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Training, qualification and specialisation needs for shipyards to meet the ERM requirements

16 DE NOVEMBRO 2015
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Offshore Wind Industry – Macro-Economic Environment

Offshore wind will play a significant role in the future energy mix.

According to the European Wind Energy Association, in the first half of 2015, Europe fully grid connected 584 commercial offshore wind turbines (2,342.9 MW) and 15 commercial wind farms were under construction increasing the capacity to 4,268.5 MW. **EWEA estimates that offshore wind could grow to 150 GW by 2030, meeting 14% of EU's total electricity consumption.**

Offshore wind farms are being built further from the coast and in deeper waters to harness the better wind resource. Average project size has also increased significantly, as typical size has grown from 60 to 300 MW.

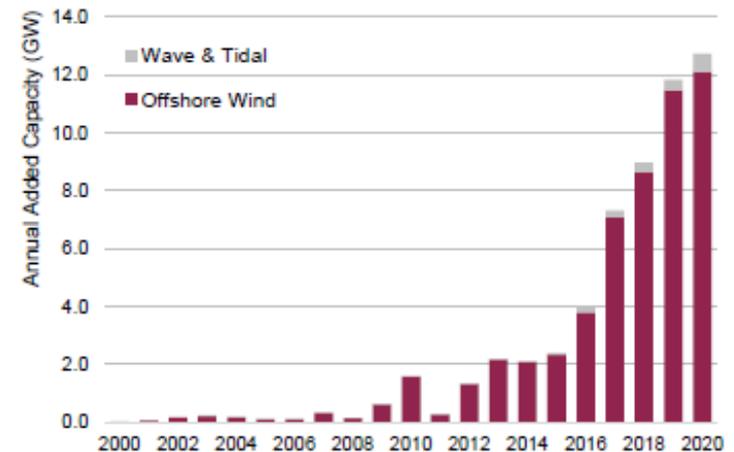
Today, **new offshore designs and personnel skills and competences are needed to explore the huge resources of the North Sea, Atlantic and Mediterranean deep waters for water depths greater than 50m.**

Offshore Wind Industry – Macro-Economic Environment

According to Douglas-Westwood-OECD “Reorientation of Shipyards: Opportunities in Offshore Energy”:

- Offshore Wind accounts for the largest proportion of offshore renewable energy supply and is driven by both political and economic factors.
- Political drivers include globally agreed regulations, such as the Kyoto protocol, and various regional and national measures are being undertaken in order to directly cut or cap greenhouse gas emissions.
- The offshore renewables market is highly reliant on government subsidies due to the high capital cost involved.

Douglas Westwood  OECD
BETTER POLICIES FOR BETTER LIVES

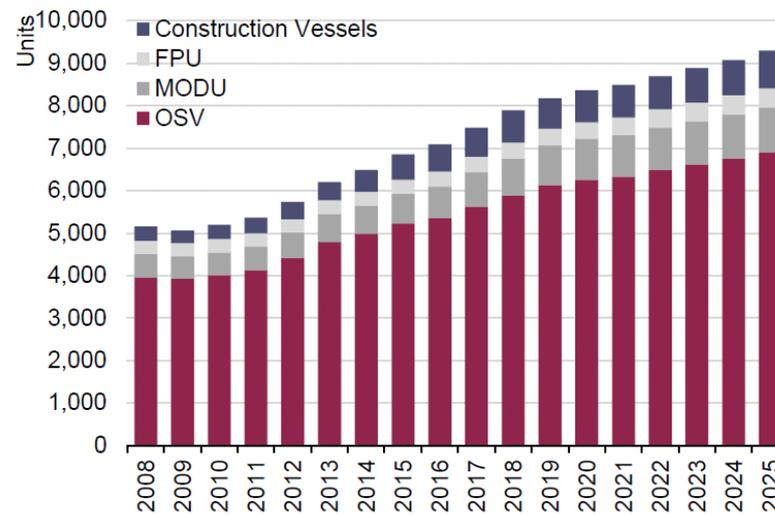


Annual Added Capacity

The Offshore Industry – Market Overview

The EESC – European Economic and Social Committee, in a project that is being developed to the EU Commission, concluded:

