

# Main NEDO projects 1

## ~ Development of next-generation technology that will help promote the introduction of floating offshore wind power generation $\sim$

Extracting, organizing, and verifying technology issues with a view to

## the future of Green Innovation Fund projects

Floating offshore wind power generation technology is still under development in Europe, and although many issues remain in terms of safety and cost reduction, the development of new technologies continues to progress, just as with anchored offshore wind power generation. It is being In order for Japan to lead the world in floating offshore wind power generation, we will need to pay close attention to the forward-looking technologies of the Green Innovation Fund project, and evaluate not only the technology itself, but also its feasibility and cost reduction. It is important to properly evaluate the reduction rate and to quantitatively understand the issues facing its introduction in Japan.



#### **Technical development of full concrete compact** Theme semi-sub type floating body and deep water mooring

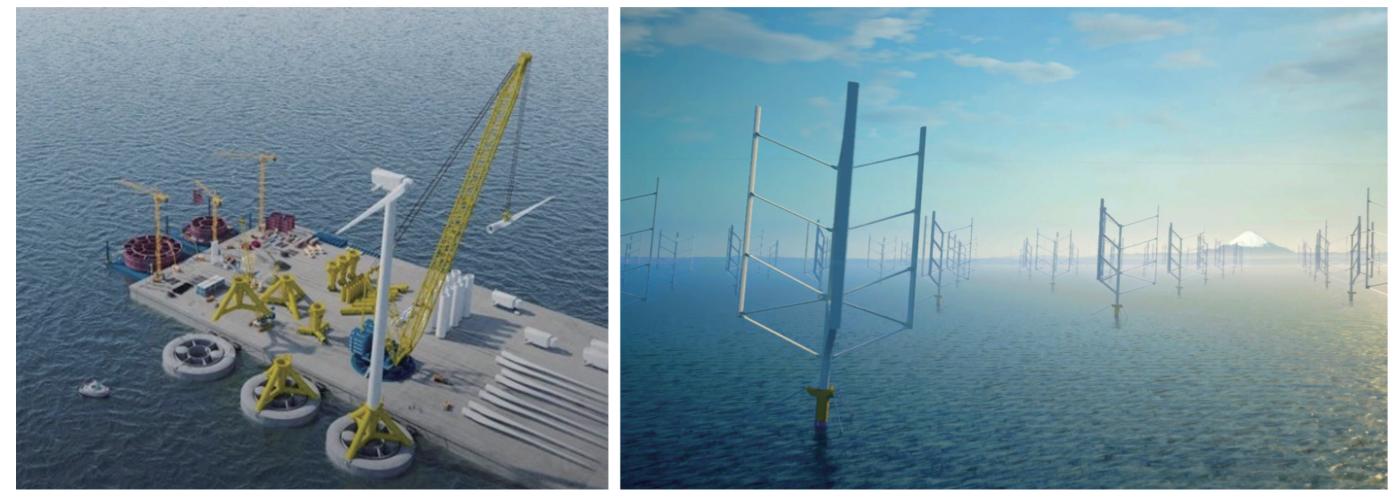
Tokyo Electric Power Company Holdings, Incorporated Hokkaido Electric Power Company, Incorporated **TAISEI CORPORATION** 

#### **Development of TLP (tension leg platform) type** Theme **2** hybrid floating offshore wind turbine support structure

#### **OBAYASHI CORPORATION**

Verification of feasibility of large floating vertical axis **Theme** wind turbine

Albatross Technology Inc. Electric Power Development Co.,Ltd. Tokyo Electric Power Company Holdings, Incorporated Sumitomo Heavy Industries Marine&Engineering Co., Ltd. Kawasaki Kisen Kaisha, Ltd.



Theme ④

# Main NEDO projects (2)

 $\sim$  Offshore wind farm development support project  $\sim$ 

**TODA CORPORATION** Theme **5** \*From press releases and provided materials from each company

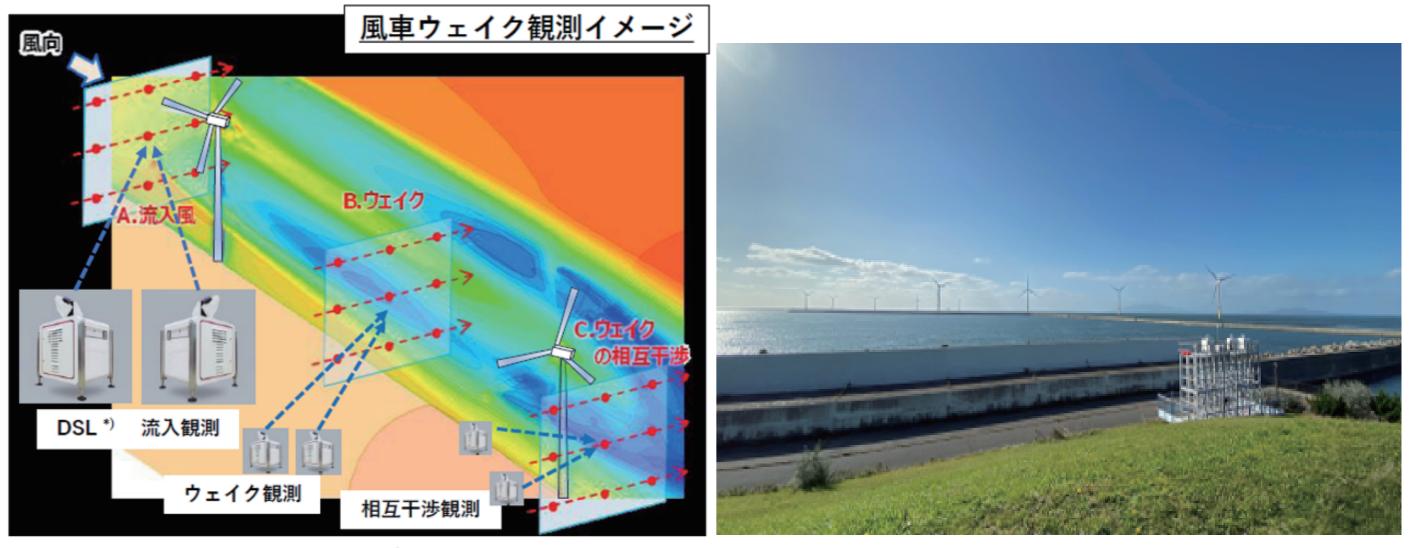
**Research and development of double donut spar type** Theme ④ floating wind power generation system

Kumagai Gumi Co., Ltd. Saga University Yokohama National University CHODAI CO., LTD

**Development of technology to install wind turbines** Theme **5** all at once to achieve cost minimization

### Research and development on observation and evaluation methods for wind turbine wakes

When constructing offshore wind power generation, the placement of wind turbines, etc. is considered in advance based on highly accurate wind condition data. It is known that in wind farms consisting of multiple wind turbines, the amount of power generated decreases due to a loss or disturbance in wind speed called wind turbine wake. Therefore, in order to increase the power generation efficiency of offshore wind farms and reduce power generation costs by maximizing power generation, it is important to correctly observe and evaluate wind turbine wakes and accurately understand their behavior and impact.



鉛直方向、水平方向のウェイクの風速・乱流強度分布観淵