Navigating the Local Complexities in Offshore Wind in Taiwan – A Vessel Operator’s Perspective

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Taiwan will be a Key Market

Taiwan government plans to invest additional **US$23b** on infrastructure support

Forecast Growth in Asia Waters

Among all the continents, Asia is seen to be driving the growth of Offshore Wind in the next decade. China, Taiwan, Japan and Korea are among the key markets.

Source: Clarksons Platou AS, Goldman Sachs Research
Challenges in the Taiwan Marine Sector
Requirement for specialised marine expertise

Market Landscape

- Total Capacity: 5.5 GW
- Average Wind Turbine Capacity: 4 – 8 MW
- No of Wind Turbines Needed: 600 – 900

Challenges

Lack of relevant offshore marine knowledge
Dearth of local marine operators; lack of relevant knowledge and expertise across major stakeholders

Unclear local content requirements
E.g. lack of clarity with regards to restrictions on foreign-built tonnage and requirement for locally flagged vessels

Increasing cost-competitiveness required for supply chains
Necessitated by the reduced feed-in tariff in 2nd round of auction

Fragmented market
Myriad of stakeholders from different subsectors with differing scope & liabilities, no one-stop solutions provider
The Kuok Group has diverse operations in **five continents** with specialisations in Properties, Hospitality, Logistics, Media, Maritime, Commodities, Environment & Philanthropy.

**Properties**

- SHANG
- PPB GROUP BERHAO

**Hospitality**

- SHANGRI-LA
- KERRY HOTELS & RESORTS
- HOTEL JEN

**Logistics**

- KERRY LOGISTICS

**Commodities**

- chemQuest
- CWM Commodities

**Environmental**

- GMP

**Philanthropy**

- KUOK FOUNDATION BERHAO

**KUOK (SINGAPORE) LIMITED**

**POSH** is headquartered in Singapore and listed in the Singapore Stock Exchange.

**Kerry TJ Logistics** is headquartered in Taiwan and listed in the Taiwan Stock Exchange.

Our strategic partners, **PACC Line** and **PaxOcean** are both headquartered in Singapore.
POSH - Overview

Leading Offshore Marine Services Provider

- **Headquartered in Singapore** and subsidiary of Kuok Singapore Limited
- **Over 60 years of operating experience** and specialised expertise in offshore and marine oilfield services
- **Young and diversified fleet of more than 100 vessels** serving many of the world’s oil companies and international offshore contractors across Asia, Africa, Middle East, Europe, North and Latin America
- **Highly experienced team** consistently recognised by customers for our professionalism and commitment to service quality and safety

Diversified portfolio of services, supporting multiple segments of the oil and gas value chain

- **Offshore Supply Vessels (OSV)**
  - One of the **youngest** fleet of midwater and deepwater Anchor Handling Tug Supply (AHTS) vessels and Platform Supply Vessels (PSV) equipped with Dynamic Positioning (DP) technology

- **Offshore Accommodation (OA)**
  - Operates fleet of **high-specification** offshore accommodation vessels ranging from 40 to 750-pax; capable of both topside and subsea services

- **Transportation & Installation (T&I)**
  - **Leading** operator in deepwater T&I space and operates the largest Anchor Handling Tug (AHT) fleet globally comprising tugs of 150 to 200 ton bollard pull (TBP) each

- **Harbour Services & Emergency Response (HSER)**
  - **Best coverage** of locations among MPA-licensed harbour towage providers; **worldwide** emergency assistance to vessels that require support after encountering distress
POSH’s Key Differentiators
Delivering Excellent Service Quality Globally at Highest Safety Standards

Market Leader in Walk-to-Work Solutions
Successfully executed various Walk-to-Work projects globally, providing safe, reliable and first class accommodation solutions for clients, ranging from 40 to 750 pax

World’s largest 750-pax comfort-class DP3 Semi-Submersible Accommodation Vessels (SSAV) equipped with state-of-the-art technologies

Monohull Offshore Accommodation fleet consists of unique 238-pax diesel electric “E-Class” accommodation vessels and conventionally moored vessels

Three units of Multi-Purpose Supply Vessels (MPSV) capable of supporting construction and commissioning phase at offshore wind farms

Extensive Operational Footprint

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Three units of Multi-Purpose Supply Vessels (MPSV) capable of supporting construction and commissioning phase at offshore wind farms

Excellence through Safety: One Team, One Goal, Zero Harm Policy
- Supervising Safety Course
- Safety Day
- Crew Seminars
- Learning Engagement Tool
- Safety Campaign
- POSH 10 Golden Rules of Safety
- Regular Management Visits
- Participation in DP Station Keeping Reporting Scheme
Our Unique Proposition
One-Stop Solutions Provider in the Offshore Renewables Space

Transportation of blades for Siemens, Nordex & GE
Over 1800 blades and 2000 towers shipped to date

Logistics & warehousing on shore & at quayside
>5500 employees and 181 business locations in Taiwan

Able to fabricate jackets for turbine foundations
In-house engineering capabilities, >2.4 mil m² of dock & yard globally

Offshore marine expertise to support construction, operations & maintenance
Working with Rolls-Royce on new SOV for offshore wind farm maintenance
## 1) Diverse Marine Spread for Offshore Wind