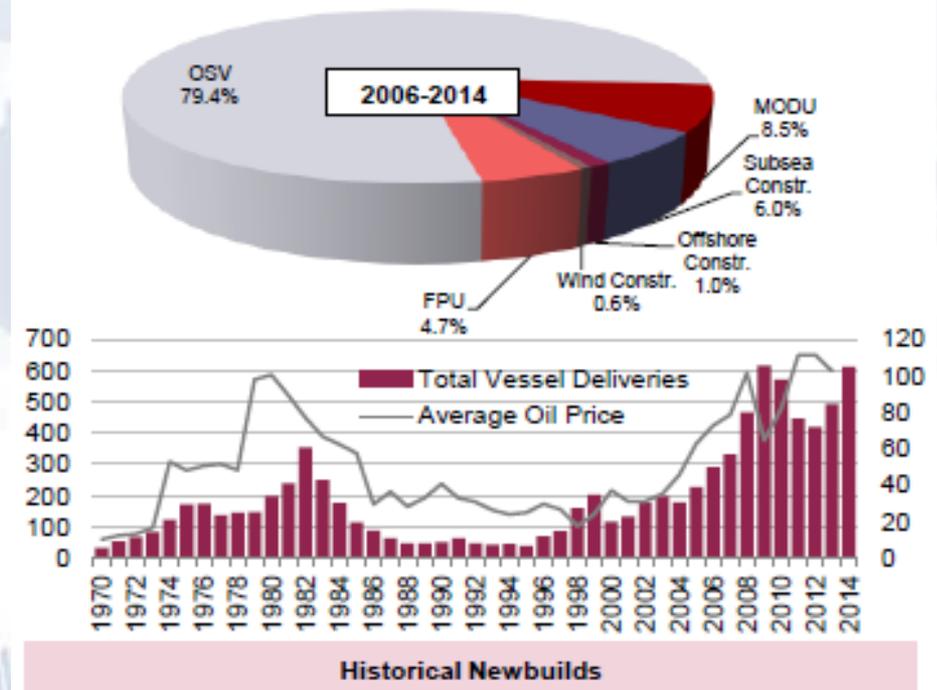
- Over the 2014-2025 forecast period, demand for all vessel types is expected to increase annually by 3.7%.
- In 2014, the share of offshore vessels in total European shipbuilding production was 40%.
- **The building, repair/conversion of advanced offshore installations are an important source of profit for the EU shipbuilding/repair sectors.**



The Offshore Industry – Market Overview

- Shipbuilding activities have experienced two distinct build cycles. The first cycle marked the advancement of the global offshore oil & gas industry, which led to a spike in offshore construction.
- The last decade has seen higher building activity, driven by both a high oil price environment and a need for fleet replacement.

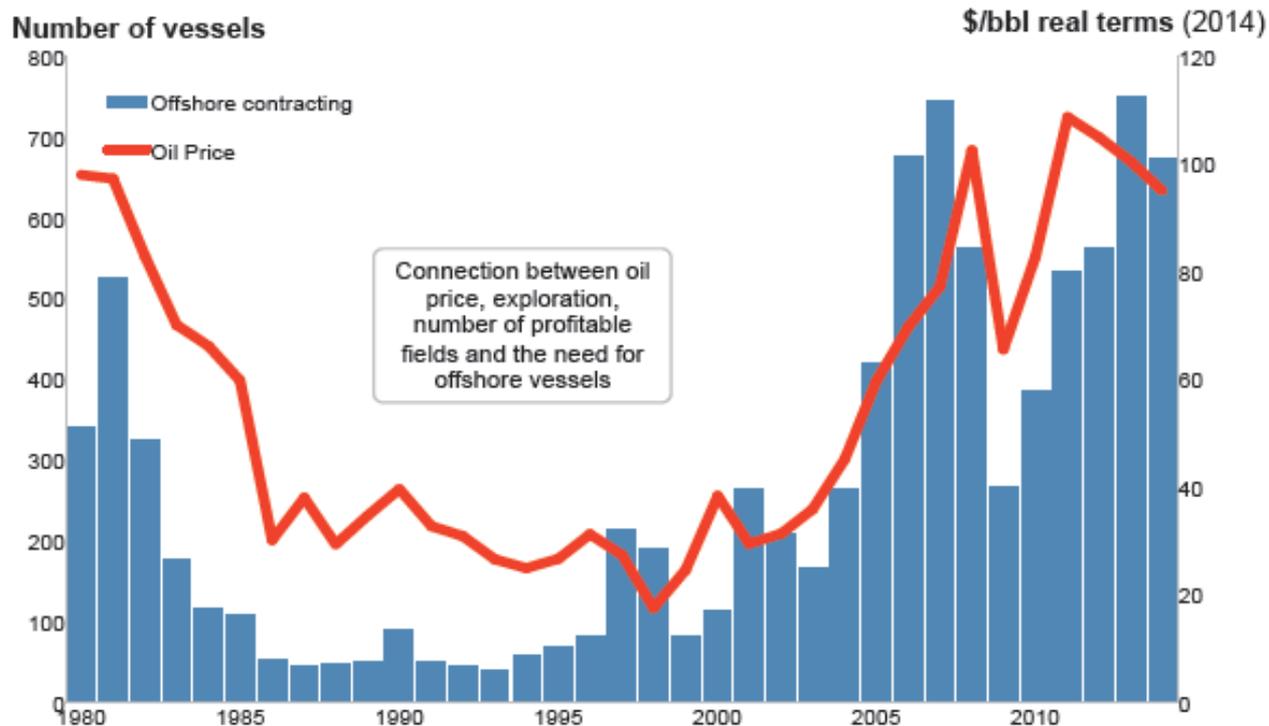
Douglas – Westwood
 OECD
 NET OF POLICIES FOR OBTAINERS



