



Helicopter Leasing Trends

A promising trend is emerging in offshore wind farms towards a greater utilization of helicopters. Supporting factors include new wind farm projects being developed further from shore coupled with benefits offered by helicopters over crew transfer vessels. Meanwhile, the offshore oil and gas service sector is slowly regaining confidence supported by a successful auction by Brazil for offshore blocks and stronger earnings from the major oil companies.

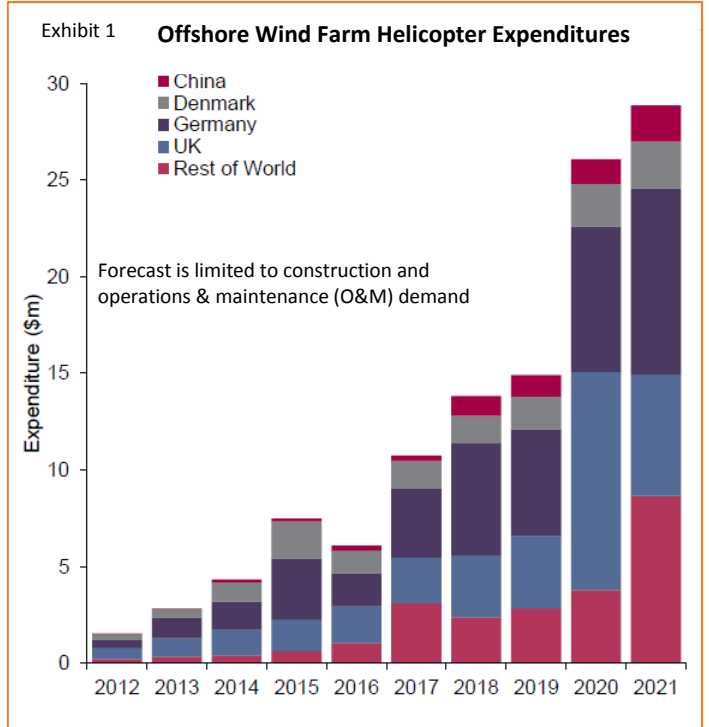
Wind Power: The Next Helicopter Frontier

Wind power is one of the fastest growing forms of energy production, and offshore wind farms are increasingly being supported by helicopters. According to the Westwood Global Energy Group, **global offshore windfarm capacity is expected to increase 330% over the next decade and with it helicopter expenditures for offshore wind farms are projected to grow 3x** (see Exhibit 1 at right). Westwood has noted that within the offshore wind market, “future growth prospects are very positive” for helicopters.

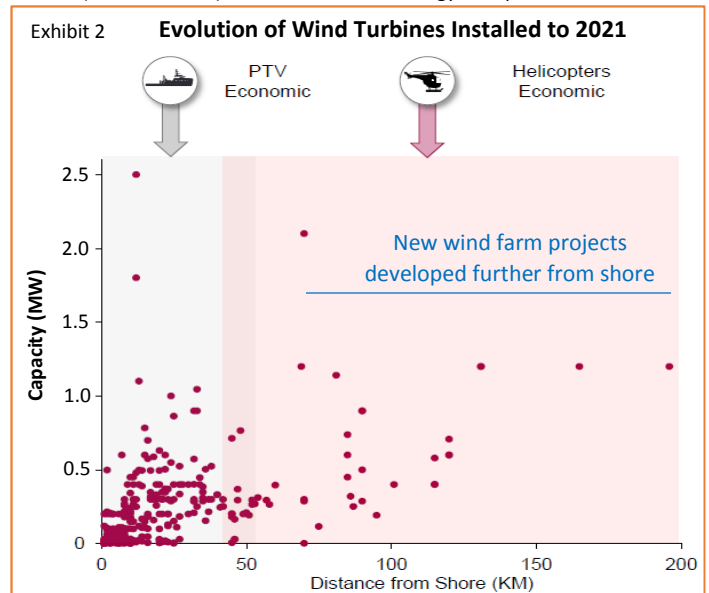
Offshore wind farms can produce more power than those onshore, as sea winds are stronger and more consistent than wind over land. With stronger wind speeds, the amount of energy produced increases by the power of three. According to Statoil, “As much as 80% of the total potential for offshore wind power is believed to be in deep waters.”