Offering a wide spread of offshore vessels across the Offshore Wind Value Chain

<table>
<thead>
<tr>
<th>Vessel Type</th>
<th>Scope of Work</th>
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<tbody>
<tr>
<td>Harbour Tug</td>
<td>• Marshalling of incoming and outgoing vessels at key ports</td>
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<tr>
<td></td>
<td>• Support for vessel type including turbine transportation, cargo and offshore support vessels</td>
</tr>
<tr>
<td>Anchor Handling Towing and Supply (AHTS)</td>
<td>• Support during site survey for geological features</td>
</tr>
<tr>
<td></td>
<td>• Fisherman liaison / guard vessel support</td>
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<tr>
<td></td>
<td>• Noise mitigation support</td>
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<tr>
<td></td>
<td>• Personnel and equipment transfer during construction</td>
</tr>
<tr>
<td>Anchor Handling Tug (AHT)</td>
<td>• Accommodation support for technicians during construction &amp; installation operations</td>
</tr>
<tr>
<td>Accommodation Vessels</td>
<td>• Equipment and materials transfer across construction, installation and operations</td>
</tr>
<tr>
<td>Barge</td>
<td>• Personnel and equipment transfer and during construction and operations</td>
</tr>
<tr>
<td>Crew Transfer Vessel (CTV)</td>
<td>• Short-term offshore accommodation</td>
</tr>
<tr>
<td>Service Operation Vessel (SOV)</td>
<td>• Accommodation support for technicians during operations &amp; maintenance of turbines.</td>
</tr>
</tbody>
</table>

All vessel types are involved across the major phases of the offshore renewables value chain, from construction, installation through to operations & maintenance.
2) Best in Class Partnership

Synergistic Partnership to Offer Complete Suite of Services to Offshore Wind Industry

- MOU signed with Macquarie Capital & Swancor to jointly explore opportunities for their offshore wind farm developments in Taiwan
- MOU signed with Rolls-Royce to explore suitable designs for walk-to-work and SOV vessels, specific to offshore wind operations
- MOU with World Marine Offshore (WMO) to jointly offer customized solutions for wind farm operations (e.g. CTVs, subsea services, turnkey solutions)

Through collaboration with proven and reputable operators in related fields, POSH Kerry Renewables aims to deliver a unique integrated solutions platform, which will provide clients with a comprehensive suite of supply chain and offshore marine solutions, that can be customised to meet their specific requirements in the offshore wind farm space.
### Commitment towards Localization

**Localisation Initiatives**

- **Headquartered and listed in Taiwan, >60 years of operating experience**
- Asia’s premiere logistics operator with:
  - >5000 employees,
  - >180 business locations, and
  - >3000 self-owned vehicles in Taiwan and
  - Operational footprint spanning >50 countries worldwide.
- Ability to navigate the unique local operating landscape and network

- **Senior Marketing Manager Mr. Harry Wu**: naval architect with >20 years experience, extensive portfolio spanning across wind turbine installation vessels, crew transfer vessels, wind turbine blades and other specialised vessels
- **Marketing Executive, Ms. Chang Fang**: First recruit under our Flagship Management Trainee program, aimed at providing accelerated development for young and promising local executives for next-gen leadership

- **Long-term commitment and plan to recruit Taiwanese crew and offer structured shipboard training and tutelage by qualified crew**
- Actively engaging local academies for collaboration
- MOU signed with Taiwanese vessel operator Seagreen Enterprise (海歷企業有限公司) to train up a pipeline of local crew

- **Accepted as members of major local Wind & Maritime associations:**
  - T-Wind Marine Association - 臺灣離岸風機基礎暨海事工程協會
  - Taiwan Wind Industry Association - 臺灣風力發電產業協會
  - Taiwan Wind Energy Association - 台灣風能協會
Contracts Awarded in Taiwan
Strong Traction with Clients in the Offshore Wind Market

- **Maiden contract in Taiwan** for the offshore renewables, commenced in 2018
- **Client:** International geotechnical services operator
- **Scope:** Anchor handling, supply and standby support during site survey, installation & construction

- **Crew Transfer Vessel contracts** in Taiwan for two projects
- **Client:** International EPCI companies
- **Scope:** Transportation of personnel, equipment and cargo during construction and installation

- **Long-term charter for Guard Vessels Support**
- **Client:** International wind farm developer
- **Scope:** Guard duty service and liaison with other ships to maintain safety requirements around the wind farms
Our Vision
Integration across the entire Renewables Value Chain

Through working with partners, expand horizontally towards other segments of the value chain for a comprehensive suite of solutions for the offshore renewables market.

- Import of parts and equipment
- Fabrication & assembly
Blowing Beyond Taiwan – South Korea next?
Taiwan as the launch pad into Asia

Our success in the offshore wind sector in Taiwan will serve as a launch pad into other countries in Asia. With other countries like Japan, Korea, India and Vietnam also moving fast into the offshore wind space, we are also actively monitoring the latest development in these up and coming markets for suitable opportunities.

India moves to auction its first offshore wind power project
India has called for expressions of interest for the first offshore wind power project in the country that is being set up in Gulf of Khambat, Gujarat
Last Published: Fri, Apr 13, 2018, 06:38 AM IST

Vietnam – the next offshore wind market in Asia?

Legislation paves way for Japan to identify offshore wind development zones
Thu, 03 May 2018

South Korea planning big boost of renewables and offshore wind
Wed, 02 May 2018
Thank You