. Predictive analysis and maintenance of the mooring system using remote based lifecycle analysis and smart monitoring using Artificial Neural Network will also be presented. Design of the mooring line components and anchors for different FOWT platforms using impedance based lifecycle load and smart monitoring. Will help design a robust mooring system for strength and fatigue along with reduced maintenance.

Mooring Options and Total Installed Cost for a Commercial Scale Wind Farm

Reviewer: Tim Fulton, Aecon Group

Mooring options and total installed costs will be presented for a commercial scale wind farm utilizing 12MW turbines in 200m water depth. Pros and cons of the various mooring systems will be presented including installation performance, mooring footprint, cost of components and cost of installation. Attendees will gain a better understanding of the various mooring options available as well as the economics for a commercial scale wind farm broken down by mooring components, pre-lay operations, and tow and hook-up operations.

Mooring Solutions Evolution Towards Commercial Scale Deployment

Reviewer: Linguistic Bath, Vryhof

Introducing key Mooring Challenges on Commercial scale development (not seen Demonstrations) and present potential approach to design codes and maintenance philosophy solutions. Commercial Scale development mooring design and integrity management won’t be similar to those in current demonstration or small farms. New approaches are needed.

Session Chair: Lars Samuelsen, AGL, Jesica Holten, EMBL

Tea Break (in exhibition hall) - Sponsored by Vryhof Group

3:45 - 5:00

Floating Production for Commercial Scale

Session Chair: Peter Lysdahl, Aker Solutions

Influence of Floater Design Aspects on Serial Production, Logistics and Project Development

Reviewer: David Matha, Ramboll

Presentation of floater design aspects and their influence on serial production processes, related to the design of material (steel and concrete) and structural design of floating platform (e.g. prototyped modular floor structure or large volume installation fabricated design). The influence of design choices on logistics and infrastructural requirements during project development, particularly in the material and fabrication phases, will be presented. The presentation will provide an overview how floater design aspects influence serial production, logistics and project development.

Delivery of Floating Units in Law Infrastructure Areas

Reviewer: Simone van der Linden, Biosol

Floating unit transportation, a key aspect for commercialization but local infrastructure are not always suited for floating fabrication. This presentation will explore how to transport floating technologies in various locations in order to benefit in local cost, quality and safety.

Floating Wind Solutions Serial Fabrication

Reviewer: Matthew Foulds, G2 Group

This is a topical presentation on floating wind solutions focusing on the serial fabrication process of the floater, including final assembly and transport. This feature takes fabrication offshore to Indonesia with over 700,000 square meters of fabrication area and currently in serial production of wind jacket foundations. Attendees will get a clear view of fabrication capabilities and the steps required for the construction of floating wind structures from plate rolling, through module fabrication and painting, and final assembly.

Panel Discussion

5:15 - 6:00

Three Presentations and Discussion on ESG-related Subjects - Chair: Shail Awad, Oceanmc, Ron Halliburton, Enscape Presenters: Jason Stanley, VP ESG Tidewater, Katrina Warren, Sr. Managing Director ESG-Lynk, William Fox, Chief Product Officer, Data Gumbo
PROVEN TECHNOLOGY SUPPLIER AND PROJECT CO-DEVELOPER WITH THE HIGHEST LEVEL OF LOCAL CONTENT, WHEREVER IN THE WORLD
High Voltage Dynamic Export Cables for Floating Wind
Presenter: Axel Johanns and Emmanuel Martin Lauze, Nexans
Dynamic subsea export cables represent a significant challenge for realization of cost efficient floating wind substation. We will present the underlying technology gaps, quality assurance and risk optimization and possible solutions for these. Specifically we will present solutions for multiple localizations and water depths. Top GIS will be under the gap between traditional export cable technology and future dynamic cables, TRL level and outlook on dynamic export cables, limitations, knowledge and technology gaps.

