

A decorative graphic on the left side of the cover, consisting of overlapping circular segments in green, light blue, and red.

2021
Volume 3

Global Floating Wind

Market and Forecast Report
2021 - 2034

SAMPLE BROCHURE

Foreword

Renewables are considered one of the primary fuels to satisfy the world's growing energy demand and wind is a vital component. Many countries are looking to offshore as a more beneficial effective environment to harvest larger volumes of wind energy. Historically, offshore wind farms are primarily developed with 'Bottom-fixed' structures in relatively shallow water, near-to-shore. As 80% of the globe's strongest wind resources lie in waters beyond the reach of Bottom-fixed (~60m), Floating wind technology is increasingly accepted as 'the future' of offshore wind.

Over the long-term, Floating wind is projected to become a critical component of the energy mix. The pace and rhythm of this nascent market is profound, with upward projections of potentially 180 GW of installed capacity by 2050, comprising nearly 13,000 floating turbine units. As Floating wind is truly a global opportunity ramping-up for commercialization across six to ten distinct markets, Quest Floating Wind Energy (Q FWE) along with our many collaborators champion Floating wind to deliver its ultimate potential.

Quest Floating Wind Energy is passionate about the ultimate potential for Floating wind and the force of influence it will demonstrate over time across the renewables landscape. This report entitled **2021 Global Floating Wind Energy Market and Forecast Report, Volume 3**, focuses exclusively on the Floating wind segment within the global offshore wind market. Please note that Q FWE also maintains comprehensive market intelligence, project data and reports on the global offshore Bottom-fixed wind market, so we are your GO TO source for continual, in-depth analysis on offshore wind.

I would like to extend my sincere thanks and appreciation to the entire Q FWE team for their collective work in creating our proprietary CapEx/LCoE Cost Model and Q Vision database architecture which drives the majority of this report's Quantitative and Qualitative market analysis.

We look forward to exploring 'the Floating' journey with you!



February 2021

Sugar Land, TX USA

This comprehensive 115-page market report dedicated to Floating wind illustrates the tremendous market opportunities globally across the supply chain over the next ~15 years including the most active developers, potential market size, pertinent project activity details and other vital metrics illustrated by region and construction timeline.

Report Findings

- Over the long-term, Floating wind is projected to become a critical component of the energy mix. The pace and rhythm of this nascent market is profound, with upward projections of potentially 180 GW of installed capacity by 2050, comprising nearly 13,000 floating turbine units. Floating wind is a global opportunity ramping-up for commercialization across six to ten distinct markets and Quest Floating Wind Energy (Q FWE) fully expects Floating to be the largest growth component over the long-term possibly outpacing Bottom-fixed into the future. In 2023 to 2024, the accelerated pace of contract awards are projected to surge to nearly \$32 billion followed by more than \$16 billion in orders over 2025 to 2026.
- Floating wind's early years were based on pioneering technology that was recognized by only a few 'developers', mostly of a utility background. The initial projects to prove the technology, so called 'Demonstrators', were undertaken with support of such early adapters. The maturation stage that followed saw entry of large 'offshore energy' companies and large 'traditional' onshore and offshore wind developers with long histories in project development - a process that very much continues.
- The offshore Floating wind industry has come a very long way in just a few years delivering new floater designs, scaled Demonstrators, Pre-Commercial projects and new players. Floating wind is a young industry with 15 units currently online representing nine projects and a decade of work. Equinor has designed and developed six of these while Aker Offshore Wind / Principle Power have deployed four, Ideol two and one design each for IHI, Mitsui and Toda, installed off Japan. The wind industry continues to deliver value to enhance wind's cost competitiveness and efficiency with steady improvements in the Levelized Cost of Electricity (LCoE). Since 2016, offshore wind particularly has pushed LCoE reductions well in excess of 60%..
- We observe that moving forward, Developers are mainly de-coupled from technology and now start each early development project with an agnostic-based technology approach; this results in each company working with a variety of Floater designs and designers as illustrated in our reports' section 5.0 featuring an infographic of "Developers' Floater Technology DNA".
- Over the forecast period analyzing contract awards to 2030 and beyond, Quest has identified projects representing more than 26.2 GW of Floating wind scheduled for commissioning worldwide to 2035, a number that will grow exponentially following the addition of newly sanctioned projects and accelerated commercialization.
- Five super-sized Floating offshore wind projects currently 'Under development', each ranging between \$800 million and \$2 billion in CapEx, represent a growing share (7%) of the \$96 billion total addressable market of presently identified Under Development, Planned and Possible projects.
- As illustrated in the report's figures, the offshore Floating wind market to 2035 is sizeable representing \$96 billion in CapEx for forecast wind power capacity additions of 26,207 MW to be powered by 2,656 Floating Turbine Units (FTUs).
- Worldwide spending by supply chain segment over the forecast period consist of \$36.4 billion for Turbines, \$22.5 billion for Substructures, \$14.7 billion for Mooring Systems, \$11.6 billion for Subsea Power Cables and over \$2 billion in Installation activities.
- Current tenders for commercial-scale Floating offshore wind farms, in a number of key regions, are accelerating the potential for rapid growth. As an example, the ongoing ScotWind seabed licensing round will include a carve-out for floating projects in Scottish waters. ScotWind awards are expected to be announced during the first half of 2021. It is estimated that 10 new sites will eventually be chosen for wind farm developments.

Report Findings - Continued

- The Floating opportunity pipeline continues to gain momentum. A year-over-year comparison (Jan. 2021 vs. Jan. 2020) to our Floating wind outlook reveals Double Digit increases with the number of Projects up 61% while the total number of Units gaining by 25% and Total MW rising 14%.
- Likewise, CapEx gains of nearly \$33 billion new projects surging in Asia Pacific and Northern Europe with spending increases of \$19 billion and \$17 billion, respectively. In Asia, there are nearly 6 GW of projects earmarked for South Korea alone led by these Developers: TOTAL Energies, Ocean Winds/Aker Offshore Wind, Equinor, MOTIE and Shell/CoensHexicon.
- According to Quest FWE's proprietary Q Vision database, near-to-medium-term projects account for 1,000 cumulative Floating units with about 750 projected to be online between 2025-2026; CapEx is led by Asia/Pacific with \$25.2 billion, Northern Europe with \$11.3 billion, USA-Pacific with \$6.2 billion, Southern Europe with \$2.4 billion and USA-Atlantic \$300 million.

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Executive Summary

Our accelerated Energy Transition is being led from more aggressive stated Net Zero carbon emissions goals coupled with more influential economic and political factors along with shifts in societal preferences. This is matched by a corresponding increase in the role of renewable energy as the world increasingly electrifies. Environmental, Social and Governance (ESG) are drivers influencing our energy transition. In line with that, 2020 has been the year of aggressive commitments to Net Zero carbon emissions by 2050 for a large swath of companies. This group has been led by Europe's largest integrated oil companies —Shell, BP, TOTAL Energies and Equinor. This group remains at the forefront of their peers, and they are transparent about transitioning to cleaner energy in the future.

What does the energy transition mean to us?

- The scale of this shift varies significantly across the three scenarios (Rapid, Net Zero and Business-as-usual) outlined in BP's Energy Outlook - 2020 edition. In 'Rapid' (according to report), renewable energy sees increasing share towards 50% while the share of hydrocarbons in primary energy are shown declining to around 40% by 2050.
- The global energy transition to a lower carbon footprint presents many opportunities across industries to tackle new challenges through innovation and applied technology. Renewables are set to penetrate the global energy system more rapidly compared to any other fuel in history.
- Renewables led by wind, offshore wind and solar are growing exponentially and delivering bigger capacities and cheaper economic solutions.
- Cheap renewable energy and batteries are remaking electricity systems globally and will take a growing share of power generation from fossil fuels which could reach parity well before 2050. Modern natural gas power plants can provide the flexibility needed to integrate more renewables into the grid.
- Wind energy is a growing form of cheaper energy supply in many markets. According to the Global Wind Energy Council, wind capacity installations continue to outpace new fossil fuel capacity in multiple mature and emerging markets. In 2020, there were 5.2 GW of newly added global capacity additions for offshore wind (Bottom-fixed and Floating) bringing the total installed offshore wind capacity in operation to 32.5 GW.



