Special Feature: GX initiatives

Offshore Wind Power Initiatives

Completion of the Wind Turbine Installation Work for the Kitakyushu Hibikinada Offshore Wind Power Project (port area)

The Kitakyushu Hibikinada Offshore Wind Farm Construction Project is a large-scale offshore wind farm construction project to install 25 wind turbines (9.6 MW class) and generate approximately 220 MW of output on an approximately 2,700 ha site located in the port area of the Kitakyushu Hibikinada district. We signed an EPCI*1 contract for marine construction and other works ([1] offshore civil engineering works such as foundation work for wind turbines, installation of wind turbines, cable laying, etc., [2] construction of O&M*2 base port), and started the construction in March 2023. (project developer: Hibiki Wind Energy Co., Ltd.).
On August 31, 2025, installation of the 25th wind turbine installation work was completed.

*1 EPCI: Acronym for Engineering, Procurement, Construction, and Installation *2 O&M: Operation & Maintenance

(1) Wind turbine foundation and marine works
In charge of marine civil works, including foundations and installation of 25 bottom-fixed-type wind turbines

Contractor

Penta-Ocean Construction Co., Ltd. and Nippon Steel Engineering JV

(2) O&M base port construction
Establishment of a base port for the operation and maintenance of the wind farm

Contractor

Penta-Ocean Construction Co., Ltd. and Wakachiku Construction JV

Project outline
(Source: Hibiki Wind Energy Co., Ltd. website)


Wind turbine installation work (CP-16001)


Departure from the base port (CP16001)


Completed O&M base port

A Japanese Offshore Wind Construction Leader

In Japan, aiming for the achievement of carbon neutrality by 2050, the Japanese government has set targets for the development of 10GW of offshore wind power by 2030 and 30-45GW by 2040. Offshore wind power is expected to increase its supply capacity as a major source of renewable energy, and in this context, the entire country is witnessing a surge in momentum for offshore wind construction.
In this business environment, we aim to become the “front runner in the offshore wind construction”, and are actively working to establish a system to meet the growing demands for offshore wind power facilities.

Construction of Large Work Vessels (HLV, CLV) for Offshore Wind Construction, Expansion of Work Vessel Lineup

Heavy Lift Vessel (HLV)

With the increasing size of wind turbines, the weight of monopile foundations has grown, making foundation installation difficult using offshore installation vessels. To safely and efficiently install large monopile foundations for 15MW–20MW class turbines, we are constructing one of the world’s largest self-propelled Heavy Lift Vessels (HLV) equipped with a fully rotating crane with a 5,000t lifting capacity, based on a new concept.

HLV Overview

Main Dimensions	: Length 218.4 m, Width 57.4 m
Foundation Design	: Ulstein Design & Solution (Netherlands)
Hull Construction	: Seatrium Group (Singapore)
Cranes and others	: Huisman Equipment (Netherlands)
Ownership Structure	: POC (50%), Fuyo General Lease Co., Ltd. (50%)
Construction Cost	: ¥120 billion (POC’s share: ¥60 billion)
Completion & Delivery	: Scheduled for May 2028

Cable Laying Vessel (CLV)

To expand our operations from wind turbine construction to power cable laying, and with an eye toward future offshore wind development within Japan’s Exclusive Economic Zone (EEZ), we are constructing one of the world’s largest and most advanced self-propelled Cable Laying Vessels (CLV). This CLV will be equipped with two 5,000-ton carousels (cable tanks), a state-of-the-art trencher (burial machine), and a work-class ROV. It will be capable of handling not only bottom-fixed offshore wind installations, but also floating offshore wind projects and subsea direct current power transmission cable laying.

CLV Overview

Main Dimensions	: Length 150 m, Width 32.2 m
Foundation Design	: Salt Ship Design (Norway)
Hull Construction	: PaxOcean Group (Singapore)
Ownership Structure	: POC (50%), Fuyo General Lease Co., Ltd. (50%)
Construction Cost	: ¥31 billion (POC’s share: ¥15.5 billion)
Completion & Delivery	: Scheduled for February 2028

Overview of Trencher and Work ROV

Procurement Sources	: SMD (UK)
Ownership Structure	: POC 65%, Kojima Corporation 35%
Construction Cost	: ¥5.5 billion (POC’s share: ¥3.5 billion)

Offshore Installation Vessels			Scour Protection & Work Support Vessel
CP-8001	CP-16001	Sea Challenger	CP-5001
 Completed in 2018	 Completed in 2023	 Scheduled for modification completion in 2026	 Completed in 2012
Non-self-propelled (800t lift) / Owned by POC	Non-self-propelled (1,600t lift) / Owned by PKY*3	Self-propelled (1,600t lift) / Owned by JOM*4	Self-propelled (500t lift) / Owned by POC

*3: PKY Marine (a joint venture of Penta-Ocean Construction, Kajima Corporation, and Yorigami Maritime Construction)
*4: Japan Offshore Marine (a joint venture of Penta-Ocean Construction and DEME Offshore)