Offshore wind farms also tend to be out of sight from shore thereby avoiding eye sores that are associated with onshore wind farms. With that, there is less opposition to the development of offshore wind farms. Wind farm proponents also point to the fact that offshore wind farms reduce the need to build difficult-to-approve power plants and laying overland transmission lines.

Much of the initial development of wind farms was in near shore areas that were readily accessible by boats (see Exhibit 2). But as developments move further offshore, helicopters have become the more economical mode of transportation to and from the installations. Germany will be a leading contributor to the projected increase in helicopter usage (as per Exhibit 1) due to a high average distance from shore for its projects. As wind farms become larger and the distance from shore increases, this drives the economics for transport to and from the site in favor of helicopters. As a reliable and fast response asset, helicopters offer benefits to wind farm operators that include efficient utilization of working hours of technicians, greater site accessibility in most types of weather and less downtime for turbines.



Source (Exhibit 1 and 2) : Westwood Global Energy Group



The Emergence of Helicopters for Wind Farms

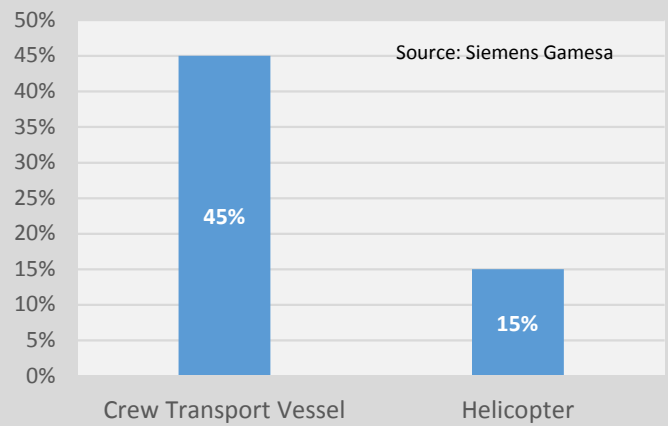
Offshore sites are more accessible by helicopters

Helicopters also have an advantage over boats when reaching wind installations because of weather. Exhibit 3 below shows the calculated probability of a successful mission to an offshore wind installation in the North Sea by helicopter or by boat. Helicopters are estimated to have an 87% probability of access, while vessels only have a 51% probability of access – the differential being almost exclusively because of weather. Success rates for both modes of transport are highest during the summer months when the weather is relatively calm. During the winter months, the helicopter maintains a relatively strong success rate whereas the crew vessel shows a sizable decline because it is affected by unfavorable winter sea conditions. According to Siemens Gamesa, one of the leading builders of wind turbines and wind farms, crew vessel downtime due to weather (Exhibit 4) is as high as 45% in the installations it has developed, versus 15% for helicopters.

One size does not fit all

Typical helicopter operations for large offshore wind farms involve the use of light twin engine and medium helicopters. The light twin helicopters with the capacity to carry 5-7 passengers are used for hoist operations where crew are lowered onto the turbine from the air. These operations are for fast troubleshooting and scheduled servicing. Medium helicopters are typically used for transfers of 10-12 crew to service vessels with helipads and to offshore platforms or substations.

