Promotion of GX —Responding to Climate Change Issues



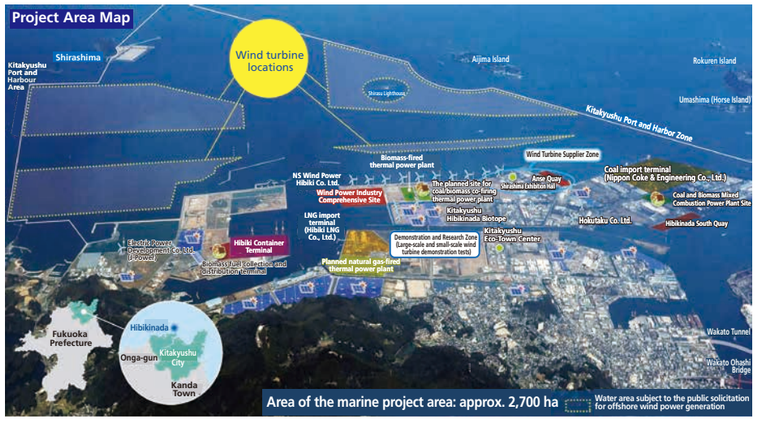
Panoramic View of Kitakyushu Hibikinada Offshore Wind Farm

A Front-runner in Offshore Wind Construction

The Kitakyushu Hibikinada Offshore Wind Farm Construction Project was Completed, and Commercial Operation Started in March 2026

The Kitakyushu Hibikinada Offshore Wind Farm Construction Project is a large-scale offshore wind construction project to install 25 wind turbines (9.6 MW class). The farm generates 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.). Installation of the 25th wind turbine was completed on August 31, 2025, and commercial operation started in March 2026.

*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

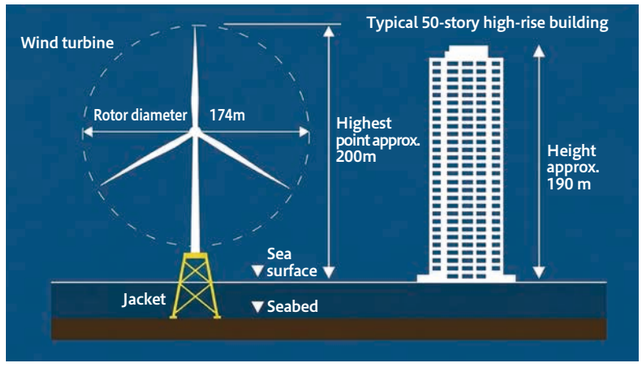
Contractor

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

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



Wind Turbine Installation Work (CP-16001)



A Front-runner in Offshore Wind Construction in Japan

In Japan, aiming for the achievement of carbon neutrality by 2050, the Japanese government has set targets for the development of 10 GW of offshore wind power by 2030 and 30–45 GW 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.
Under these circumstances, as a "front-runner in offshore wind construction," we are actively promoting the establishment of a system to meet the growing demand for offshore wind power facilities.

Upgrades to Our Third Self-propelled Offshore Installation Vessel "Sea Challenger" Completed, Full-scale Operations Underway in Taiwan

Upgrades to the self-propelled Offshore Installation Vessel (OIV) "Sea Challenger," owned by Japan Offshore Marine (ownership ratio 51%), a joint venture between POC and Belgium-based DEME Offshore Holding NV—including an increase in crane lifting capacity (from 900 t to 1,600 t), widening of the vessel, and extension of the legs—were completed in December 2025. As a result, together with CP-8001 (completed in 2018, owned by POC) and CP-16001 (completed in 2023, owned by PKY Marine*3), we own three OIVs. We are the only construction company in Japan capable of constructing multiple offshore wind farms at the same time with our own fleet.
"Sea Challenger" operated from February to August 2026 on wind turbine installation work at Taiwan's "Hai Long 3 Offshore Wind Farm."

*3: PKY Marine: a joint venture of Penta-Ocean Construction, Kajima Corporation, and Yorigami Maritime Construction (ownership ratio: 65%)

Floating Offshore Wind Initiatives

Together with the University of Tokyo, we have established a Social Cooperation Program on Innovation for Construction, Operation and Maintenance of Floating Offshore Wind Energy System within the UTokyo International Collaborative Research Organization on Floating Offshore Wind Energy and Related Technologies (UT-FloWIND).
In order to overcome Japan's uniquely severe environmental conditions and to realise floating offshore wind power as a mainstay source of renewable energy, we will carry out scientific and systematic technology development. In this Social Cooperation Program, we will bring together the wisdom and technology of academia and industry and work on R&D and the development of highly skilled professionals on the following three themes related to design, construction, stable operation, etc.

- **Theme 1** System design to enhance overall construction efficiency and resilience, taking into account metocean conditions in Japanese waters
- **Theme 2** Optimal floating structure design based on an integrated perspective from construction through operation
- **Theme 3** Development of a digital twin model of metocean conditions in Japanese waters

These three research themes are closely aligned with the initiatives of the Floating Offshore Wind Construction System Technology Research Association (FLOWCON), approved by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), in which we participate as a member. Through collaboration with the University of Tokyo, we will advance research on the rationalisation of construction methods and the sophistication of operations for floating offshore wind. By promptly sharing cutting-edge research outcomes not only within our company but across the broader industry, we aim to contribute to the establishment of a rational construction system for the large-scale deployment of floating offshore wind.

Lineup of Offshore Wind Power-related Work Vessels

Offshore Installation

CP-8001



Completed in 2018
Non-self-propelled (800t lift) / Owned by POC

CP-16001



Completed in 2023
Non-self-propelled (1,600t lift) / Owned by PKY
* PKY Marine (a joint venture of POC, Kajima Corporation, and Yorigami Maritime Construction)

Sea Challenger



Completed in 2014, upgraded in December 2025
Self-propelled (1,600t lift) / Owned by JOM
* Japan Offshore Marine (a joint venture of POC and DEME Offshore)

Scour Protection and Work Support

CP-5001



Completed in 2012
Self-propelled (500t lift) / Owned by POC

Power Cable Laying

CLV (Cable Laying Vessel)



Scheduled for completion in 2028
Self-propelled (10,000t cable) / Owned by POC and Fuyo General Lease Co., Ltd.

Foundation Construction (Monopile Foundations)

HLV (Heavy Lift Vessel)



Scheduled for completion in 2028
Self-propelled (5,000t lift) / Owned by POC and Fuyo General Lease Co., Ltd.

Towing of OIVs and Work Support

Kaiko



Completed in 2021
Self-propelled (6,000 hp) / owned by KWS