

# SSE Renewables chooses SEANEX connection system for Seagreen offshore wind farm project

Winterbach, Germany – 20 April 2021 – Scottish operator SSE Renewables and turbine manufacturer Vestas have selected the offshore-optimised Seanex inner cone system by Pfisterer to connect more than 100 10MW wind turbines in the Seagreen project in the Western North Sea. The system offers significant benefits during installation and continuous operation of the 66 kV inter-array cabling.

Seagreen, Scotland's largest offshore wind farm project is under construction 27 km off the Angus coast. It is a joint venture between SSE Renewables and Total. Pfisterer is supplying Seanex joints as well as preassembled and tested cables with Seanex connectors for the construction. Each of the more than 100 Vestas V164-10MW turbines will be connected using Seanex accessories. The joints and preassembled cables link the submarine cables to the gas-insulated switchgear [GIS] in the tower of the turbines.

"We are pleased that our Seanex solution has been selected for this project. This confirms that in Seanex, we have developed a compact, robust connection system that is perfectly suited to 66 kV offshore wind farms," says Dr. Peter Müller, Head of Renewables at Pfisterer. "The Seanex connection system has helped us simplify our fabrication and delivery activities by providing a clear interface point between the inter-array cables and the turbine, accelerating the project execution and saving time and costs while providing a permanently robust and secure connection." says James Allan, Lead Engineer – Array Cables of Seagreen/SSE Renewables, summarizing the advantages.

"The connection system will provide an easier, quicker, cost efficient and safer approach to connect the wind turbine HV network to the array cable infrastructure in a pluggable variant. Seanex ensures an end-to-end pretested configuration, allowing the possibility to test the entire array cable infrastructure prior to turbine installation, and will last as long as the turbine. It will also reduce the time for connecting the individual wind turbine generators (WTGs) to the array network, and still allow a primary gas-insulated switchgear in the transition piece to become redundant since it is directly connected to the WTG HV switchgear. It feels like plugging in your extension cord at home on a bigger scale," explains Stephan Kremers, project manager at Vestas.

## Simple and time-saving offshore installation

As the wind turbines are installed, the pluggable connection between the submarine cable and the tower cable allows the project partners' individual construction phases to be clearly separated. In addition, the 39 cm long Seanex cast resin joints enable more flexible handling during the offshore installation process. They are solid-insulated and therefore SF6 gas free, resistant to salt water and UV radiation, and submersible. They are suitable for various cable types

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The Seanex connection system offers significant benefits during installation and continuous operation of the 66 kV interarray cabling.

up to a diameter of 800 mm². In the Seagreen project, the XLPE insulated submarine cables are connected to the switchgear via highly flexible, preassembled and pretested "dropper cables". At sea, when installing the turbine, it is simply a case of plugging the cable into the preassembled joint. This significantly reduces the offshore installation time. The touch-safe, gas-free and therefore maintenance-free inner cone fittings feature separate mechanical and electrical contacts which are highly stable in continuous operation under load.

As the inventor of inner cone technology, Pfisterer is an offshore pioneer with decades of experience in numerous wind farm projects, and a full product series from 12 to 550 kV for the complete cabling of wind turbines and offshore substations. Pfisterer will deliver the Seanex fittings for the Seagreen project when construction starts next year in 2021 – the company's 100th anniversary year. Seagreen 1 is expected to go fully online in 2023 with a capacity of 1075 MW, providing electricity for around 1.6 million homes.

#### About PFISTERER

Pfisterer is a leading independent manufacturer of cable fittings, insulators and overhead line accessories for sensitive interfaces in energy networks. The Group is headquartered in Winterbach, near Stuttgart in southern Germany. Pfisterer develops, produces, and sells internationally successful solutions for 110 V to 1,100 kV voltage levels. With its end-to-end range of products for application in energy networks, consulting, installation, and training, Pfisterer is a valued partner to companies specialising in power supply, plant construction, and electrified rail transport around the world. Pfisterer operates production plants in Europe, North America and South America, as well as sales offices in 18 countries across Europe, Asia, South America, and the USA. The Group employs around 2,100 people.

#### About Seagreen

The 1,075MW 114-turbine development Seagreen project is located 27km off the coast of Angus. A £3bn joint venture between SSE Renewables and Total, Seagreen will be Scotland's single largest source of renewable energy, providing a significant contribution to Scotland's net-zero ambition and enough clean, renewable energy to power 1.6 million homes.