

SSE Offshore Wind Alliance



Client:
SSE Renewable
Developments (UK) Ltd

Location:
Various Offshore UK

Project Type:
Renewables

In 2011, Subsea 7 signed an alliance agreement with SSE Renewables Developments (UK) Ltd to work in an alliance with SSE and other partners to develop and execute their future offshore wind developments - a potential portfolio of projects generating over 5,500MW of electricity from offshore UK windfarms.

Subsea 7's work scope involves all marine operations and integrated installation of the total offshore infrastructure including, turbines, offshore substation, foundations and cabling.

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Project

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Client

SSE Renewable Developments (UK) Ltd

Location

Various UK offshore windfarm sites

Water depth

Between 20m and 60m

Project Type

Renewables

Date Awarded

November 2011

Date Completed

Ongoing

Vessels/Spoolbases Utilised

Array Cable Installation Vessel
Export Cable Installation Vessel
Trenching Vessel
Foundation Installation Vessel
Turbine Installation Vessel
Offshore Substation Installation Vessel
Various Support Vessels

Overview

Subsea 7 has signed an alliance agreement with Scottish and Southern Energy (SSE) to work with SSE and other partners to develop and execute their future offshore wind developments.

The purpose of the alliance is to work together in a collaborative arrangement to secure a substantial reduction in the cost of delivered power from offshore wind farms.

The alliance partners include:

- Developer - SSE - a large UK utility company and one of the three largest European offshore wind developers with a portfolio of over 5,500MW of projects
- Turbines - Siemens Wind - a market leader in offshore wind turbines
- Electrical systems - Siemens Transmission and Distribution - a market leader in offshore transmission and distribution systems
- Foundation Design - Atkins
- Fabrication - Burntisland Fabrications
- Marine operations and offshore installation - Subsea 7.

Included in Subsea 7's scope:

- Installation of array and export cables
- Foundation installation
- Offshore substation installation
- Turbine installation
- Management of all marine operations and logistics.

Interface management is a key area where Subsea 7 can add value to the delivery of an offshore windfarm project. By taking responsibility for integrated installation, Subsea 7 manages a lot of the risks associated with the various interfaces.

Subsea 7 brings core skills from its oil and gas business into offshore wind:

- Project management and engineering
- Risk management
- Safety culture and approach
- Marine operations in a harsh environment
- Design and build of new marine equipment
- Ability to work in a collaborative contracting arrangements.

Currently, the Offshore Wind Alliance members are co-located in the SSE Centre of Engineering Excellence for Renewable Energy in Glasgow. They are engaged in pre-feed work, undertaking conceptual engineering studies on the Beatrice Offshore Windfarm Development.

The site is located in the Outer Moray Firth on the north-western point of the Smith Bank, approximately 13.5km from the Caithness coastline. It will cover an approximate area of 131.5km²

The site is adjacent to the world's first deep water windfarm development – the two-turbine (10MW) Beatrice Demonstrator Project. The Beatrice Demonstrator turbines are owned by SSE and Talisman. and have been operational since 2007.

Building on the success of the Beatrice Demonstrator Project, SSE are proposing to develop an offshore windfarm which will generate up to 1,000MW of renewable energy, enough to power over 796,000 homes. The proposed windfarm will have between 142 to 277 turbines, depending on turbine size.

Beatrice Offshore Windfarm Limited is the joint venture partnership formed between SSE Renewables (75%) and Repsol Nuevas Energias UK (formerly SeaEnergy Renewables) (25%).