January 24, 2022

Tokyo Gas selected as the prospective recipient in NEDO's Green Innovation Fund Project / Offshore Wind Power Cost Reduction Project

TOKYO GAS Co., LTD.,

TOKYO GAS Co., LTD., (President: UCHIDA Takashi, hereinafter referred to as "Tokyo Gas") is pleased to announce that on January 21, 2022, Tokyo Gas was selected by New Energy and Industrial Technology Development Organization (NEDO) as a prospective recipient of the "Green Innovation Fund Project / Offshore Wind Power Cost Reduction Project" for the development of low-cost technology for manufacturing and installing floating foundations.[*1]

Tokyo Gas will contribute to the expansion of floating offshore wind power in Japan through the research and development of mass production and cost reduction of the Windfloat® platform[*2] of Principle Power[*3] , Tokyo Gas became one of the major shareholders of Principle Power in May 2020.

<Adopted Theme>

Mass production and cost reduction of manufacturing and installing semi-submersible floating foundation for early social implementation

<Main Research and Development Programs>

- **Optimization of floating foundation**
  Optimized design of floating foundation corresponding to larger wind turbine (15MW scale) and severe weather and sea conditions in Japan
- **Mass production of floating foundation**
  Establishment of design and mass production method of floating foundation suitable for serial production
- **Optimal design of hybrid mooring system**
  Optimized design of hybrid mooring system for floating foundation by the combination of steel mooring and synthetic fiber mooring rope
- **Development of low-cost construction technology**
  Development of low-cost construction technology corresponding to severe weather and sea conditions in Japan

“Photo courtesy of Principle Power. Artist: DOCK90”

＊1：https://www.nedo.go.jp/news/press/AA5_101505.html

＊2：This is a semi-submersible floating structure with proven track records in the oil and gas field. In addition to the structural stability, the floating structure is stabilized by dynamic ballast control (a method to reduce weight by making the structure hollow, filling it with water, and adjusting/controlling the amount of water according to the weather condition), which is effective in reducing the impact on the power generation and durability of the wind turbine caused by the swaying of the floating foundation.

＊3：https://www.tokyo-gas.co.jp/Press_e/20200527-01e.pdf

■Comments from SASAYAMA Shinichi, Senior Managing Corporate Executive Officer, Tokyo Gas

In Japan, there are limited shallow-water sites, and there is great potential for floating offshore wind power that can be installed in deep water. We are very pleased to have been selected as the prospective recipient of this project because we believe the floating foundation (semi-submersible type) based on Principle Power's Windfloat® technology, is a promising method for the future expansion of floating offshore wind power in Japan, as it is suitable for commercial operation due to its excellent stability against waves, wind, and other turbulence that can affect wind turbines and power loss, and also because it can be installed in a wide range of water depth. Tokyo Gas Group has set the goal of acquiring 6 GW of renewable energy sources[*4] in its management vision, "Compass 2030," and has been working to achieve this goal. Through this project, we will develop technologies for mass production and cost reduction, aiming to become the top runner in floating offshore wind power.

＊4：https://www.tokyo-gas.co.jp/Press_e/20211126-02e.pdf