Dynamic Power Cable Layout Solutions for FOW
Presenter: Chris Patton, ZH Offshore (Atkon Group)
The feasibility of power cables solutions for floating offshore wind turbines in a dynamic shallow water environment (~50m water depth, high floater motions and large wave impacts) will be demonstrated. We will also give highlights and additonal challenges of power cable configurations as FOW moves into deeper water. Attendees should get an understanding of the challenges and drivers to FOW power cables.

Two Decades of Experience with Dynamic Power Cables & Substations
Presenter: Ricardo Henrique, Alstom Subsea With the expansion of the offshore wind industry, going to deeper waters, increased power and distance from shore, Floating Wind becomes the offshore wind form of the future. But with that, new challenges arise and, in particular, how to transfer energy and ensure long life reliability. Can the industry do that with the same type cable design approach? Alstom Solutions proposes new designs and innovations for the future of Floating Offshore Wind - we invite you to learn more about our products and how they deliver the responses to the challenges of dynamic applications.

Selecting the Optimal Location for Substations in Floating Wind Projects
Presenter: Dr. Robin Clark, OJV (Aqualift/Almacantar L2C) We analyze the main factors that influence the location of offshore substations (OSP). We present some of the technical challenges associated with fixed and floating OSPs. The presentation will cover the cost and technical drivers for OSP positioning and provide ample examples for context. Attendees will learn on the key technical cost drivers in terms of placement of fixed and floating OSP types, as well as the benefits, costs and risks of the substation, cables and installations.

Panel Discussion
9:30 - 10:15
10:15 - 11:45
Coffee Break (in exhibtion hall)

De-Risking Projects - Management & Controls
Session Chairs: Jonah Margulis, Alstom Offshore Wind, Chris Burnett, Wood

Keynote: Optimizing the Supply Chain to De-risk Project Execution
Presenter: James Cotter and Andrew Burke, Shell Renewables and Energy Solutions Taking a whole systems approach to right sizing project execution. Key factors in creating and delivering value in project execution, extending beyond standalone component cost reductions.

Business Models Reducing LCoE
Presenter: Henrik BalslevHeberg, Eon Collaboration with service providers and EPC companies coming together to engage and invest ahead of commercial array will contribute to skill development and risk reduction paths attracting large scale wind farm constructions, including substation and high voltage dynamic cables. The permitting timelines are long and the engineering skills are present. Leasing the combination will enhance results. Several jurisdictions cannot afford to wait until “pre-commercial” test arrays for several years to construct the large scale windfarms in deeper waters. Shortening the calendar time to reach several GWs in operation will win.

Crane Vessels, Alternative for Floating Wind?
Presenter: Torben van Wyk, Maersk Supply Service Today, installations and maintenance on bottom-fixed windfarms are made possible by jack-ups and large floating crane vessels. But what will we do on commercial floating wind farms? Will the investment and impact on crane vessel market when entering the floating wind market, both during development and operational phases? Operation & Maintenance is a challenge even for developments of commercial floating windfarms. Why industry leaders need to work together and innovate new crane technologies.

Supplier Chain Management to De-Risk Project Execution
Presenter: Kevin Thompson, Ramboll Group The presentation will address the challenges of ensuring cost and schedule certainty when executing floating wind projects offshore USA. This will be a requirement for attracting investment and securing commercial success of future developments, yet there remains a disconnect between O&M technologies and the supply chain capabilities to set, handle and install such equipment at scale. The presentation will address the key decisions and highlights the challenges floating developers will face and managing cost and schedule certainty risks. Attendees will gain an appreciation of the potential supply chain limitations on the East and West Coasts of the USA for future floating offshore wind developments and high-level strategies to overcome the risks these limitations pose.

