

January 20, 2025

Launch of the Floating Offshore Wind Construction System Technology Research Association (FLOWCON)

The Floating Offshore Wind Construction System Technology Research Association (FLOWCON) hereby announces that upon approval by the Ministry of Land, Infrastructure, Transport and Tourism, it has officially begun operations.

Offshore wind energy is envisaged as the key component in making renewable energy the nation's main source of electricity. Due to Japan's location as an island nation with seas on all four sides, high expectations have been pinned on the expansion of floating offshore wind. In order to achieve its large-scale introduction and cost reduction, process-wide optimization of offshore construction is desired.

Aiming to establish a rational construction system for floating offshore wind for its large-scale introduction, the Floating Offshore Wind Construction System Technology Research Association (hereinafter, FLOWCON) was established with seven initial members: four contractors with strong track records in marine civil engineering (Penta-Ocean Construction Co., Ltd., Toa Corporation, Toyo Construction Co., Ltd. and Wakachiku Construction Co., Ltd.), a steel engineering company with expertise in design, fabrication and installation of steel marine structures (Nippon Steel Engineering Co., Ltd.), a manufacturer of lifting machinery including various heavy cranes (IHI Transport Machinery Co., Ltd.), and a company renowned for design and manufacturing of steel floating structures (Sumitomo Heavy Industries, Ltd.)

The Association also welcomes three additional companies as supporting members: two companies with expertise in design and manufacturing of steel floating structures (Kanadevia Corporation and Japan Marine United Corporation) and a steel engineering company (JFE Engineering Corporation). Mr. Tetsushi Noguchi, the Senior Managing Executive Officer and Member of the Board at Penta-Ocean Construction Co., Ltd., will serve as the chairperson of the Association.

FLOWCON will aim at achieving large-scale and rapid construction of floating offshore wind at a reasonable construction cost, while ensuring construction productivity, reliability and safety comparable to bottom-fixed construction. To this end, FLOWCON will undertake the joint research and technological development of: 1. Studies on rational construction systems for floating offshore wind, 2. Development of technologies required for wind turbine installation at the offshore work base, and 3. Development of metocean prediction system for offshore wind construction.

First, FLOWCON will begin the study focusing on the “installation process of wind turbines onto substructures”, which is deemed most critical in offshore construction, where they will conduct a study of comparison of installation at the base port versus installation at the offshore work base. For the details of FLOWCON, please refer to the attached reference material.

The above studies will be based on the content (the offshore construction scenario, etc.) discussed in the “Public-private Working Group on Offshore Construction of Floating Offshore Wind Generation, etc.” Further, by working with the Floating Offshore Wind Technology Research Association (FLOWRA, approved by the Minister of Economy, Trade and Industry) which is led by the operators, FLOWCON will endeavor to contribute to the efficient deployment and expansion of floating offshore wind.

Outline of the Floating Offshore Wind Construction System Technology Research Association (FLOWCON)

(reference material)

Name

Floating Offshore Wind Construction System Technology Research Association (FLOWCON)

Establishment

January 20, 2025 (Reiwa 7)

Objectives

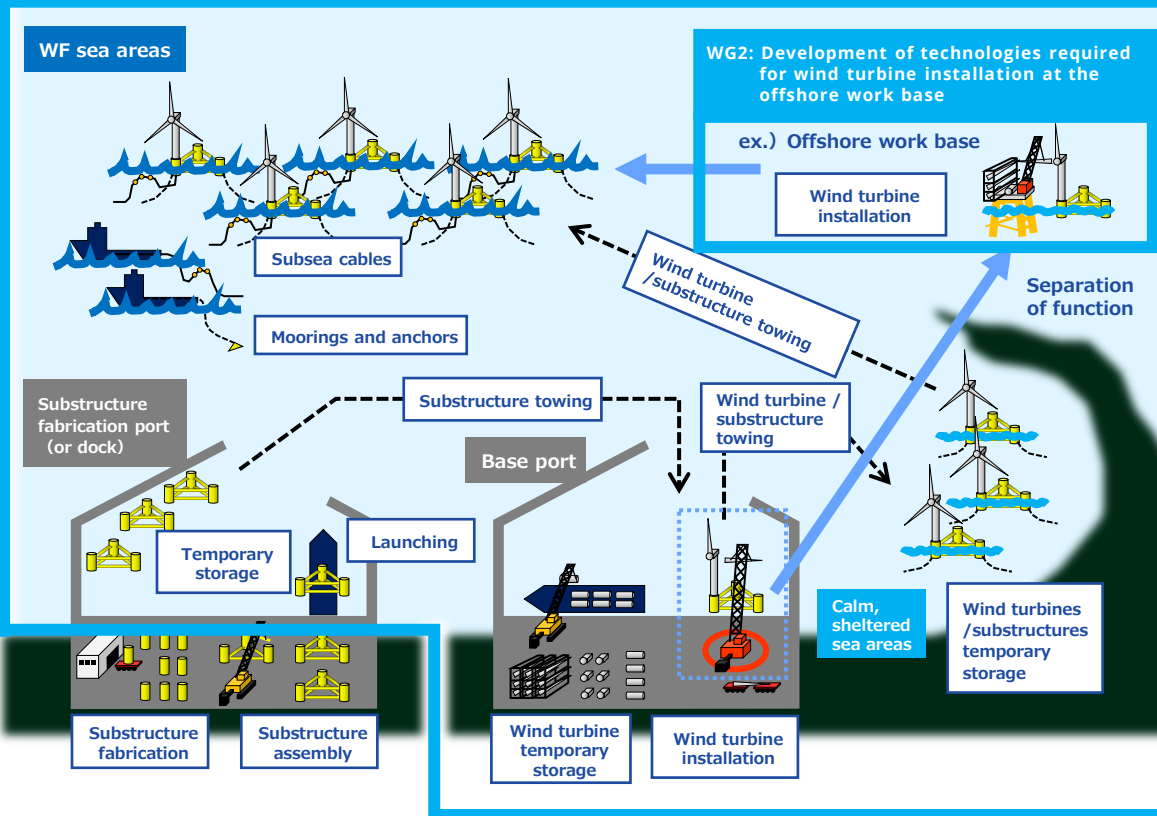
Toward establishment of a rational construction system for large-scale introduction of floating offshore wind, FLOWCON will aim at: Achievement of 1. Large-scale and rapid construction, 2. Reasonable construction cost

Research details

- (1) Studies on **rational construction systems** for floating offshore wind
(productivity improvement in wind turbine installation onto substructures) [WG1]
- (2) Development of **technologies required** for wind turbine installation at the offshore work base [WG2]
- (3) Development of **metocean prediction system** for offshore wind construction [WG3]

WG1: Studies on rational construction systems for floating offshore wind

WG3: Development of metocean prediction system for offshore wind construction



FLOWCON's Structure

General Assembly

Board of Directors

Management Committee

Secretariat

WG 1

WG 2

WG 3

Members

Members (seven)

Penta-Ocean Construction
Toa Corporation
Toyo Construction
Wakachuku Construction
Nippon Steel Engineering
IHI Transport Machinery
Sumitomo Heavy Industries

Supporting members (three)

Kanadevia Corporation,
JFE Engineering Corporation,
Japan Marine United Corporation

Advisors
(three)

※scheduled to participate

Advisory

Technology exchange

-The Coastal Development Institute of Technology
-The Port and Airport Research Institute
-The Specialists Center of Port and Airport Engineering

Floating Offshore Wind Technology Research Association (FLOWRA)