Press release

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Onshore milestones met on Moray East Offshore Wind Farm project

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- 300,000km of cable laid across a 34.5km onshore route to connect the power generated offshore, to homes and businesses
- Innovative drilling techniques used to limit the impact on people, wildlife and the environment

Completion of the Moray East offshore windfarm came a step closer as Siemens Energy, lead contractor for the 950MW project, announced work to install the onshore cable had ended.

The onshore cable, which starts near Banff, Aberdeenshire, takes the power generated offshore from the three 220kV subsea cables, and transmits it to the new onshore substation at New Deer, where it connects into the grid.

The works, which started in October 2018 saw more than 300,000 meters of high voltage cable laid across the 34.5km route. The cables, manufactured by TFK Cables in Poland, are loaded onto specialist cable drum trailers, and delivered by road and ferry, ready for installation.

Before work to lay the cable began, onshore groundworks and assessments were carried out. As an environmentally responsible contractor, Siemens Energy looks to limit the environmental impact of its construction work, and following these assessments, subcontracted the work to a specialist contractor VolkerInfra, with vast experience in Horizontal Directional Drilling (HDD).

HDD is a minimal impact trenchless method of installing underground cables, using a surface-launched drilling rig, which reduces the impact to people,

wildlife, and the environment. It also removes the need to interface with existing utility infrastructure, such as water and gas pipelines.

Before excavations began and in total 300,000 cubic metres of topsoil was removed along the route and preserved, ready to be replaced upon project completion, restoring the land to its original condition.

HDD was used across the length of the cable route where there were several environmentally sensitive areas due to the type of landscape, animals, or plants in the area as well as to completely remove the need to close roads.

One such area is the River Deveron, which is home to salmon, sea trout and brown trout, as well as many protected animals including otters, pine martens, badgers, ospreys, and Scottish wildcat.

This sensitive landscape was protected by using HDD, as it meant the cable was pulled through a U-shaped tunnel dug deep under the river. The same technique was also used to tunnel under other watercourses, utility infrastructure pipelines and roads such as the A947.

By tunnelling under, rather than cutting a trench through the sensitive areas, disturbance to landscapes and protected species was greatly reduced. Furthermore, by tunnelling under roads, disruption to the public was also limited, as it removed the need for roadworks and road closures.

In addition, other parts of the route where there were badger sets and water vole nests HDD was the only technique to ensure this wildlife was not impacted. This included Auton Burn watercourse where HDD was the only technique available which would not spread Monkey Flower – an invasive plant species which grows natively in the river course.

Mark Pilling, Head of Transmission Solutions, Siemens Energy UK&I, said: “The onshore cable is a vital part of the windfarm, bringing the energy generated offshore into the onshore substation and into people’s homes.

"Using horizontal directional drilling has not only limited the environmental impact of the project, but also removed a large amount of disruption to people's lives in this rural area. It is likely most people will not know that 34km of cable has been laid through the landscape. We are delighted this part of the project is completed and we are a step closer to bringing the low cost, low carbon power to homes and businesses across Scotland."

Work to complete the onshore substation is progressing. All civils work on the 20.5-hectare site is nearing completion and all ducting is now installed.

Three super grid transformers and shunt reactors are now commissioned, with works to install, commission and test the high voltage cables progressing at pace.

Currently around 245 people are working on site, with all work to due to be finalised onshore in the first half of 2021.

The windfarm, 22 km off the Aberdeenshire coast in Scotland, will have an installed generation capacity of 950MW after its completion. It will be capable of providing low cost, low carbon power to the equivalent of one million Scottish homes, 40% of the country, making a significant contribution to meeting Net Zero ambitions.

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