

Press release

TEPCO Renewable Power, Incorporated
Tetra Spar Demonstrator ApS

TEPCO Renewable Power joins the TetraSpar demonstration project to test industrialized floating offshore wind foundation

- **TEPCO Renewable Power (TEPCO RP) has joined the TetraSpar floating foundation demonstration project, alongside Shell, RWE, and Stiesdal Offshore Technologies**
- **TEPCO RP is a wholly owned subsidiary of Tokyo Electric Power Company Holdings and brings valuable competences to the project**
- **Commissioning is scheduled for 2021**

3 February 2021

The TetraSpar full-scale demonstration project has completed the onshore assembly of an innovative factory-made floating offshore wind foundation in the port of Grenaa, Denmark. As the project is ready to move onto the next phases, TEPCO RP joins the partnership, bringing valuable competences to the project.

The TetraSpar foundation is a tetrahedral structure assembled from tubular steel components. The components were manufactured at the facilities of the Danish wind turbine tower manufacturer Welcon A/S. The components were then transported to the port of Grenaa over the summer 2020 and were assembled in October and November 2020 in less than two months. The assembly involves no welding or other special process. All relevant methods required for manufacturing and assembly have been verified, and key elements of the assembly process took less time than previously expected. This indicates that the standardization and industrialization approach of the TetraSpar concept could be able to deliver cost and logistics advantages in comparison to other existing floating concepts.

Seiichi Fubasami, President of TEPCO RP, said: “We are very happy to be able to participate in this groundbreaking project. The TetraSpar technology can also be utilized in Japan’s natural conditions and a more efficient supply chain can be established closer to the project sites. We believe that it is a promising technology that can play an important part in efforts to promote the transition to renewable energies as primary energy sources. Our corporate philosophy is ‘Harnessing the Natural Resources to Energy, and further to Society’, and we intend to promote the use of renewable energies within Japan and overseas.”

Henrik Stiesdal, Chairman of the board of directors of Tetra Spar Demonstrator ApS, said: “We are very excited about the expanded and now strengthened partnership with TEPCO RP on board. TEPCO brings valuable competences to the project, both from its research into floating offshore wind power, and from the power sector in general. With TEPCO onboard we can expand the scope of the demonstration project in several ways, including an increased technical range of testing. Completing the onshore assembly of our first full-scale demonstration project was a very important milestone for the consortium. We would not have reached this result without the support from, and engagement by, our partners and suppliers. We now look forward to further enhancing the strength of the partnership with TEPCO RP during the next phases of the project execution.”

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Following the launch of the foundation in 2021, the wind turbine will be mounted on the foundation at the quayside using a land-based crane. From there, the combined structure will be towed to the test site in the northern part of the North Sea, moored to the seabed with three anchor lines and connected to the electrical grid. It will be located approximately 10km from shore in water depths of 200m at the test site of the Marine Energy Test Centre (Metcentre) near Stavanger in Norway. The demonstration project will use a 3.6MW direct drive offshore wind turbine from Siemens Gamesa Renewable Energy. The commissioning is planned for summer 2021.

The Tetra concept offers important competitive advantages over existing floating wind concepts, with the potential for leaner manufacturing, assembly, and installation processes, and with lower material costs.

Through their collaboration on this demonstration project, the four partnering companies will obtain knowledge in construction, installation, and operation, together with detailed data on these areas, and further refine the TetraSpar technology. The partners will make full use of the results obtained to expand the possibilities of offshore wind power and contribute to the realization of a clean and sustainable carbon-neutral society.

The share structure after TEPCO RP's project entry is: Shell: 46.2%. TEPCO RP: 30.0%. RWE: 23.1%. Stiesdal Offshore Technologies 0.7%.

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About TEPCO RP

TEPCO RP is a wholly owned subsidiary of Tokyo Electric Power Company Holdings, Incorporated ("TEPCO Holdings"), the largest power company in Japan. In April 2020, TEPCO RP took its first steps as a company dedicated solely to the renewable energy generation business, the operation of which it assumed from TEPCO Holdings. For many years, TEPCO RP has used a firm business model that covers everything from the planning and construction to the operation & maintenance of hydroelectric and wind power generation facilities. The total capacity of the company's hydroelectric, wind, and solar power facilities is approximately 10 gigawatts, and our technical prowess has enabled us to maintain the largest amount of facilities in Japan. In order to seize the significant business opportunities inherent in the global trend towards decarbonization and meet the growing need for CO2-free energy, we aim to newly develop approximately 6 gigawatts to 7 gigawatts of power generation facilities within and outside of Japan by the mid 2030s, and we will promote the transition to renewable energies as primary energy sources. In the area of wind power generation, we have performed demonstration project on Japan's first bottom fixed wind power plant, located off the coast of Choshi, and put this demonstration power plant into commercial use. TEPCO RP will promote the domestic and overseas use of renewable energies and contribute to the creation of a clean and sustainable, decarbonized society by harnessing earth's natural resources to the best of our ability in order to provide a stable supply of electricity at low cost.

About RWE Renewables

RWE Renewables is one of the world's leading renewable energy companies. With around 3,500 employees, the company has onshore and offshore wind farms, photovoltaic plants and battery storage facilities with a combined capacity of approximately 9 gigawatts. RWE Renewables is driving the expansion of renewable energy in more than 15 countries on four continents. By the end of 2022, RWE Renewables targets to invest €5 billion net in renewable energy and to grow its renewables portfolio to 13 gigawatts of net capacity. Beyond this, the company plans to further grow in wind and solar power. The focus is on the Americas, the core markets in Europe and the Asia-Pacific region.

About Shell New Energies

Shell New Energies is building an integrated power business that will provide customers with low-carbon and renewable energy solutions. The business we are building spans trading, generation and supply and offers integrated energy solutions – from hydrogen, to solar, wind and electric vehicle charging – at scale, while using nature and technology to capture emissions from hard-to-abate sectors of the energy system.

About Stiesdal Offshore Technologies A/S

Stiesdal Offshore Technologies specializes in the development and supply of innovative, industrialized solutions for offshore wind power. The company is an affiliate of Stiesdal A/S, a company developing climate solutions, including offshore foundations, energy storage, Power-to-X solutions and carbon-negative fuels. The first product developed by Stiesdal Offshore Technologies is the TetraSpar floating offshore foundation, and new Tetra configurations are in the pipeline. All are manufactured using industrial processes, and all can be deployed from any ordinary port using only land-based cranes. No offshore installation vessels are needed. Stiesdal Offshore Technologies carries out its projects in cooperation with Welcon A/S, the world's leading manufacturer of offshore wind towers. Following successful testing of the first Tetra foundation, Stiesdal Offshore Technologies will offer the Tetra foundation concept on a worldwide scale.