

Siemens wins order for its largest offshore grid connection in the UK to date

- **Moray East project has a capacity of 950 MW representing Siemens' largest UK grid access project to date**
- **Siemens to deliver onshore substation and three offshore transformer modules (OTM®)**
- **After commissioning Moray East will provide enough clean energy to power almost one million UK homes**

Siemens has been awarded an order to connect the Moray East offshore wind farm to the grid. Moray East is being developed by a joint venture company owned by EDP Renewables, a subsidiary of the Portuguese utility Energias de Portugal, ENGIE, a global energy and services group based in Paris, and Diamond Generation Europe Ltd., a subsidiary of Mitsubishi Corporation. The Siemens' scope of supply covers all necessary components, such as the offshore transformer modules (OTM®) which transform the output of the wind turbines from 66 kilovolts (kV) to the transmission voltage of 220 kV, as well as the onshore station which transforms the electricity into 275 kV for feeding it into the national transmission grid. This project will be the 11th offshore wind farm to be connected to the mainland by Siemens in the UK. Moreover, Moray East marks the largest offshore grid connection in terms of transmission capacity and order entry Siemens has delivered or been awarded in the UK to date.

The windfarm, 22 kilometers (km) off the Aberdeenshire coast in Scotland, will have an installed generation capacity of 950 megawatts (MW) after its completion. For the grid connection, Moray East will incorporate Siemens OTM®. As a world's first, three OTM® are linked together to cover the rated capacity of 950 MW of the Moray East wind farm. As an OTM® is significantly smaller in size and weight compared to conventional alternating current platforms, there's no need for special vessels for

transport and installation. Thus, this innovation will save time and money and highlights Siemens' commitment to helping power developers improve efficiencies and the delivery program.

Siemens will be responsible for the complete onshore substation including three SVC Plus as well as the three offshore substation platform topsides. In addition, it will also install a 30 km underground export cable to the onshore substation at New Deer in Aberdeenshire for the power generated. Work began on site in September 2018 to prepare the location which will house the onshore substation. It is anticipated Moray East will be operational by April 2021.

Moray East represents a step-change in the delivery of renewable power in terms of cost and scale. The project will provide an abundant supply of low-carbon electricity at a highly competitive price: "The 950 MW offshore windfarm will generate power at £57.50/MWhr which is less than half the price of power generated by offshore windfarms under construction today", said Ralf Christian, CEO at Siemens' Energy Management Division. "The grid connection is one lever that can help driving down costs."

Mirko Düsel, CEO Transmission Solutions at Siemens Energy Management, said: "These platforms for large-scale renewable projects make me incredibly proud. Not only do they incorporate our engineering excellence on a massive scale, they showcase our commitment to renewables and clean energy generation. We are delighted our market-leading technology is being used on this project."

Oscar Diaz, Project Director for Moray East, said: "This is a landmark moment for a landmark project, making renewable generation highly competitive. We are grateful to local stakeholders who continue to engage with us on a range of initiatives to enable the economic opportunities created by the project to be realized as we move to construction."

Siemens is a global leader in offshore grid connection and has extensive experience in this area. To date around 7,000 MW of offshore wind power has been connected to the grid by Siemens; a further 3,900 MW is contracted. Moray East will be Siemens' 11th offshore project in the UK and the 14th connected with alternating current (AC) technology globally.

This project also supports the local industry by providing supplies and services to Siemens. Local Scottish contractor, I&H Brown, has already been appointed to manage the site enabling work by Siemens. The project will be delivered from Siemens' Manchester office and it is anticipated several further supply chain contracts will be available for UK supply chain companies, with details due to be announced in the coming months.

This press release and a press picture are available at

www.siemens.com/press/PR2018120110EMEN

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