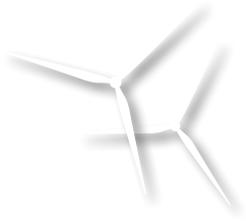


# Sheringham Shoal Offshore Wind Farm



Statkraft

StatoilHydro



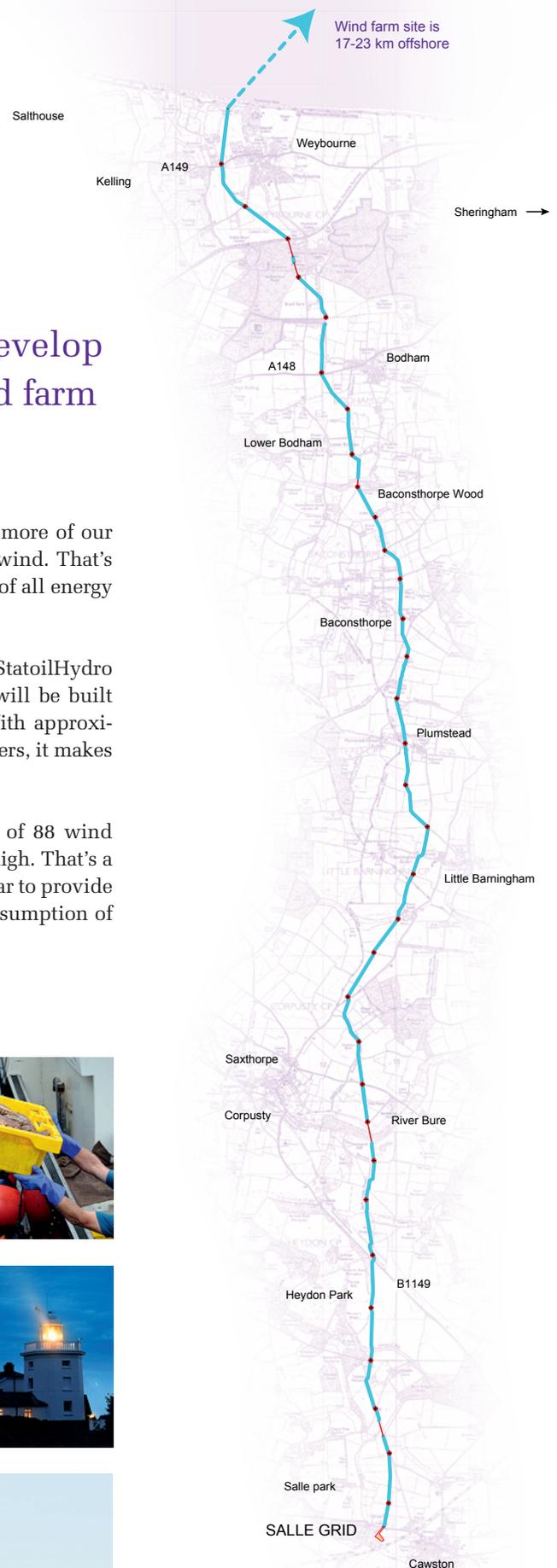
# Powering future generations

StatoilHydro and Statkraft join forces to develop Sheringham Shoal, a 315 MW offshore wind farm off the coast of Norfolk, United Kingdom.

**The world needs more energy.** In future, we will need to obtain ever more of our energy supply from renewable resources such as hydropower, waves and wind. That's why the UK government is committed to the EU target that states that 20% of all energy should come from renewables by 2020.

**Green out of the blue.** The UK government has given the go-ahead for StatoilHydro and Statkraft to build Britain's fourth largest offshore wind farm which will be built around 20 kilometres due north from the coastal town of Sheringham. With approximately 40 per cent of the EU's entire wind resources available in British waters, it makes sense for us to exploit the wind.

**Lighting the way.** Sheringham Shoal Offshore Wind Farm will consist of 88 wind turbines in an area of 35 square kilometres, each one 80 metres or 260 feet high. That's a significant 1.1 TWh of green electricity going into the National Grid every year to provide lighting, heating and cooking. This is roughly equivalent to the annual consumption of around 220,000 British homes.