Executive Summary - Continued

- Pundits' projections for onshore wind indicate over 50 GW of installed wind capacity on an annual basis in addition to more than 40 GW of offshore wind capacity additions each year in the Sustainable Development Scenario. Meanwhile, Quest Floating Wind Energy's rolling forecast of 400 presently identified projects representing more than 79,295 MW of offshore wind capacity - a number that will grow exponentially as newly sanctioned projects are added to the forecast over time.
- The top five offshore wind markets delivered over 30 GW of new capacity in 2020 led by the UK (10.4 GW), Germany (7.7 GW), China (7.1 GW), The Netherlands (2.6 GW) and Belgium (2.3 GW).
- South Korea's Green New Deal, a pledge to invest billions in renewable energy and electric vehicles and phasing out coal by 2030, will drive the government's plans to make South Korea "one of the world's top five offshore wind energy powerhouses by 2030." Of the 11.1 GW forecast for Asia Pacific by Quest Floating Wind Energy, there are nearly 6 GW of Floating wind projects earmarked for South Korea alone led by these Developers: TOTAL Energies, Ocean Winds/Aker Offshore Wind, Equinor, MOTIE and Shell/Coens/Hexicon.
- The offshore Floating wind industry was in its infancy only six years ago, an 'inner circle' that met more naysayers than believers. This industry has come a very long way in just a few years delivering new floater designs, scaled Demonstrators, Pre-Commercial projects and new players. Floating wind is a young industry with 15 units currently online representing nine projects and a decade of work. Equinor has designed and developed six of these while Aker Offshore Wind / Principle Power have deployed four, Ideol two and one design each for IHI, Mitsui and Toda, installed off Japan.
- The wind industry continues to deliver value to enhance wind's cost competitiveness and efficiency with steady improvements in the Levelized Cost of Electricity (LCoE). Since 2016, offshore wind particularly has pushed LCoE reductions well in excess of 60%.

- On the Developer front, the last two years have seen accelerated initiatives by new companies, joint ventures and other collaborations. These evolving players include experienced utilities such as Iberdrola and EnBW Energie plus leading developers such as Orsted, Ocean Winds and Aker Offshore Wind. Increasingly, legacy oil and gas companies (Equinor, Shell, TOTAL Energies and BP) are rapidly entering the sector with vast experience in long-term capital-intensive projects and impeccable track records in risk management, project execution and complex logistics.

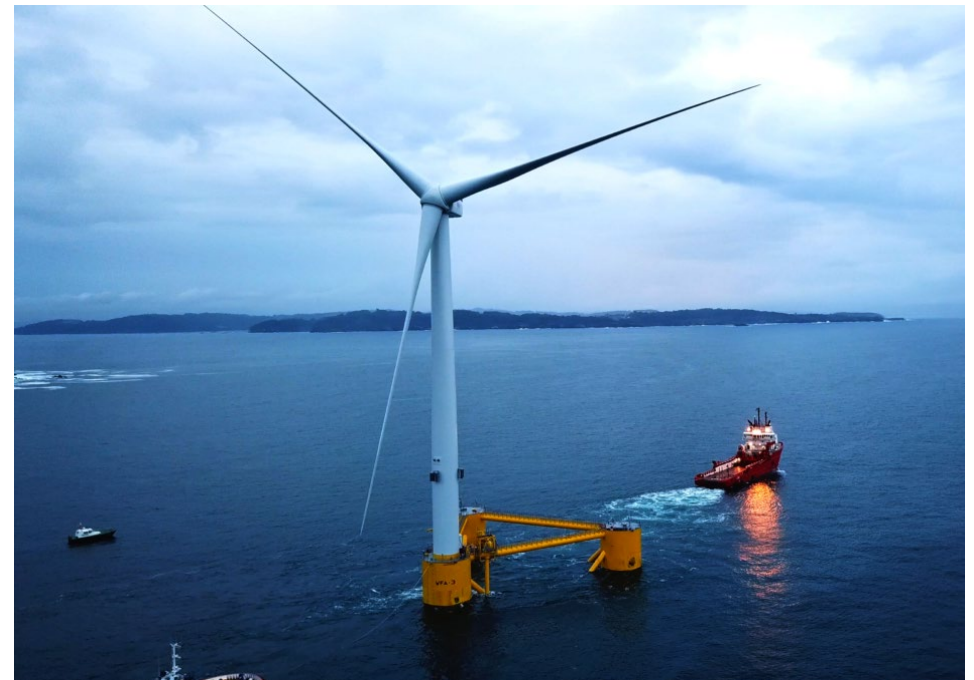


Image Source: PPI

Executive Summary - Continued

- As we approach our publishing deadline a couple of notable developments. First, BP advanced their offshore wind growth strategy with 3 GW of advantaged leases in the Irish Sea. BP and partner EnBW were selected as preferred bidder for two highly-advantaged 60-year leases in UK's first offshore wind leasing round in a decade. These leases are 'Advantaged' leases due to distance from shore, lower grid cost, synergies from scale, and faster cycle time.
- Second, BW Offshore announced its clean energy plans through a potential strategic investment in Floating designer Ideol as they pursue their long-term clean energy plans and high ambition for investing in Floating offshore wind. Sources report that BW Offshore acquired a 50% stake in Ideol for \$72 million and the new entity will be known as BW Ideol.
- France is backing 750 MW of floating wind projects in a dedicated tender slated for 2021-2022. Norway recently announced the opening of two areas for offshore wind, offering the possibility of 4,500 MW. In Asia-Pacific, South Korea has demonstrated leading initiatives in floating wind, and neighboring Japan will imminently take far-reaching steps toward large-scale commercial developments. Longer-term, the U.S. West Coast will play a large role in Floating wind, with offshore lease auctions from BOEM believed to be imminent. State incentives increasingly are a driver for Floating offshore wind. Of note, New York's ambitious target to reach 100% renewable energy generation by 2030. While California's efforts to generate 33% of its electricity from solar, wind and other renewable energy was met in 2019.
- In Asia Pacific, Taiwan and South Korea are accelerating their Floating activity levels. Asia Pacific's total addressable market to 2035 stands at \$42 billion in CapEx which denotes a 44% share of the world total. Out of 11,108 MW forecast, the bulk lie in South Korea, followed by Japan (25%), Taiwan (18%) and Saudi Arabia (5%) Although China in new to Floating Wind, we see several 'Demonstrator' projects under way to be delivered in 2022-2023.

- Offshore wind energy is quickly becoming a relevant adjacent industrial sector to offshore oil and gas for numerous supply chain companies. Their advanced engineering capabilities, project management skills and technology solutions will be required to meet rapid demand growth over the two decades and beyond. As spending on renewable energy, particularly offshore wind accelerates, Floating projects will make up a growing share of overall activity.



Image Source: Equinor

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1.

Q FWEconomics – Macro Market Perspective

in a Global Context

Sustainability and ESG Are Permanent Fixtures

"The Technologies required to reach net zero exist today – the challenge is to use them at pace and scale, and I remain optimistic.."