Exhibit 4 Weather Downtime Comparison for Offshore Site

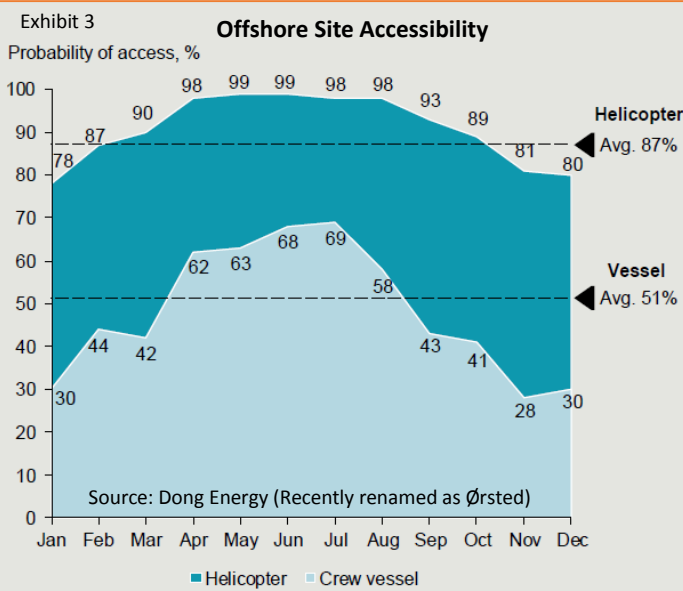


Waypoint leads the industry in providing helicopter types used to support the wind power industry

Airbus and Leonardo are both marketing their products aggressively to the wind power market. Airbus' products are most common in the market today – the EC135/H135 (six passengers) having the largest market share. Airbus is also marketing the larger EC145/H145 (nine passengers) to the wind power industry. Leonardo is aggressively marketing its AW169 (up to ten passengers), which competes directly with the H145, and has also offered the AW139 (twelve passengers) as a medium aircraft solution for the industry. Airbus' in-development medium aircraft, the H160, will also eventually be targeted to the wind power industry.

Waypoint is the leading global lessor of the H135 and H145, having over 15x of these aircraft in our fleet today and over a dozen orders and options outstanding for both, making us uniquely placed to offer aircraft to the wind power industry. In addition, Waypoint has a flexible order and option backlog to support AW169 placements in the wind power industry. A number of our leading customers are entering the industry, and Waypoint will be placing aircraft into wind power support use soon.

Helicopter support for wind power is still in a nascent stage – the first deliveries of aircraft specifically for wind power support were made in 2015, and its estimated that there are no more than 30 aircraft worldwide currently dedicated to providing wind power support. The research noted here, however, makes us confident that there will be at least 100 aircraft servicing these types of installations by 2021.



Super Medium Helicopter Study –

Recently released is a white paper study on the super-medium market by the Waypoint Risk team. The research is supported by a leading helicopter analyst with data from Rystad Energy and FlightGlobal. If you would like to participate in a webinar or receive a copy of the white paper, please contact Karen Sackowitz at +1 203 343 0602 or ksackowitz@waypointleasing.com.

Waypoint Leasing Receives Structured Innovation Award –

Recognized by the 6th China Air Finance Development (DFTP) Summit, Waypoint is the recipient of its Structured Innovation Award. The award comes as commendation for Waypoint's first helicopter leasing platform in Tianjin Free Trade Zone in China.

Volatility in The Financial Markets Is Exceptionally Low –

Despite the uncertainty of a new pick for chairman of the Federal Reserve, the implied volatility used to price options on USD interest rate swaps (Swaptions) is at a 4-year low. Separately, the Fed Funds futures market is predicting a .25% rate increase at the next Federal Reserve meeting in December.

Oil Majors Meet or Beat Earnings Forecast –

Among the oil majors to report 3Q 2017 earnings, BP, Chevron, ExxonMobil and Shell beat profit forecasts and Total met the consensus. BP stood out from the crowd by launching a share buyback program which offers affirmation that fundamentals have improved. In terms of capital expenditures, Statoil indicated that its 2017 full year spend on projects will be ~9% lower than previously predicted. This was driven by compression of unit costs and not less activity.

