Beatrice Offshore Wind Farm Ltd

About Beatrice Offshore Wind Farm Ltd

Beatrice Offshore Wind Farm Limited (BOWL) is a joint venture partnership formed between SSE Renewables (50%) Repsol Nuevas Energias UK (25%) (formerly SeaEnergy Renewables) and Copenhagen Infrastructure Partners (25%). In February 2009 we were awarded exclusivity by The Crown Estate to develop the Beatrice Offshore Wind Farm in Scottish Territorial Waters.

SSE is one of the UK’s largest generators of electricity with around 11,600 MW of generation capacity in total (in the UK and Ireland) from the most diverse portfolio of power stations. It is the leading generator of electricity from renewable resources with a total generation capacity of around 3,300 MW.

Copenhagen Infrastructure Partners (CIP) is a multinational team with extensive experience and knowledge within the fields of regulated infrastructure and renewable energy. The team has a broad range of competencies within corporate finance, merger and acquisitions, engineering, project development and project management.

Repsol Nuevas Energias UK Limited is developing two major offshore wind farm projects in Scotland: Inch Cape and Beatrice, with a combined capacity in excess of 1GW. More information may be found at www.repsol.com.

What is the project?

The Beatrice Offshore Wind Farm site is located 13.5km (at its closest point) from the Caithness Coast in the Outer Moray Firth, with its centre located approximately 25km (13.4Nm) south south-east of Wick. The proposal is to install up to 84 7MW Siemens turbines which will be capable of generating up to 588 MW of renewable energy.

The Beatrice project was consented by Marine Scotland in March 2014 and granted an Investment Contract by the UK government in May 2014. With financial approval, manufacture and construction activities are planned in 2016 with offshore construction planned for 2017.

As well as generating renewable electricity, the Project is expected to bring a range of socio economic benefits to both the Moray and Highland regions through job creation, skills training and opportunities for local businesses.

CONTACT US

If you have any comments, queries or views you would like to share with BOWL please feel free to contact us:

Kirstanne Land
BOWL Community Liaison Manager
0141 224 7569
kirstanne.land@sse.com
www.sse.com/beatrice
Our Operation and Maintenance Plans

During the 25 year operational phase of the proposed Project, O&M facilities will be required to control, monitor and maintain the offshore wind farm’s assets. BOWL announced in July 2014 that Wick had been selected as the preferred location for Beatrice’s O&M facilities, signing a Memorandum of Understanding (MOU) with Wick Harbour Authority (WHA). The indicative design below shows the location of the proposed marine base building on the Telford Jetty.

Through a collaborative approach with WHA and the Royal National Lifeboat Institution (RNLI), preliminary plans for the Telford Jetty have progressed. As part of these plans, it is proposed that a new facility for Wick’s RNLI lifeboat station will be incorporated into the new building, providing an upgraded work space for the organisation. The new building will also incorporate new WHA facilities in the form of a Harbormaster’s watch office. The watch office will facilitate effective coordination of commercial and recreational traffic in and out of Wick Harbour.

At an early stage, BOWL undertook a range of surveys and studies including geotechnical surveys in the Outer Harbour and on the jetty itself. The knowledge gained from these has been used to inform the design of the proposed marine base facilities.

The exterior design of the building has been designed to an extremely high standard to provide a finish and aesthetic appropriate to its location, sympathetic to its surroundings and to meet the expectations of Highland Council. The proposed facilities in Wick could see the investment of circa £10m in design, construction and local improvements to the area.

Subject to a final investment decision in 2016 and meeting planning requirements, the proposed O&M facilities are expected to go into construction in 2016 to be ready for commissioning activities of the offshore wind farm in 2018. BOWL will also require facilities at Wick John O’Groats Airport to support helicopter operations, providing a holistic access and logistic solution for the Project.
Proposed Jetty Extension

The existing Telford Jetty is solid, being formed with stone walls which have subsequently been strengthened by an additional reinforced concrete facing to the Outer Harbour face and steel bearing piles/walings/fenders to the Inner Harbour face.