- BP's CEO Bernard Looney

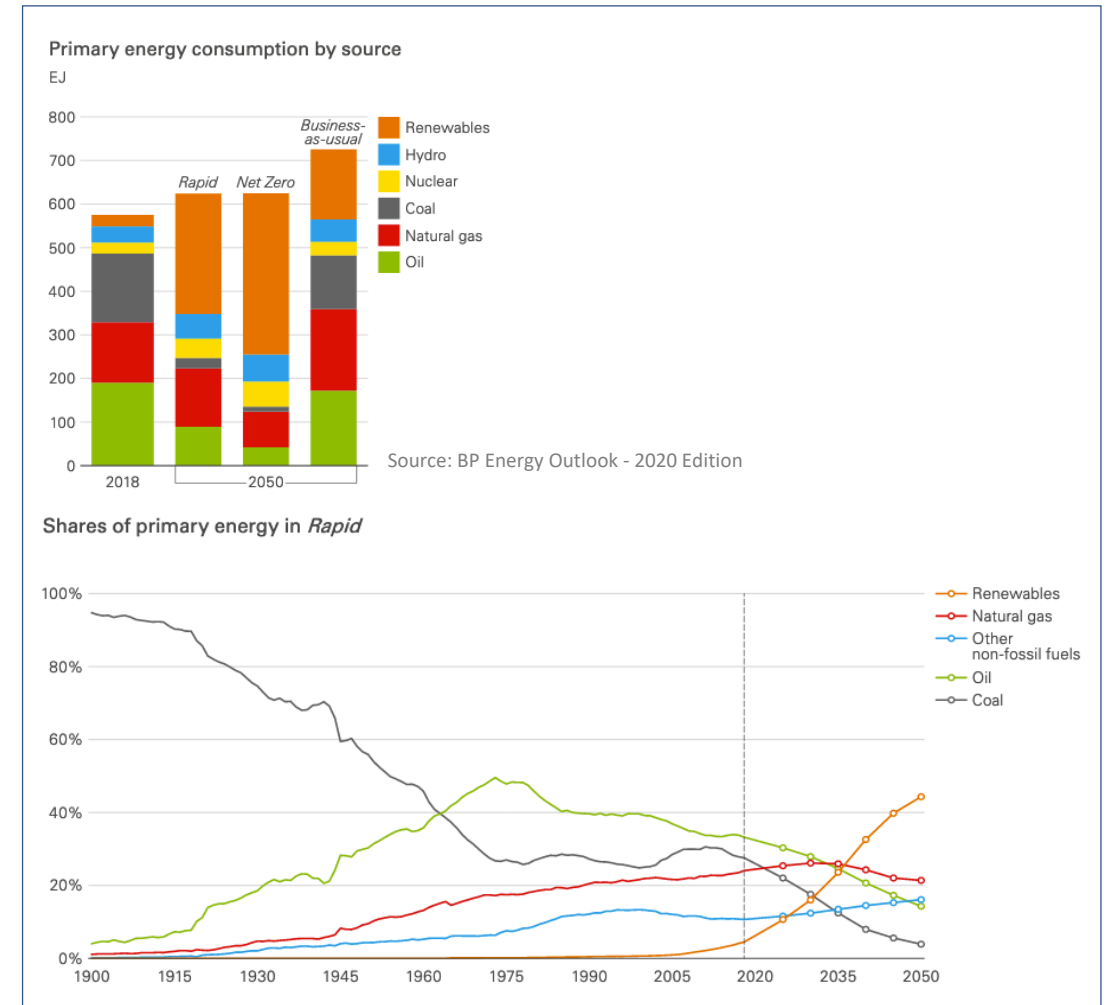
2050
Equinor Sets Goal for 50% Reduction in Net Carbon Intensity
BP Sets Net Zero CO₂ Target
Bank of America Achieves Carbon Neutrality @ Jan. 2020
Shell Sets Net Zero Emissions Goal
TOTAL Adopts Net Zero Climate Ambition

amazon



Global Context, The Energy Transition

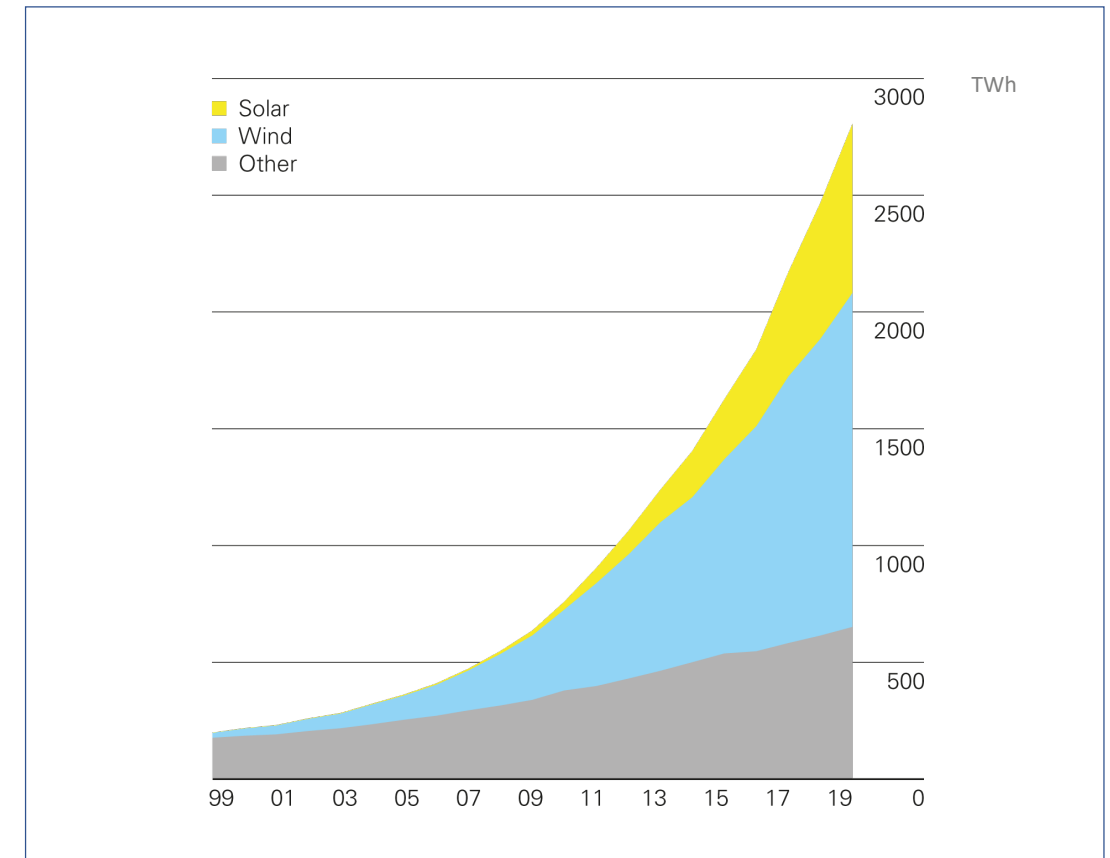
- Over the Outlook period, BP's 2020 Energy Outlook Report analyzes three scenarios which explore different pathways for the global energy system to 2050; these are BAU-Business as Usual, Net Zero and Rapid Transit.
- Primary energy demand increases by around 10% in Rapid and Net Zero over the forecast and by around 25% in BAU. Interestingly, a noted decline in the share of hydrocarbons (coal, oil and natural gas) applies in all three scenarios.
- Our accelerated Energy Transition is being led from more aggressive stated Net Zero carbon emissions goals coupled with more influential economic and political factors along with shifts in societal preferences.
- This is matched by a corresponding increase in the role of renewable energy as the world increasingly electrifies. The scale of this shift varies significantly across the three scenarios; however, 'Rapid' sees the share of renewable energy increasing towards 50% while the share of hydrocarbons in primary energy declining to around 40% by 2050.