The Market Drivers

The key driver for offshore newbuilding demand is the prevailing oil price and the perception of future oil price development vs. actual and expected cost development (Sea Europe – Market Forecast Report 2015).

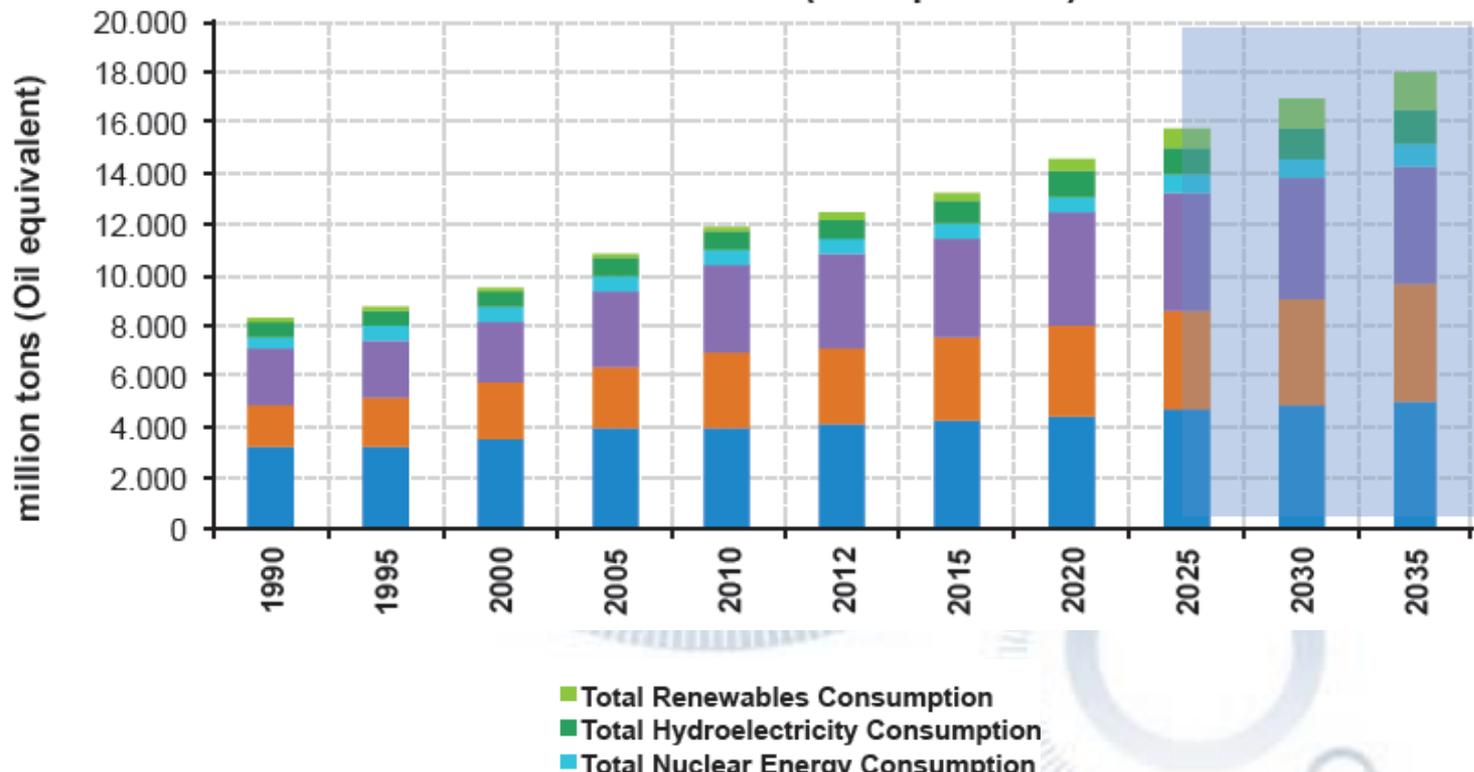
Oil price as key market driver for offshore