Panel Discussion
Luncheon (in exhibition hall) Sponsored by Huawai

Floating Wind - Marine O&M Considerations
Presenter: Bo Lindell, Shell Discuss the unique challenges facing the renewable and marine industries as it relates to the Operations & Maintenance (O&M) of floating wind farms. Floating wind represents one of the greatest areas for growth in offshore marine sector within the past 10 years. Developers, their Supporting OEMs, and Vessel Owners (Operators) will require new vessels, new supporting technologies and new operational paradigms to ensure they can deliver time and commercial promises.

WindFloat®: Upgrades and Associated Installation Strategies Towards Commercialization
Presenter: Marcel Winkler, Principle Power Implementation of lessons learnt from experience on the delivered floating windfarm projects of WindFloat India in Atlantic and Portugal, and Kincardine in Scotland and EFW project under way in France in the 3rd generation of WindFloat design. The presentation will provide insight into the implementation of Principle Power’s design, fabrication and installation experience with the delivered projects and project in execution will support solutions in the delivery of large commercial scale projects that will meet targets in terms of cost effectiveness, logistics and local content creation.

An Innovative Approach to Install Offshore Wind farm in an Effective and Safe Way
Presenter: Robert Thompson, Huisman The Windfarm Installation (VIVI), an integrated solution for large floating (and fixed) offshore windfarms – tackling installation time, costs and emissions.

Panel Discussion
2:45 - 3:10
Tea Break (in exhibition hall)

Operations & O&M Scenarios
Session Chairs: Joie Jardine, Shell, And Sabak, Genova, Techno Energies

Comparison of Different O&M Scenarios for Large Floating Wind Farm Arrays
Presenter: Debra Mathis, Ramboll We will review a few different O&M models for offshore floating wind farms. We will look at the operational practices of the demonstration project that shall meet targets in terms of cost effectiveness, logistics and local content creation. The presentation will provide insight into the implementation of Principle Power’s design, fabrication and installation experience with the delivered projects and project in execution will support solutions in the delivery of large commercial scale projects that will meet targets in terms of cost effectiveness, logistics and local content creation.

A Cost Effective O&M Strategy for Floating Wind Farms
Presenter: Jonathan Bouquot, Aerales Veritas The presentation will detail the global approach we have developed to manage the Aspect Structural Integrity of Offshore Wind Farms (fixed and floating), making use of new technologies to enhance the efficiency and cost of the inspection and maintenance strategies. The presentation will give food for thought on how the ten service phase could be approached in terms of Structural Integrity Management: notice of risk-based inspections, Structural Health Monitoring, Remote Inspection, Technics and Robotics. The survey will be delivered.

Operations & O&M: The WindFloat® Way
Presenter: Clara de Munte Santos, Principle Power The presentation will cover topics of interest for the offshore industry. The two aspects of the WindFloat® operation model that will be covered are: the WindFloat® operation model and the WindFloat® operation model. The presentation will cover the topics of interest for the offshore industry. The two aspects of the WindFloat® operation model that will be covered are: the WindFloat® operation model and the WindFloat® operation model.
**Creating New Horizons**

Boskalis creates new horizons for all its stakeholders. As a leading global dredging contractor and marine services provider, we offer a unique combination of experts, vessels, and services. Within the offshore wind industry, Boskalis has a successful track record in providing services throughout every phase of an offshore wind project.

Using this experience, combined with our transport and installation solutions, we have the ability to execute and optimize the logistics and installation for floating wind farms. In this relatively new market, we already established a track record for the transport of floating foundations and the transport and installation of complete floating wind turbines.

More information? offshorewindsolutions.boskalis.com
Within Q FWE our team assembles over 100-years of experience and professional networks focused to provide economic, technical and commercial Clarity, Insight and Vision. Backed by twenty-years of expertise in data analytics, analysis and the development of offshore and deepwater projects provides us with the means and the network to offer critical insight on the Offshore Wind industry going forward. Q FWE has created a dedicated offshore wind projects database covering both fixed and floating solutions. Our proprietary Q Vision tool tracks and monitors projects and their supply chain from early planning to commissioning and O&M. This dynamic tool provides a continuous feed of strategic insight, tactical information and robust data analytics throughout each stage of the supply chain.