Wind Drives Growth in Power Generation

Renewable Energy Generation by Source - Terawatt-hours

- Wind has grown to represent over 50% of renewables generation outpacing solar and other renewables since ~2011.
- In 2019, Renewable energy consumption led by wind and solar power was the highest increase on record in energy terms (3.2EJ) and the largest for any fuel.
- Over the next decade, offshore wind (Bottom-fixed and Floating) will become one of the most competitive sources of electricity commensurate with fossil fuels, solar PV and onshore wind.
- Offshore wind provides higher capacity factors than other renewables and this is even more pronounced in Floating wind where the resource is more prolific.

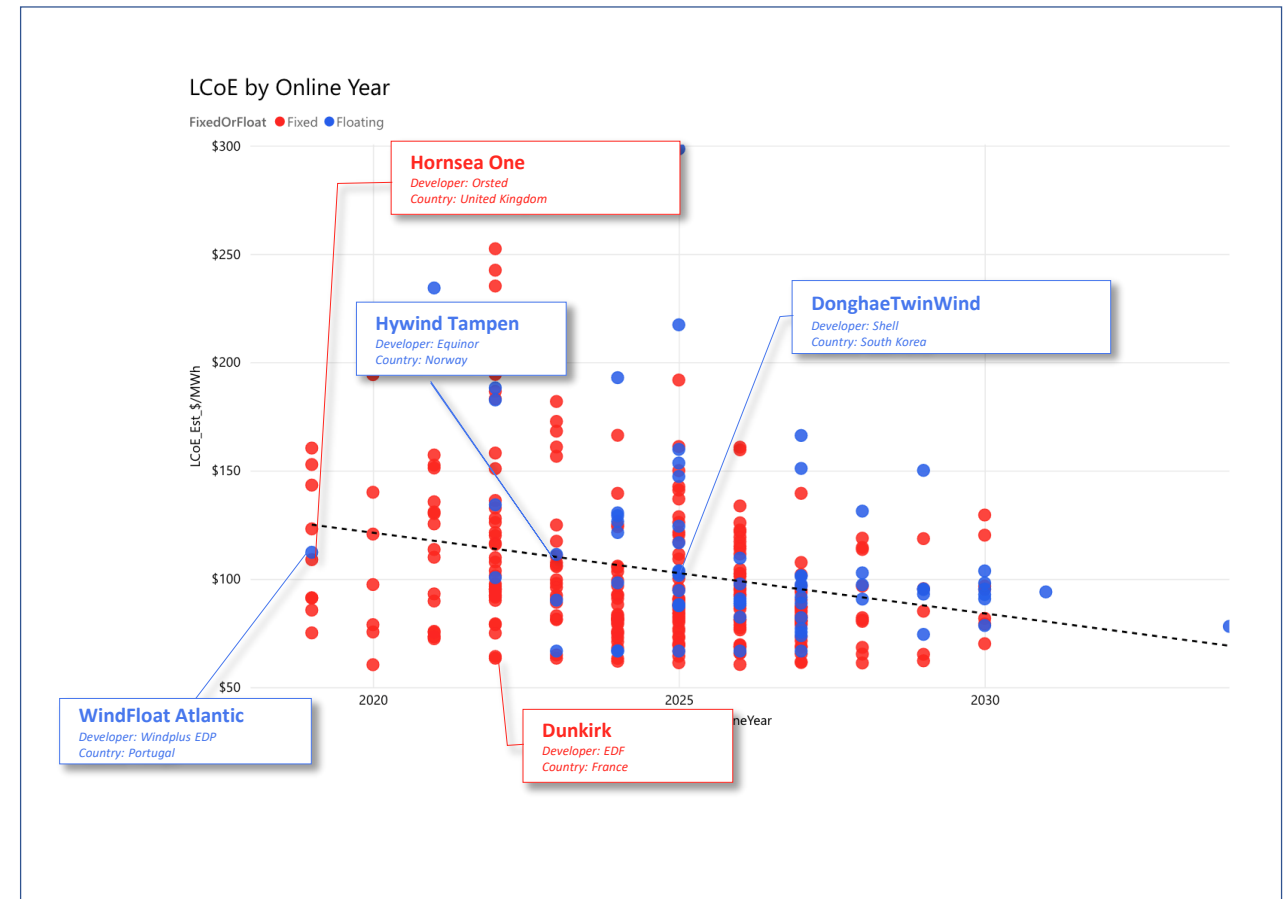


Source: BP Statistical Review of World Energy 2020 – 69th edition

Floating Wind's Levelized Cost of Energy (LCoE) in \$/MWh

Costs are Dropping Significantly

- This chart illustrates high-level results from Quest's 'LCoE Modeling' rendered as a scatter plot chart for 279 Fixed and 100 Floating wind Projects. This figure demonstrates modeled values allowing comparisons between projects already built and those Planned in the future. As shown, when comparing the Levelized Cost of energy between Fixed and Floating wind projects by Online Year, it's clear to see that costs are falling rapidly, both in Fixed and Floating. Apart from some outliers, we clearly recognize this trend.
- In Bottom-fixed projects (the-red-dots), looking at Hornsea One (2019) #174 units (1,218 MW) reveals an LCoE of \$108.9 MW/h while EDF's Dunkirk project off France (2025) comprising #50 units (600 MW) is one of the lowest cost Fixed wind projects settling at an LCoE of \$66.6, almost \$43 lower. As a benchmark in 2019, Europe's Avg. LCoE is \$69 MWh which is less than half the cost as compared to 2012.
- In Floating (the-blue-dots), we see two projects in Europe, WindFloat Atlantic pre-Commercial, #3 units (25 MW) at an LCoE of \$112.3 and Donghae TwinWind, #20 units (200 MW) at an LCoE of \$103.4, both which are linear with the regression analysis trendline.



Source: Q Vision CapEx/LCoE

2.