Energy consumption sources

In the next two decades, renewable energies and nuclear power are expected to be the world's fastest-growing energy sources, each increasing over 5% per year (Sea Europe – Market Forecast Report 2015)

World Energy Consumption million tons (Oil equivalent)

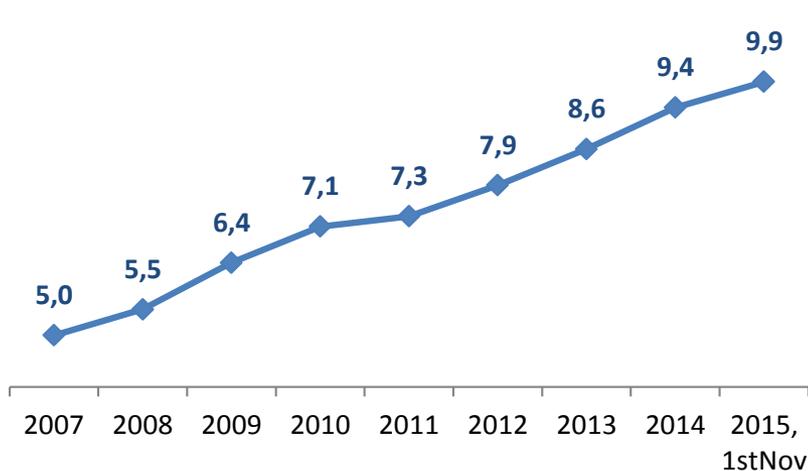


Newbuilding Requirements

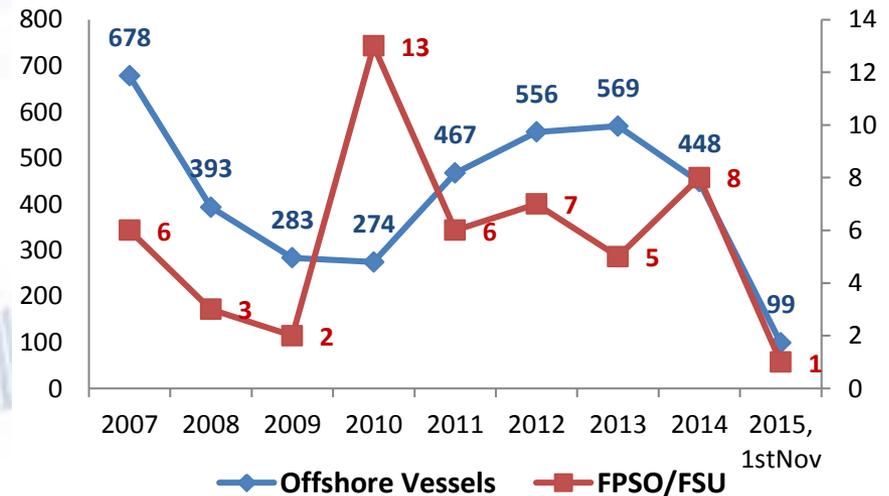
The long term outlook for offshore is promising but oversupply is a risk in the short term.