In order to accommodate existing Harbour users of the Telford Jetty, the marine base building, vehicular/emergency services access and quayside space to service BOWL’s proposed Crew Transfer Vessels, an extension to the existing Telford Jetty has been proposed.

In order to inform engineering design for any proposed extension, a significant amount of ground investigation has been undertaken (some of the site investigation (SI) surveys are shown below).

In order to minimise the impact on the Outer Harbour, a solid jetty extension has not been adopted. The proposed extension is expected to comprise of a reinforced concrete deck and grillage of reinforced concrete beams supported off tubular steel piles. This arrangement will result in a completely open structure which will minimise impact on the Outer Harbour sea bed. An indicative cross section of the proposed extension is illustrated below.

Tubular steel piles will be bored or driven to rockhead to provide a support for pre-cast concrete units to be craned into position, negating the requirement for any formwork or falsework within the Outer Harbour. It is expected that piles will either be installed from the existing jetty or from a barge.

Typical detail through piles of illustrating proposed extension to the Telford Jetty
Beatrice Offshore Wind Farm Ltd

Proposed Inner Harbour Pontoons

For the last 150 years Wick Harbour has provided a safe haven for fishing, commercial, and leisure vessels. Since the formation of Wick Harbour Authority in 2005 and partially in response to the decline in the fishing industry, the Harbour has been the subject of diversification. The Authority successfully developed a marina in the Inner Harbour in 2009 which has made a significant impact on the harbour at Wick and is an important port of call for recreational vessels passing up or down the east coast of Scotland.

A continuation of the Harbour’s diversification, it is proposed that six additional berths for crew transfer vessels will be installed within the Inner Harbour. These will be located on the north side of the Telford Jetty, adjacent to the RNLI pontoon and the marina’s current visitors’ berths.

The plan on the right shows an indicative pontoon arrangement for up to 6 BOWL crew transfer vessels. The pontoons are expected to be retained by tubular steel piles, similar to those used on the marina pontoons.

At this early stage the final layout is yet to be confirmed. The final pontoon arrangement will be designed with input and local knowledge from the Harbour Authority and the RNLI.

As part of the planned development, BOWL are intending to remove the disused slipway in the north east corner of the Inner Harbour and relocate the finger pontoons currently used for visiting yachts.

It is expected that the proposed removal of the slipway will enable the number of marina berths to be maintained, offer additional space within the Inner Harbour for local vessels and enable available space within the Inner Harbour to be used effectively.

Plan illustrating proposed development zones within the Inner Harbour with indicative pontoon arrangement shown.

North west and south west isometrics illustrating the proposed layout of the marine base facilities
Beatrice’s Socio Economic Benefits

BOWL recognises that a project of this scale and importance to the Scottish economy should provide community benefits on a local, regional and national scale and is committed to maximising the expected socio-economic impacts for the Moray Firth Region. Below are some of the expected benefits that Wick and the Highland region can expect through the development.

Job Creation
SSE is committed to investing in our communities and providing opportunities for job creation and skills development. As a multi billion pound, large scale renewable development; the employment effect of the project is expected to have a major positive impact on the local, regional and Scottish economy.

Due to the number of Oil and Gas workers, the number of ex-service personnel and Dounrey staff the Moray Firth area has a wealth of experience and transferable skills which is of great benefit to Beatrice.

Skills Training
In addition to creating jobs in the highly skilled Moray Firth region, the Beatrice project also hopes to support and encourage young people with an interest in a career in renewable energy. Initial skills training discussions have been held with the University of the Highlands and Islands (UHI), who have a strategic partnership with SSE. The BOWL team are currently investigating opportunities within the Moray Firth for creating apprenticeships and skills training programs in local colleges during the operation of the project.