Float's Long-term Opportunity to ~2050e

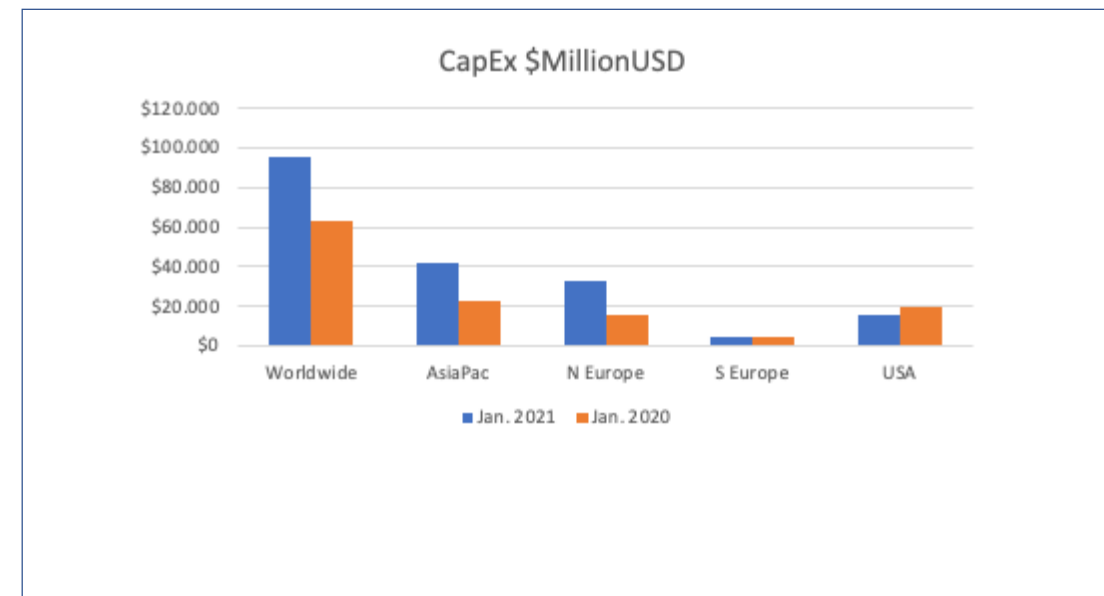
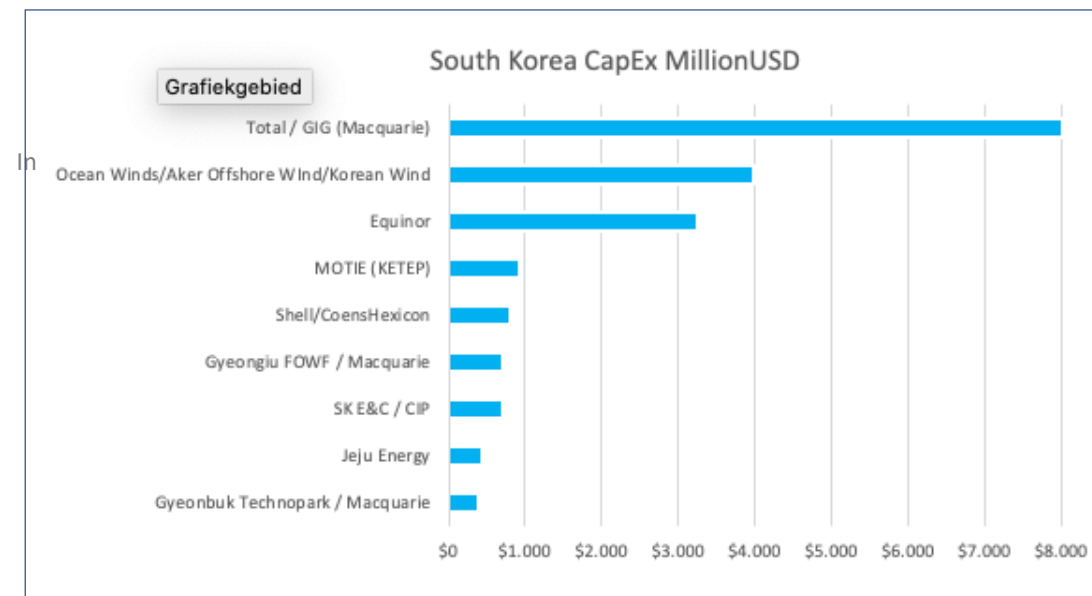
by Total MW, Status and No. of Units

The Floating Opportunity Pipeline, Momentum Is Gaining

Jan. 2021 vs. Jan. 2020

- A year-over-year comparison to the global opportunity pipeline sees gains of nearly \$33 billion in CapEx with new Floating Wind projects surging in Asia Pacific and Northern Europe with CapEx gains of \$19 billion and \$17 billion, respectively. Shown Right, Asia Pac and N. Europe see a surge in new Floating Wind projects gaining \$19 billion and \$17 billion, respectively.

Developer/Owners as illustrated below. We'll highlight important European activity in the report's regional section.



Charts, Tables and Graphs are sourced from our Q Vision Product Suite.

3.

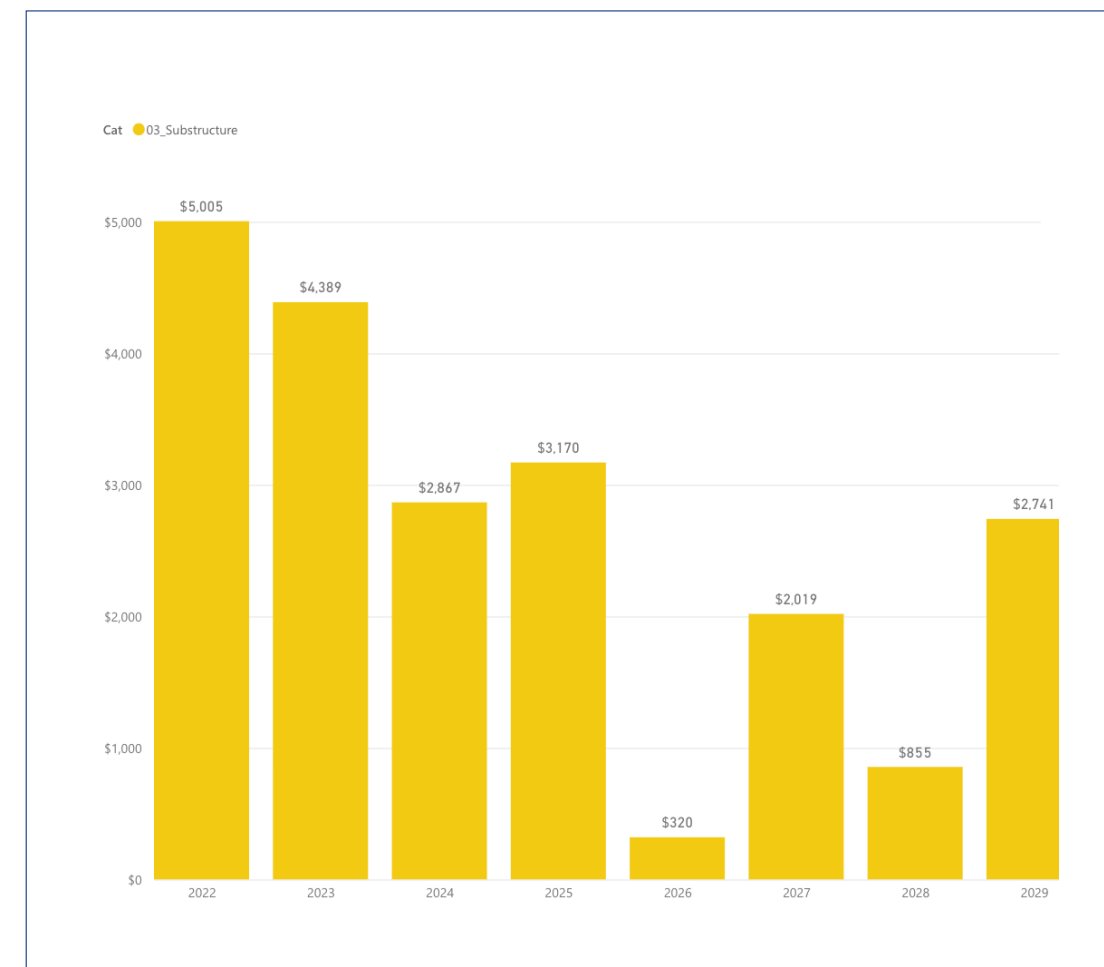
Contract Award Opportunities 2020 to 2035e

by Supply Chain Segment and Award Year

Floating Fabrication is a \$21 Billion Opportunity

Contract Awards to 2029e

- As illustrated, projections point to large fabrication orders for Floating substructure from 2022 to 2025 representing potential contracts exceeding \$15 billion.
- Nine percent of these, \$1.9 billion, denote projects Under development, twenty percent are Planned projects, \$4.2 billion, and the remainder represent Possible projects totaling \$15 billion in potential contracts.