The global offshore fleet consists of around 10,000 vessels with 5.394 anchor handling tugs and platform supply vessels (9.9 m Dwt) on the 1st November 2015, and 517 AHTS/PSV (1.5 m Dwt – 15% of existing fleet) on the order book (Clarksons Research).

Existing HATS/PSV (million Dwt)



Number of vessels contracted



Training, qualification and specialisation needs for shipyards to meet the ERM requirements(1)

There is a need to recruit and train skilled personnel to the offshore industry. According to the EU's Wind Energy Technology Platform report (TPWind), the European offshore wind industry faces a deficit of 5,500 appropriately qualified personnel, which might increase to 18,000 by 2030.

The industry has acknowledged that there will need to be a drive towards recruiting and training suitably skilled personnel to carry out the work required to meet the global wind farm targets.

The qualifications given must be, when possible, classified by ESCO, the multilingual classification of European Skills, Competences, Qualifications and Occupations, as well as at national level (in Portugal in the National Catalogue of Qualification – CNQ), to allow certification and transparency on the competences produced.

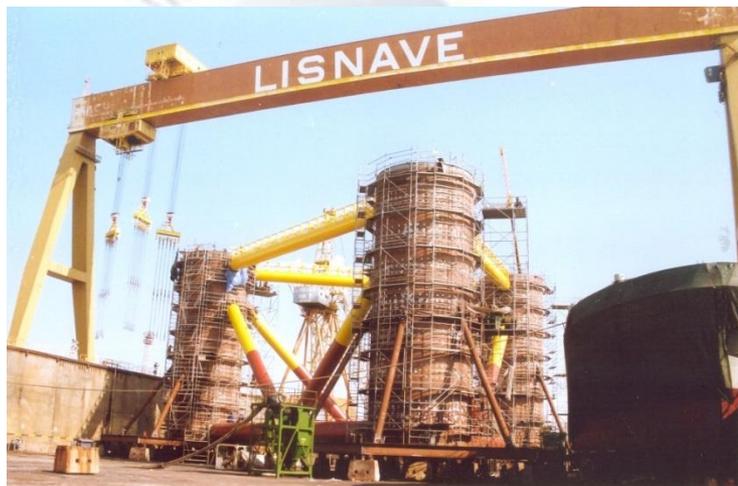
Training, qualification and specialisation needs for shipyards to meet the ERM requirements(1)

The Portuguese shipyards already gave a contribution, either on the building of equipment, as well as, on its the maintenance/ modification (WaveRoller - construction of the flaps and parts of the barge).

At Lisnave shipyards premises was fabricated the base of the WindFloat structure and assembled the structure built by A. Silva Matos and the generator and at ENP – Estaleiros Navais de Peniche some work was done on the Pelamis Wave Energy Converter and on the Waveroller.

In the relevant structural components , such as large diameter and high thickness pipes or when a high performance epoxy fire protection coating system is specified, there is a large investment in specialised equipment to be done. These type of works shall be done by specialised metalwork or anticorrosive protection firms.

Examples



Training, qualification and specialisation needs for shipyards to meet the ERM requirements (3)

To my knowledge, there is no specific ERM requirements to the shipbuilding industry. Offshore industry can be looked as an extension of shipbuilding industry although more demanding in terms of quality and organization.

Considering that there is forecast a significant demand growth in the offshore market and that there is a lack of qualified personnel, the shipbuilding industry must train and give the needed qualifications and competencies to its workforce.

The Portuguese shipyards are ready to respond in productivity, quality and delivery time, in order to meet the needs of the Marine Renewable Energy Industry.

Policy Recommendations

Analysis of relations between offshore and maritime industry confirms that offshore industry is a strong driver for maritime industry, particularly for shipbuilding, repair and equipment sectors.

Considering the shortage of qualified workers and skills in offshore industry, it is recommended new policies for adapting skills and training and encouraging young people to work at sea.

Europe 2020 strategy should be updated to meet the EU requirements relating to maritime activities, and financing and promoting sustainable development, bearing in mind the wide range and variety of the types of work and skills that are necessary in the area of offshore.

Thank you for your attention!

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