

RWE Deploys Innovative Noise Abatement Technology at Sofia Offshore Wind Farm

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RWE, a leading global power company, is utilizing advanced noise mitigation technology during the construction of its 1.4 GW Sofia offshore wind farm, located 195 kilometers off the UK coast on Dogger Bank. The project site falls within the Southern North Sea Special Area of Conservation (SAC), a protected zone with stringent regulations on underwater noise disturbance to safeguard harbor porpoises.

To minimize the impact of piling operations on marine wildlife, including harbor porpoises, dolphins, and whales that rely on ultrasound for navigation, RWE has implemented a large-scale bubble curtain system. This technology effectively reduces the propagation of underwater noise, mitigating potential disturbances to these sensitive species.

The bubble curtain system involves the deployment of a perforated hose, forming a 180-meter-wide ring on the seabed around each foundation installation site. Compressed air is then pumped through this hose, creating a continuous stream of bubbles that ascend to the surface. This bubble barrier disrupts and slows down sound waves, significantly lowering noise levels generated during the piling process.

RWE's adoption of this technology aligns with industry best practices, with the bubble curtain system having been successfully deployed on previous offshore wind projects such as Vattenfall's DanTysk wind farm in Germany and more recently at EnBW's He Dreiht wind farm in Germany and the Vineyard Wind 1 project in the United States.

The monopile foundations for the Sofia project are being installed by Van Oord's jack-up vessel Aeolus. As of March, over 60 of the 100 wind turbine foundations were in place, with the first wind turbine also successfully installed by Cadeler's new vessel Wind Peak.

The 1.4 GW Sofia offshore wind farm is on track for commissioning in 2026. Upon completion, it will have the capacity to generate enough clean electricity to power the equivalent of 1.2 million UK homes, contributing significantly to the UK's renewable energy targets. RWE's commitment to utilizing advanced noise abatement technology underscores its dedication to responsible development and minimizing environmental impact during the construction of this major offshore wind asset.