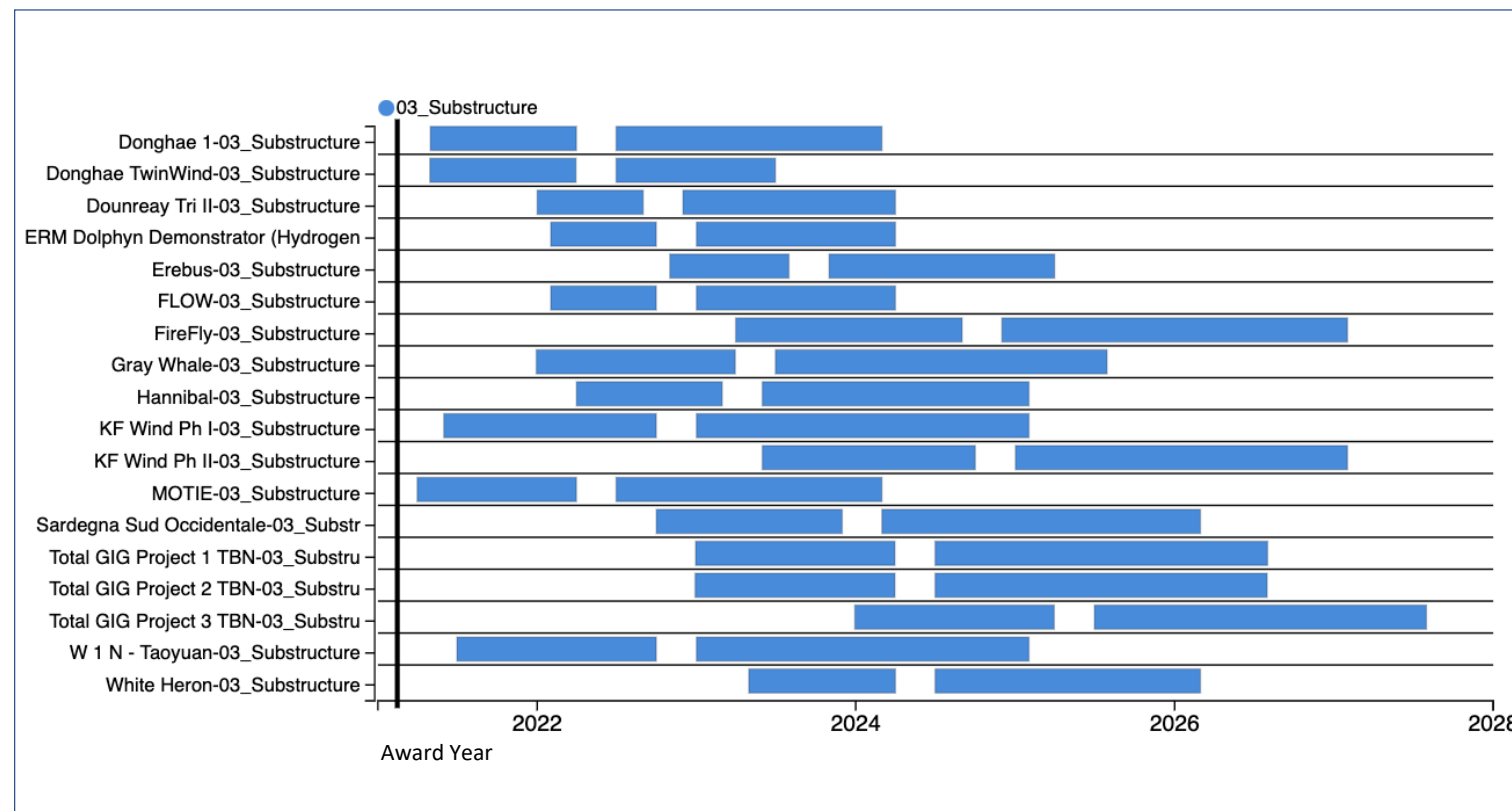


Source: Vision

Floating Fabrication Contracts in Northern Europe and AsiaPac

Likely Project Awards to 2024e

- Highlighted Right starting from the top, are the nine most likely project awards to 2024e in Asia Pacific and Northern Europe for Floating Substructure Fabrication.
- Shown Left is the first bar of the series delineating the estimated contract award horizon while the second bar shown Right illustrates the projected start/end date of the construction window for that supply chain segment.



Source: QVision

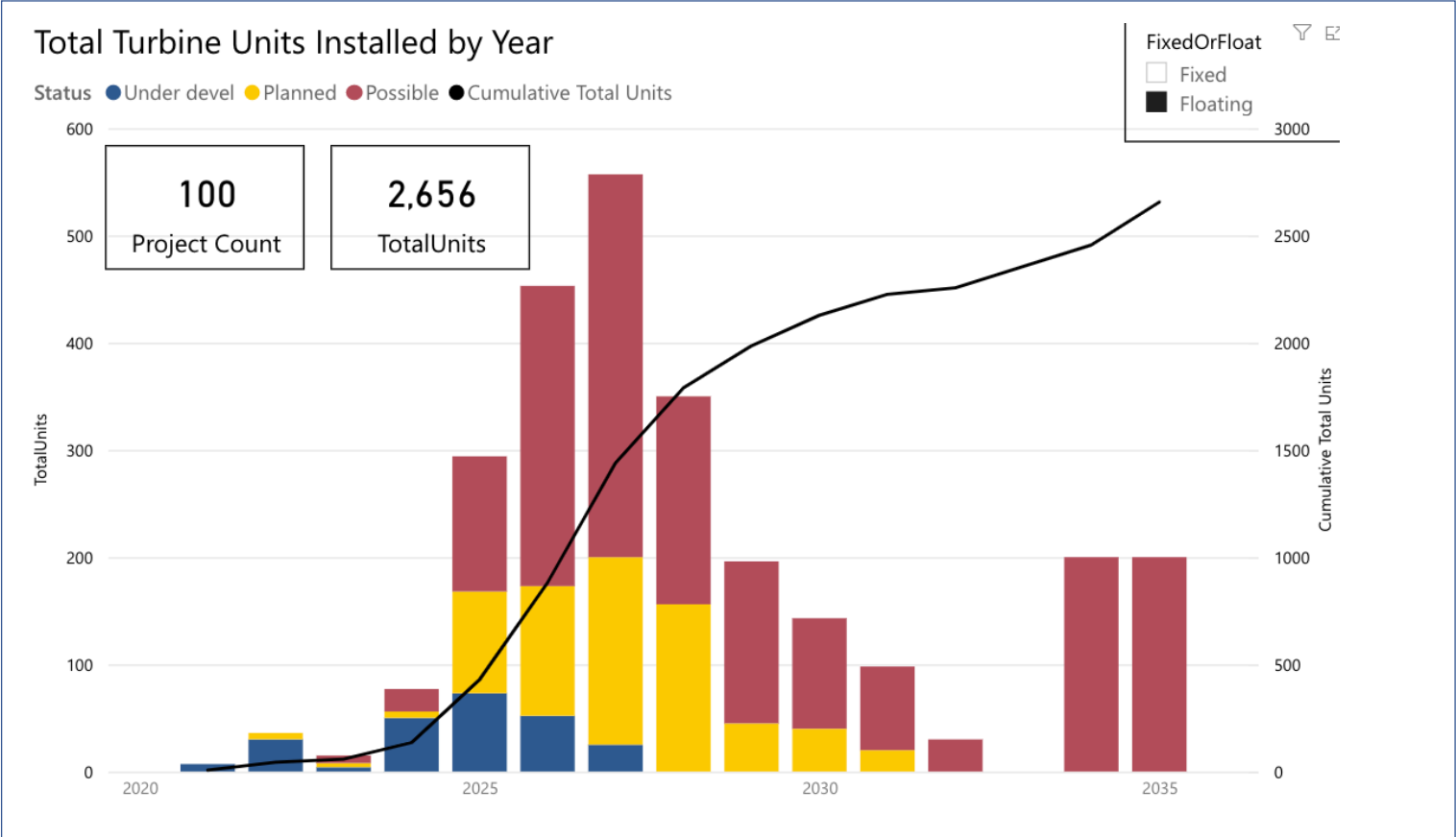
4.