S92 and AW139 Values Have Been More Stable –

According to FlightGlobal/Ascend in their 3Q 2017 update, there is a low storage ratio for S92s at 6% and that values have held up well along with the AW139. In addition, the consultancy group has seen a firming of helicopter lease rates and LRFs (Lease Rate Factors) in 2017. They also expect more stability in helicopter values in the next 1 to 2 years.

UK To Hold More Offshore Wind and Green Energy Auctions In 2019 –

The UK government said on October 11, that £557M of funding would be made available for offshore wind and other "less established" renewable technologies in relation to the next auction in the spring of 2019. The auction will be open to bids from developers of offshore wind projects as well as certain "advanced conversion" technologies that deliver energy from waste. It will, however, be closed to onshore wind and solar projects. (Financial Times – October 11, 2017).

Mexico Approves the S92 for Use –

Mexico's Directorate General of Civil Aeronautics (DGAC) has approved the Offshore and Utility Type Certificate for the S92. This will allow the aircraft to perform a range of services in the country including offshore oil and gas transportation, VIP transportation and search and rescue. The certificate was signed on November 6.

Brazil's Oil Auction Results –

Considered by many to be a success, Brazil auctioned off six of the eight deepwater exploration blocks on offer. The winning bidders were determined by the highest percentage of profit offered which ranged from 67% to 80%.

Airbus & Waypoint CEOs Demonstrate Confidence in H225 –

To show confidence in the reliability and safety of the H225 after the implementation of additional safety measures, the CEO of Airbus Helicopters, Guillaume Faury, landed in a Waypoint owned and GHS operated H225 at Helitech International in London in October. The aircraft was on display and carried out a number of demonstration flights during the event. Included among the passengers was Ed Washecka, CEO of Waypoint.

Petrobras 29x Helicopter Tender –

Petrobras has requested tender offers from operators for helicopters ranging from light twins to heavies. Also included in the bid process are super-mediums. Results are expected to be announced before the end of the year with contracts beginning over the course of 2018.

Fast Deployment Business Model Small for Liquefied Natural (FLNG) Projects –

Add Energy has partnered with Transborders Energy in collaboration with TechnipFMC and MODEC to focus on small scale stranded offshore gas resources. For the initial pilot project, offshore Australia has been identified with location to be confirmed early 2018. Final investment decision is expected by 2020.

Ian Gurekian
T: 1 203 343 0603
igurekian@waypointleasing.com

Marc Schechter
T: +1 203 343 0596
mschechter@waypointleasing.com

Patrick Duffy
T: +1 203 819 8886
pduffy@waypointleasing.com

Offices

Waypoint Leasing (Ireland) Limited

8 Riverpoint
Bishops Quay, V94 WC6A
Limerick, Ireland
Office: +353 61 445 020
Fax: +353 61 445 022

Waypoint Leasing Services LLC

19 Old Kings Highway South
Darien, CT 06820
United States of America
Office: +1 203 343 0600
Fax: +1 203 669 9900

Waypoint Leasing Services UK Limited

Suite 1.02, Eastside, The Office Group,
King's Cross, York Way,
London, N1C 4AX, UK
Office: +44 203 574 4962

Waypoint Leasing Services Pte. Ltd

3 Church Street,
Level 8 Samsung Hub
Singapore 049483
Office: +65 9858 1338

Waypoint Leasing Services Brazil

Rua do Ouvidor, nº 108, 2º andar
Centro – Rio de Janeiro
CEP: 20040-030
Brazil
Office: +55 (21) 3570 8800

Waypoint Leasing SA (Pty) Ltd.

Office 301, 3rd Floor, Eikestad Mall
43 Andringa Street,
Stellenbosch, 7600
South Africa
T: +27 60 748 1599

Waypoint Leasing Services Australia Limited

Level 36
123 Eagle Street
Brisbane QLD 4000
Australia
T: +61 (0) 424 565 843