

# PROJECT SHEET

**CHANGFANG AND XIDAO OFFSHORE WIND FARM (CFXD OWF)**  
WTG FOUNDATION TRANSPORTATION & INSTALLATION

## BOSKALIS

Boskalis is a leading global marine contractor and services provider. With safety as our core value, we offer a wide variety of specialist activities to the oil & gas and renewables sectors. These activities include marine installation and decommissioning, seabed intervention, marine transport and services, subsea services and marine survey. In addition, Boskalis is a global dredging contractor, provides towage and terminal services across the globe and delivers marine salvage solutions.

By understanding what drives our clients we are able to provide the solutions that enable them to meet their specific business goals. For this reason we are constantly looking for new ways to broaden and optimize our offering and are committed to expanding our proposition, supported by our financial strength. With our committed professionals in engineering, project management and operations, 500 specialized vessels and an unprecedented breadth of activities in 90 countries across six continents we help our clients in the offshore industry push boundaries and create new horizons.

## INTRODUCTION

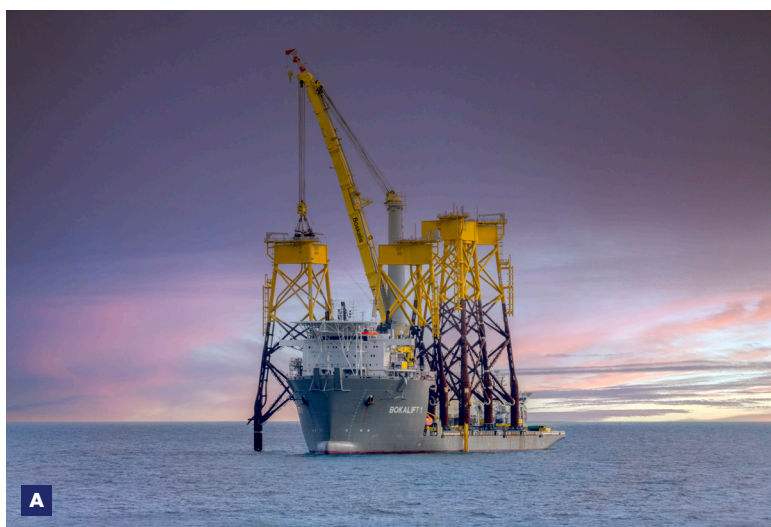
- A joint venture company co-owned by Royal Boskalis Westminster N.V. (Boskalis) and Taiwanese partners, was awarded the foundation T&I scope of Changfang and Xidao (CFXD) OWF in 2019.
- The CFXD OWF is located approximately 15 kilometers off the coast of Changhua County, Taiwan, the total capacity is 589 MW.
- Bokalift 2 was converted into a Heavy Lift Vessel and the CFXD OWF project was her maiden project.

## SCOPE

This project included the transportation and installation of 62 three-legged jacket foundations and the accompanying 186 pin piles during the three installation seasons in 2021-2023.

## FEATURES

Client	Changfang Wind Power Co., Ltd. and Xidao Wind Power Co., Ltd.
Location	The coast of Changhua County, Taiwan
Period	June 2021- July 2023
Contractor	Boskalis and Taiwanese Partners
Vessel/installation	Bokalift 1, Bokalift 2, Boka Southern Ocean, Boka Falcon, Boka Tiamat, Boka Atlantic, Mighty Servant 3



- A** Bokalift 1 lifting three-legged jacket weighing up to 1,372 mt.
- B** Boka Southern Ocean conducted the double big bubble curtain work around Bokalift 2 during pin pile installation.

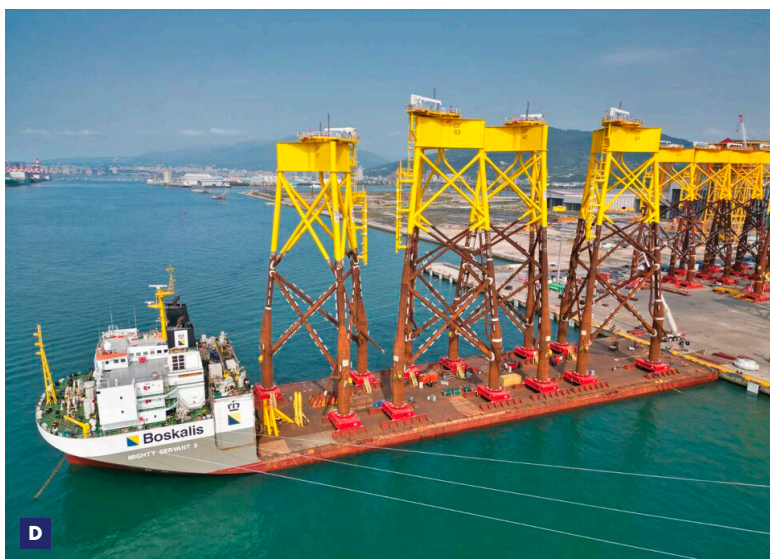


**OFFSHORE EXECUTION**

- Bokalift 1 started the first campaign in June 2021 and installed pin piles for the first 16 locations in 1.5 months. She was responsible for the full T&I scopes including pile cleaning, stopper cutting, soil plug removal and grouting works.
- Bokalift 2 was delivered in 1<sup>st</sup> Quarter 2022 and started her maiden campaign in June 2022 with the installation of 7 jackets and pin pile installation at 10 locations assisted by Boka Southern Ocean for the Double Big Bubble Curtain, grouting and stopper cutting scopes and Boka Falcon for the remaining construction support.
- In 2023, with our versatile fleet, Boskalis introduced additional vessels to the CFXD project. Bokalift 1 was assisted by Mighty Servant 3, Boka Tiamat and Boka Atlantic, where the fleet completed the pin pile installation at the remaining 36 locations as well as installing 52 jackets well ahead of schedule.

**FACT & FIGURES**

- Bokalift 1 and Bokalift 2 were the main installation vessels to complete the pin pile and jacket campaigns. An efficient installation campaign with high workability was achieved, through transporting the pin piles and jackets on deck.
- A pre-piling template was built for the project to ensure all pin piles were installed within the strict installation tolerances.
- Boka Falcon provided essential supporting activities with several specialized tools to conduct pile cleaning, stopper cutting and soil plug removal in 2022.
- Boka Southern Ocean conducted the double bubble curtain work before starting and during the pile driving to minimize potential impacts on marine mammals. In addition, she deployed the noise measurement buoys and during jacket installation she performed as grout vessel in 2022.
- Boka Tiamat provided essential supporting activities with several specialized tools to conduct pile cleaning, stopper cutting, and soil plug removal in 2023.
- Boka Atlantic served as grouting vessel for the grouted connection between the jacket and pin piles.
- Mighty Servant 3 supported Bokalift 1 to transport four three-legged jackets from Taipei port to the field in May 2023 to provide offshore feeding.



**C** Boka Tiamat and Boka Atlantic for support activities on the installed jackets.  
**D** Mighty Servant 3 transporting jackets from Taipei port to the offshore field, for offshore feeding.