Floating Overview, Capacity Additions and CapEX

by Total MW, Status and No. of Units

Worldwide Forecast by Status and No. of Units

- Currently ‘Under development’ projects denote \$9.4 billion in CapEx. Of these, five super-sized Floating offshore wind projects, each ranging between \$800 million and \$2 billion in CapEx, represent a growing share (7%) of the presently identified total project universe.
- Near-to-medium-term projects account for 1,000 cumulative Floating units with about 750 projected to be online between 2025-2026; CapEx is led by Asia/Pacific with \$25.2 billion, Northern Europe with \$11.3 billion, USA-Pacific with \$6.2 billion, Southern Europe with \$2.4 billion and USA-Atlantic \$300 million.
- Over this period, \$14.9 billion will be allocated to turbines, \$10.7 billion to substructures, \$5.5 billion for cabling, \$6.5 billion in mooring systems, and \$900 million on installation.



Source: QVision

5.

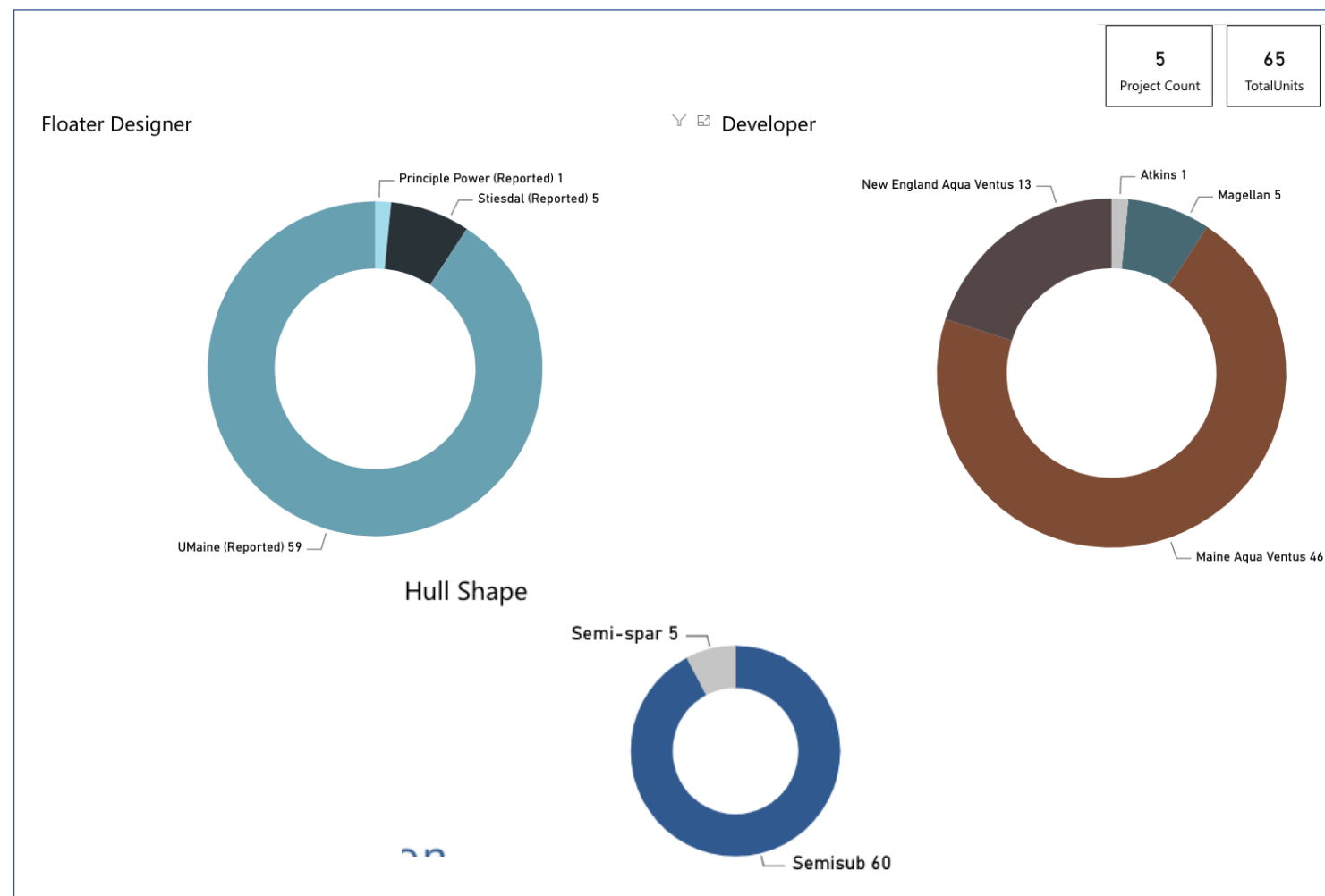
Floating Overview, Capacity Additions and CapEX

by Project and No. of Units

Floater Designers – USA Atlantic Activity

No. of FTUs by Designer, Developer & Hull Shape | Under devel, Planned & Possible

- Offshore the USA-Atlantic, Q FWE is tracking five potential projects comprising 65 Floating Turbine Units (FTUs). The majority of these hull shapes (60) are projected to be Semisub while at present five are Semi-spar.
- Active Developers shown far Right are Maine Aqua Ventus with 46 units, New England Aqua Ventus with 13 units, 5 units shown for Magellan and one unit for Atkins.
- Of these ‘Reported’ Floater Designer designations, 59 units are shown for University of Maine, 5 units are Stiesdal, one unit is Principal Power’s WindFloat.



6.