Q Vision is our proprietary Business Analytics’ tool delivering real-time data and analysis giving you a competitive advantage to win Fixed and Floating Offshore Wind Energy projects. This Microsoft Power BI tool allows for dynamic analysis of relationships across markets and technologies; robust benchmarking as well as an enhanced understanding of project economics including LCoE. Q Vision offers 15 different “lenses”, each offering a unique perspective on this fast growing industry. Once parameters have been set, the user can view a data table of all projects contained in the results through the Full Project Data lens.

Q FWE's Q Vision system tracks over 200 data fields for all floating wind energy projects in all stages of development bottom-fixed projects. This dynamic tool provides a continuous feed of strategic insight, tactical information and robust data analytics throughout each stage of the supply chain.

Q Vision: CapEx LCoE - your eyes on the market

This annual access tool allows the user to investigate numerous market facets of the Offshore Wind market. The Q Vision CapEx module offers 15 distinct lenses covering the value of supply chain segments Floater, Turbine, Moorings, Cabling and Installation. The different lenses focus on developer, designer and regional differences for the future total spend—Total Addressable Market, as well as numerous tools to analyze LCoE. Includes backing data in MS Excel.

Q Vision: Supply Chain Opportunities - get ahead of the curve

Easy access to the world’s most accurate data on the Offshore Wind market Supply Chain Opportunities, contract sequencing and open awards.

The Q Vision subscription service is a dynamic platform in Microsoft Power BI enabling our clients efficient mining of our comprehensive project data into dynamic charts which provides quick actionable insights supported with full project details. These analytical tools are essential for forecasting and very useful for getting a quick overview of the potential future market for Turbines, Substructures, Moorings, Subsea Power Cables, Installation services and ultimately O&M activities.

Q Vision: Offshore Turbine Locator - the helicopter view

Easy access to the world’s most accurate data on the Offshore Wind market. Quest is currently tracking 400+ projects encompassing 18,000+ individual turbines (of these 119 are floating projects with over 2,500 turbines). Included are projects currently under development, planned, as well as possible.

The Offshore Turbine Locator tracks both Bottom-Fixed and Floating Offshore Wind Projects by total MW bubble size on a world map, cumulative total MW to 2033 and beyond, and cumulative Total MW by country. Each page has filters for Status, Region, Fixed or Floating, Development Type and Startup Year range. Includes backing data in tabular format on Page 9 and an MS Excel download.
Technip Energies is a leading engineering and technology company for the energy transition. We offer leadership positions in LNG, particularly floating LNG, plus hydrogen and ethylene as well as growing market positions in sustainable chemistry, CO₂ management and carbon-free solutions.

In offshore floating wind, we provide competitive and safe solutions ranging from robust floaters to wind farm architecture. Our design-to-operations combined with our leading mooring technologies make us a reliable partner for your projects delivery.

Through our extensive and advanced portfolio of offshore technologies, we bring our clients’ innovative projects to life while accelerating the energy transition for a better tomorrow.

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Vryhof is a trusted partner to many of the offshore industry’s leading companies, delivering innovative and customer-focused anchoring and mooring solutions. We are committed to the highest standards of safety and integrity and are proud of our legacy and impeccable track record, delivering value in everything we do. Our 50-year history of setting standards and leading the way in the offshore sector makes us unique in terms of our expertise and breadth of services. In recent years, Vryhof and its installation partners have taken full scope permanent mooring projects for offshore oil & gas and floating offshore renewables by offering innovative and cost-effective solutions including design, procurement, installation, life extension and decommissioning. Vryhof consists of Deep Sea Mooring and Vryhof Anchors.

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INTERNATIONALLY RECOGNIZED LEADER IN FLOATING OFFSHORE WIND