

Press release

World's first: Innovative steel collars installed at RWE's Kaskasi wind farm in the German North Sea

- **RWE-patented technology deployed for the first time**
- **New monopile foundation collars increase load-bearing capacity**
- **DEME Offshore carried out installation of 3 foundation collars - each weighs 170 tons**

Essen, 8 June 2022

An innovative foundation technology is celebrating its premiere at RWE's Kaskasi offshore wind farm: For the first time ever in the renewables industry special collars were installed around the monopile foundation at seabed level. The 'collared monopile' is a design based on a RWE patent. The new technology will provide additional support for lateral loading, increase the bearing capacity and improve the structural integrity of the entire foundation. Installation works were carried out by DEME Offshore.

Sven Utermöhlen, CEO Offshore Wind, RWE Renewables: "At our Kaskasi offshore wind farm we use innovative technologies that will set standards throughout the entire offshore industry. It's a great credit to the project team and our contractors that we developed, manufactured and safely installed the three innovative foundation collars. The collared monopile, a patented solution developed in-house, will help to increase stability in difficult ground. This showcases our technical expertise as the second largest player in offshore wind globally."

Collared monopiles strengthen behaviour of entire structure

Kaskasi is RWE's sixth wind farm off the German coast, the 342-megawatt project is currently under construction 35 kilometres north of the island of Heligoland. In total three innovative foundation collars were successfully embedded into the seabed – each 7 metres high, weighing 170 tons. The installation in water depths of up to 25 metres was carried out by the jack-up vessel 'Sea Challenger' from DEME Offshore. The space between collar and monopile foundation was filled with grout material, creating finally a stable connection. RWE will carry out accompanying tests to verify that the collar improves the structural behaviour in comparison with standard monopiles.

The detailed design of the collars was developed by the German civil engineering company JBO based on the RWE patent, Bladt Industries was selected as manufacturer and DEME Offshore was responsible for the transportation and installation.

RWE

Bas Nekeman, Business Unit Director Northern Europe at DEME Offshore, emphasises: “Whilst these monopile foundation collars represent only a relatively small scope of work DEME Offshore is performing at the Kaskasi offshore wind farm, we are extremely happy achieving this important milestone for the project. The installation of these type of structures is a world’s first which required us to develop a tailor-made solution. The completion of the three monopile foundation collars demonstrates our ability to deliver our customers the right technical know-how, operational excellence and team spirit required for the successful delivery of these types of innovative projects.”

RWE tests world’s first recyclable wind turbine blade

The collared monopile is only one example of how RWE is leading technological development in the offshore wind industry. Further innovations introduced at Kaskasi are the vibro pile driving technology and the ‘Self-Expanding Pile Shoe’, a new foundation solution with a concrete ring that expands in the seabed. In addition, a sustainable product will be celebrating its German premiere: At Kaskasi offshore wind farm Siemens Gamesa and RWE will equip a number of wind turbines with recyclable rotor blades. The blades are the first of their kind, thanks to an innovative resin that enables components to be recycled for new applications at the end of their lifecycle. Installation of the wind turbines is scheduled to start this summer. By the end of 2022 a total of 38 wind turbines are to be fully operational. Then, the Kaskasi offshore wind farm will have the capacity to supply the equivalent of approximately 400,000 households with green electricity every year.

Tailwind for RWE and the energy transition in Germany

RWE is one of the leading companies in the field of renewable energies and No. 2 worldwide in offshore wind. As part of its ambitious investment and growth strategy, “Growing Green”, the company plans to triple its global offshore wind capacity by 2030, thus increasing from the current 3 gigawatts (GW) to 8 GW. Also in Germany, RWE is stepping up the pace: by 2030, the company intends to invest up to 15 billion euros in the green energy sector. RWE continues to expand in the offshore wind energy market too: together with its Canadian partner, Northland Power, RWE is driving forward the development of a large offshore wind cluster in the German North Sea. The partners plan to construct a cluster of three wind farms north of the German island of Juist with a total installed capacity of over 1.3 GW, which are expected to commence operation in 2026 and 2028 respectively. These planned offshore wind farms will be able to produce enough green electricity to meet the requirements of up to 1.6 million households per year. RWE is also developing a further wind farm in the direct vicinity with a capacity of 225 megawatts.

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Pictures and a graphic for media use are available at the [RWE Media Centre](#)

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DEME Offshore

For the installation of the three collars [DEME Offshore](#) developed a complex and tailor-made concept including underwater cleaning of the monopile and boat landing protection. For the embedment of the collars into the seabed plug and play ballast weight frames, adding up to a total weight of 1,000 ton, were designed and built. For the filling with grout material Remotely Operated Vehicle activities were carried out.

RWE

RWE is leading the way to a green energy world. With an extensive investment and growth strategy, the company will expand its powerful, green generation capacity to 50 gigawatts internationally by 2030. RWE is investing €50 billion gross for this purpose in this decade. The portfolio is based on offshore and onshore wind, solar, hydrogen, batteries, biomass and gas. RWE Supply & Trading provides tailored energy solutions for large customers. RWE has locations in the attractive markets of Europe, North America and the Asia-Pacific region. The company is responsibly phasing out nuclear energy and coal. Government-mandated phaseout roadmaps have been defined for both of these energy sources. RWE employs around 19,000 people worldwide and has a clear target: to get to net zero by 2040. On its way there, the company has set itself ambitious targets for all activities that cause greenhouse gas emissions. The Science Based Targets initiative has confirmed that these emission reduction targets are in line with the Paris Agreement. Very much in the spirit of the company's purpose: Our energy for a sustainable life.

Forward-looking statements

This press release contains forward-looking statements. These statements reflect the current views, expectations and assumptions of management, and are based on information currently available to management. Forward-looking statements do not guarantee the occurrence of future results and developments and are subject to known and unknown risks and uncertainties. Actual future results and developments may deviate materially from the expectations and assumptions expressed in this document due to various factors. These factors primarily include changes in the general economic and competitive environment. Furthermore, developments on financial markets and changes in currency exchange rates as well as changes in national and international laws, in particular in respect of fiscal regulation, and other factors influence the company's future results and developments. Neither the company nor any of its affiliates undertakes to update the statements contained in this press release.

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