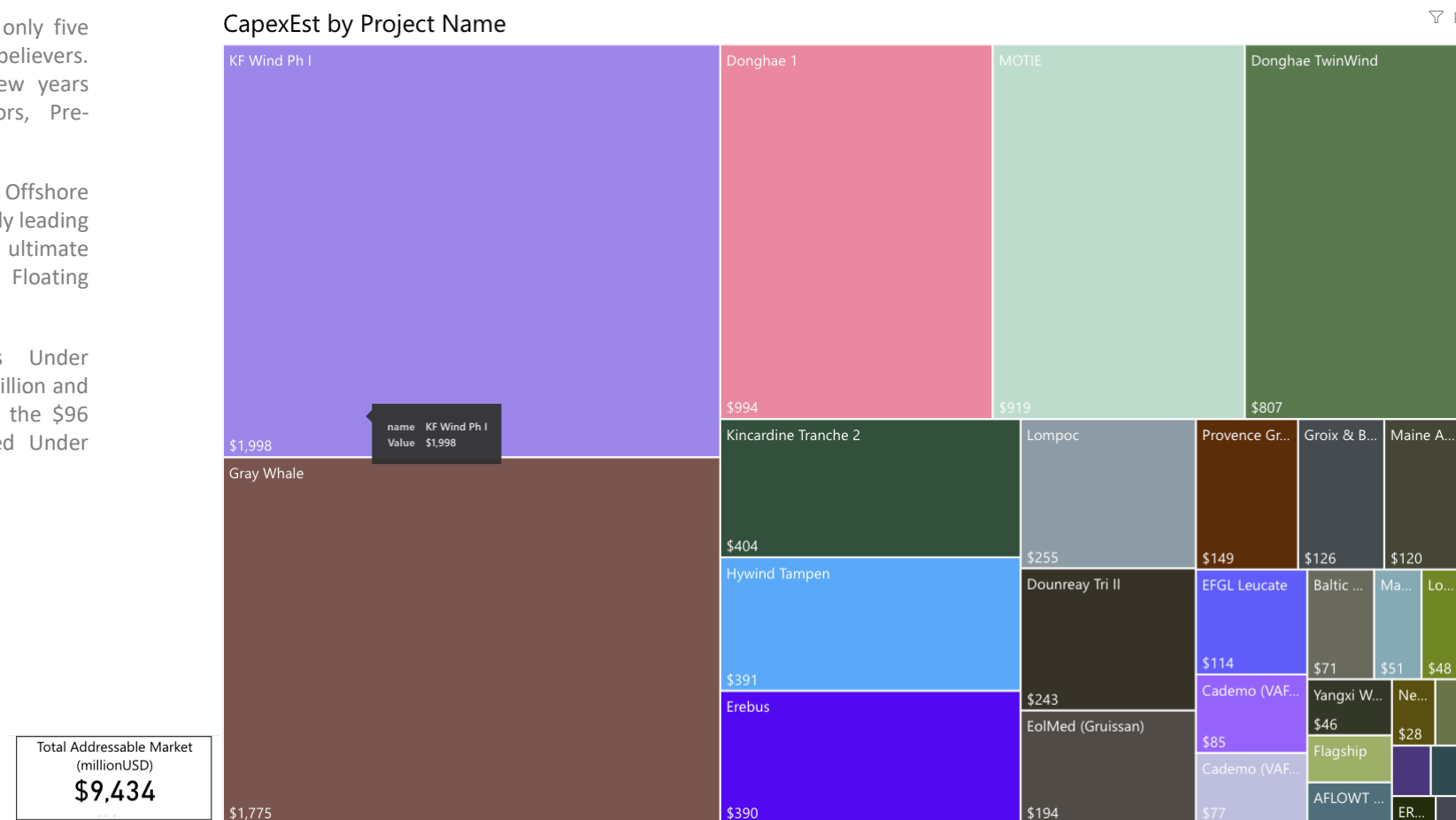
Key Project Opportunities

A Focus on Size and Status

Global 'Under development' Projects by Name

Status Under development

- The offshore Floating wind industry was in its infancy only five years ago, an 'inner circle' that met more naysayers than believers. This industry has come a very long way in just a few years delivering new floater designs, scaled Demonstrators, Pre-Commercial projects and an abundance of new players.
- The entry of companies such as Equinor, Repsol, Aker Offshore Wind, Shell, TOTAL Energies and most recently BP is quickly leading to a step-change for this young industry's viability and ultimate capability to produce 100-to-200 (or even 500-plus) Floating Turbine Units (FTUs) on a serial manufacturing basis.
- Five super-sized Floating offshore wind projects Under development shown right, each ranging between \$800 million and \$2 billion in CapEx, represent a growing share (7%) of the \$96 billion total addressable market of presently identified Under Development, Planned and Possible projects.



Charts, Tables and Graphs are sourced from our Q Vision Product Suite

Reported = Value Confirmed | PSR = Preferred Supplier Relationship, Project Value

Global ‘Under development’ Project Details

CapExEst (millionUSD) by Project

ProjectName	Region	Country	SubCountry	Online Year	FixedOrFloat	DevType	Status	LocAvg WD (m)	Total Units	TotalMW*	CapexEst USD	Developer	Designer
KF Wind Ph I	Asia/Pacific	South Korea	Ulsan, Seosang-myon	2025	Floating	Commercial	Under devel	150	53	504	\$1,998	KFWind/Principle Power	Principle Power (Reported)
Gray Whale	Asia/Pacific	South Korea	Ulsan, Seosang-myon	2026	Floating	Commercial	Under devel	150	50	500	\$1,775	Total	Principle Power (PSR)
Donghae 1	Asia/Pacific	South Korea	Ulsan, Seosang-myon	2024	Floating	Commercial	Under devel	145	25	200	\$994	KNOC/Equinor/EWP	Equinor (Reported)
MOTIE	Asia/Pacific	South Korea	Ulsan, Seosang-myon	2024	Floating	Commercial	Under devel	100	27	203	\$919	MOTIE (KETEP)	TBD
Donghae TwinWind	Asia/Pacific	South Korea	Ulsan, Seosang-myon	2025	Floating	Commercial	Under devel	160	20	200	\$807	TwinWind	Hexicon (Reported)
Kincardine Tranche 2	N Europe	UK	Scotland	2021	Floating	Commercial	Under devel	70	5	48	\$404	KOWL	Principle Power (Reported)
Hywind Tampen	N Europe	Norway		2022	Floating	Commercial	Under devel	280	11	88	\$391	Equinor	Equinor (Reported)
Erebus	N Europe	UK	Wales	2025	Floating	Pre-Commercial	Under devel	65	10	95	\$390	Total Quadran/Simply Blue	Principle Power (Reported)
Lompoc	USA - Pacific	USA	California	2024	Floating	Pre-Commercial	Under devel	77	4	40	\$255	Ideol	Ideol (Reported)
Dounreay Tri II	N Europe	UK	Scotland	2024	Floating	Commercial	Under devel	85	5	100	\$243	Highland Floating Wind	Hexicon (Reported)
EolMed (Gruissan)	S Europe	France		2022	Floating	Pre-Commercial	Under devel	62	3	30	\$194	EolMed Consortium	Ideol (Reported)
Provence Grand Large (Faraman)	S Europe	France		2022	Floating	Pre-Commercial	Under devel	100	3	24	\$150	EDF	SBM Offshore (Reported)
Groix & Belle-Ile	N Europe	France		2022	Floating	Pre-Commercial	Under devel	62	3	29	\$126	Shell/EOLFI	Naval Energies (Reported)
Maine Aqua Ventus I	USA - Atlantic	USA	Maine	2023	Floating	Demonstrator	Under devel	85	1	10	\$120	New England Aqua Ventus	UMaine (Reported)
EFGL Leucate	S Europe	France		2023	Floating	Pre-Commercial	Under devel	72	3	30	\$114	Ocean Winds	Principle Power (Reported)
Cademo (VAFB) A	USA - Pacific	USA	California	2024	Floating	Pre-Commercial	Under devel	100	2	20	\$85	Cierco	Saitec Offshore (Reported)
Cademo (VAFB) B	USA - Pacific	USA	California	2025	Floating	Pre-Commercial	Under devel	100	2	20	\$77	Cierco	SBM Offshore (Reported)



Charts, Tables and Graphs are sourced from our Q Vision Product Suite

Europe (N&S) ‘Planned’ Project Details

CapExEst (millionUSD) by Project

ProjectName	Region	Country	SubCountry	Online Year	FixedOrFloat	DevType	Status	LocAvg WD (m)	Total Units	TotalMW*	CapexEst USD	Developer	Designer
Sardegna Sud Occidentale	N Europe	Italy	Sardinia	2026	Floating	Commercial	Planned	100	42	504	\$1,550	TBD	TBD
Hannibal	N Europe	Italy	Sicily	2025	Floating	Commercial	Planned	250	25	250	\$819	Copenhagen Off	Stiesdal (Reported)
CanArray	S Europe	Spain	Gran Canaria	2023	Floating	Pre-Commercial	Planned	85	4	48	\$150	EnerOcean	W2Power (Reported)
FLOW	N Europe	Sweden		2024	Floating	Demonstrator	Planned	100	1	10	\$48	FlowOcean	FlowOcean (Reported)
Flagship Canary Demo	S Europe	Spain	Gran Canaria	2022	Floating	Demonstrator	Planned	100	1	10	\$39	Iberdrola	TBD
Plocan Canary	S Europe	Spain	Gran Canaria	2022	Floating	Demonstrator	Planned	80	1	5	\$33	WunderHexicon	Hexicon (Reported)
Total									74	827	\$2,639		



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Reported = Value Confirmed | PSR = Preferred Supplier Relationship, Project Value

II. Q Vision and Our Methodology

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 analysis of relationships across Markets and Technologies, and an enhanced understanding of project Economics.

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.

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