



DEME's offshore installation vessel 'Orion' successfully completes the near 15 MW turbine foundation installation project in Scotland and heads to US

15 April 2024

DEME's flagship 'Orion' completed monopile installation works on Ocean Winds' Moray West offshore wind farm project in Scotland. Despite harsh winter conditions, DEME swiftly installed 29 monopiles in approximately two months. Meanwhile, DEME's DP2 jack-up vessel 'Apollo' is installing the transition pieces.

The Moray West offshore wind farm, developed by Ocean Winds in Scotland's Moray Firth, will generate 882 MW, powering over 1.3 million homes. A key industry milestone has been delivered by DEME installing the first complete foundations for near 15 MW turbines. Dedicated novel tools were deployed such as a Quad Vibro Hammer and pioneering bolting equipment for M90 bolts.

Progress despite harsh weather conditions

'Orion' transported the 29 monopiles, which weigh up to 2000 tonnes each, from the port of Invergordon and installed them in full DP mode, without the use of anchors. Orion's specially designed and high-tech motion compensated pile gripper, in combination with its 5,000-tonne crane and vessel ballasting techniques, enabled efficient operations despite the notorious Scottish winter weather conditions.

Innovative pile gripper and Vibro Hammer utilised

The Vibro Hammer was used to overcome the risks of pile-runs, due to the combination of soft and hard soil layers. Afterwards the piles were hammered to the target depth with a hydraulic Impact Hammer. DEME's jack-up vessel 'Apollo' is performing the transition piece installation which is expected to be finalised in the coming months. This efficient way of working accelerated and de-risked the schedule of the project which has a very limited installation period.

Specialised team and American crew members

DEME's success at Moray West wouldn't have been possible without its international team of specialist engineers and crew, including the American crew members who became an integral part of the team. This highly skilled group gained valuable additional experience, which will be instrumental for upcoming offshore wind projects in US waters.

Ocean Winds Project Director Pete Geddes comments: "I am absolutely delighted with DEME Offshore's performance whilst working on the Moray West project. They have executed the monopile installation campaign efficiently, professionally, and safely. DEME has been solution-focussed, flexible and proactive during the offshore construction campaign, and continue to be so during the ongoing TP installation campaign - well done DEME!"

Lucien Romagnoli, Business Unit Director UK, Ireland & Belgium at DEME Offshore, comments: "I am proud of our fantastic team and Orion's impressive capabilities. With the deployment of the new installation technology, we were able to complete this part of the DEME scope smoothly and efficiently. It truly demonstrates Orion's efficiency, particularly its double-stage motion-compensated gripper. We are eager to continue the momentum with 'Apollo' and seamlessly complete the transition piece installation, delivering another project to the full satisfaction of our client."

'Orion' on its way to next project in the US

Meanwhile 'Orion' has started its voyage across the Atlantic Ocean back to the United States, heading to its next project in Virginia.

Jan Klaassen, Business Unit Director Americas at DEME Offshore, adds: "I am looking forward to welcoming 'Orion' back in the US, this time in the great Commonwealth of Virginia. The 'Orion' is scheduled to arrive in the Port of Norfolk, Virginia in late April where she will prepare for the installation of 176 foundations on the Coastal Virginia Offshore Wind (CVOW) project for our client Dominion Energy. The combined technology of the Vibro Hammer and Impact Hammer will also be used on the CVOW project, in combination with state-of-the-art noise mitigation technologies to protect marine mammals."