Supply Chain Opportunities
BOWL is committed to using local, regional and Scottish suppliers during construction and operation of our wind farms wherever possible and it is our intention to place any opportunities through BOWL on SSE’s Open4Business Procurement Portal for transparency and ease of access for local businesses. BOWL has undertaken a program of engagement with local businesses in 2015 and will continue to liaise and assist those who are looking to benefit from BOWL.

To date, £25m has been spent on Scottish based supply chain contracts during the development phase, roughly 50% of the project spend. During construction and operation, Beatrice is expected to deliver £700m into the Scottish economy and supply chain.

We are a member of Caithness Chamber of Commerce and have been working closely with HIE to help local businesses prepare for possible opportunities in the offshore industry. Local Businesses can sign up to SSE’s Open4Business portal here: [www.sseopen4business-highlands.com](http://www.sseopen4business-highlands.com).

Community Benefit Funding
BOWL is committed to following the Scottish Government’s good practice guidelines in relation to offshore community benefit funding and a community pot will be available during construction to support community projects, skills development, tourism initiatives and environmental causes.
Beatrice Offshore Wind Farm Ltd

Marine Licence Application

A Marine Licence is being sought by BOWL for the proposed Telford Jetty extension and six berth pontoon mooring facilities within Wick Harbour.

This public event is part of the marine licensing process and allows local communities, environmental groups and other interested parties to comment upon this development at an early stage.

Environmental Setting

Wick Harbour has a long and rich history and the earliest harbour works began in 1803 under The British Fisheries Society, to exploit the huge seasonal herring fishery. The Telford Jetty is named after Thomas Telford who was one of the engineers who built the harbour.

The harbour is located along the eastern side of the town of Wick. The town of Wick extends along both the northern and southern edges of Wick Bay.

There is a designated Conservation Area within Wick and a number of listed buildings close to the harbour, including the north and south lighthouses and the former Herring Market. The closest Scheduled Monuments are Wick Castle 1.5km to the south and The Pap Broch 1km to the north east.

During construction cranes and construction machinery will be visible within the harbour. They are temporary in nature and once operational the landscape character of the harbour and coastline will not significantly change as a result of the proposed development as the extended Jetty and pontoons will be in line with the existing harbour.

Construction impacts are likely to be largely associated with the piling works for the Telford Jetty extension and pontoon construction. The implementation of day time working hours and considerate construction practices will be undertaken by the contractor.

Water Quality

The River Wick and Wick Bay both have “Good” water quality, classified and monitored by the Scottish Environmental Protection Agency (SEPA). The Lower reaches of the River Wick are also classified as a Special Site of Scientific Interest (SSSI).

Standard construction procedures will include pollution prevention and control (PPC) procedures and practices in line with SEPA best practice guidelines. This will manage and mitigate the risk of spills and uncontrolled runoff that may harm the surrounding water environment.
Ecology

East Caithness Sea Cliffs
The East Caithness Sea Cliffs to the south of the harbour are formed from Old Red Sandstone. This Special Protected Area (SPA) has European importance. Cliff ledges, stacks and geos provide nesting sites for internationally important populations of seabirds, especially gulls and auks. The cliffs also provide important nesting habitat for Peregrine Falcon.

Marine Mammals
The Inner Moray Firth Site Area of Conservation (SAC) is internationally renowned for the presence of resident populations of bottlenose dolphins. Alongside the dolphins the Moray Firth supports important breeding populations of common seals and grey seals. Other marine mammals including otters are sighted within the Moray Firth.

Fish
The Moray Firth supports a range of commercially valuable species of fish including haddock, mackerel, herring, sprat, cod, whiting, lemon sole, plaice and dab. Basking sharks are also sighted within the Moray Firth.

The potential impacts to the local ecology around Wick are currently being assessed, including effects on marine mammals, birds and benthic environment.

Marine mammals and fish can be sensitive to underwater noise and therefore construction techniques will be carefully assessed and mitigation implemented if it is considered necessary.

The results of environmental studies will be reported in an Environmental Assessment report which will be submitted to Marine Scotland in support of the Marine License application.