## CABLE ROUTE KEY

- Cross-bonding pit locations
- Construction corridor
- | Directional drilling





## Your questions answered



### Who is behind the scheme?

The Sheringham Shoal Offshore Wind Farm project is owned jointly by Statoil-Hydro (50%) and Statkraft (50%) through Scira Offshore Ltd. StatoilHydro is operator for the development phase.

### Where will the wind farm be built?

Sheringham Shoal Offshore Wind Farm is to be built between 17 and 23 kilometres (10 to 15 miles) off the coastline north of Sheringham and Cromer, on the border to international waters.

### Why was this site chosen?

The site was awarded by the Government during the Round II allocation in 2004. It was chosen because it lies within a government approved area for development, enjoys high wind speeds, has favourable water depths, has relatively low levels of fishing activity, affords good access, has grid connection options, and is outside protected and scientifically designated areas.

### When will building start?

Onshore works will begin in 2009 while offshore construction will start in 2010. The wind farm will be operational by the end of 2011.

### How big is the development?

The diamond-shaped wind farm will cover about 35 square kilometres (13 square miles). There will be 88 wind turbines on foundations fixed to the seabed and two offshore substations. Each turbine mast will be about 80 metres high.

### How much energy will be generated?

Sheringham Shoal will generate an estimated 1.1 TWh annually, roughly equivalent to the annual energy consumption of 220,000 British homes. As an alternative to fossil fuels, the wind farm will reduce CO<sub>2</sub> emissions by approximately 500,000 tonnes per year.

### Will the wind turbines be visible from shore?

On a clear day, you will be able to see them on the horizon, much like the cargo ships you see passing by today. Since they will be located between 17 and 23 kilometres out, they may not be visible on hazy days.

### What about the impact on nature and wildlife during construction?

The developers recognise that northern Norfolk is an area of outstanding natural beauty, so we will do everything possible to minimise the impact on the local wildlife and the environment during construction. Horizontal drilling will mean the beaches will remain undisturbed and there will be directional drilling under roads and at key landmarks such as the River Bure. The cable along the whole 21.6 km distance from the landfall to the regional grid at Salle will be placed underground to avoid the negative visual

impact from overhead power lines. The cable route has carefully been selected in order to minimise impact on nature and wildlife

### Who has been consulted?

Project team members have had broad consultations with every relevant interest group ranging from local authorities, the RSPB, the Ministry of Defence and fishermen, to local businesses, landowners and the tourist industry. We have sought to listen and engage in dialogue wherever issues have arisen, and will continue to do so throughout the construction period and during the life of the wind farm.

### What is the lifespan of the wind farm?

The Crown Estate lease period for the wind farm is 40 years. Operation and maintenance works will be ongoing throughout the wind farm's lifetime. After between 20 and 25 years of production it is likely that the wind farm will be subject to refurbishment or repowering allowing for production for up to another 25 years. At the end of the wind farm's lifespan, it will be decommissioned in line with the consent conditions.



# Facts

- 315 MW of capacity
- Located off the coast of Norfolk, England
- Covers an area of approximately 35 km<sup>2</sup>
- 88 wind turbines, each with a capacity of 3.6 MW, will supply some 220,000 homes with clean energy
- Turbine blade length 52 metres (170 feet)
- Turbine tower height 80 metres (262 feet)
- Wind turbines are placed on foundations on the seabed
- Two offshore substations
- Two 132 kV marine cables to come ashore at Weybourne
- 21.6 km underground cable will connect the wind farm to the National Grid at a new substation near Cawston

## What's the status of the project today?

Onshore, the project has received the three planning permissions required to construct and operate the grid connection to join the wind farm to the electricity distribution network. The planning permissions, granted by North Norfolk and the Broadland District Councils, are for a new substation adjacent to an existing facility at Salle, near Cawston and for the construction and operation of a 21.6 kilometre underground cable system between a landfall point at Weybourne, on the northern Norfolk coast, and the new substation.

Grid agreements have been signed with EDF Energy and NGT for the connection of the wind farm to both the regional and national grids. Offshore, the project has received Section 36 Consent from the Department for Business, Enterprise and Regulatory Reform and license from the Marine and Fisheries Agency under the Food and Environment Protection Act of 1985.

Siemens will supply the 3.6 MW turbines for the project, MT Højgaard a/s will supply the foundations and the onshore and offshore substations will be supplied by AREVA T&D.

## Timetable for construction

**2009:** Start onshore installation

**2010:** Start offshore installation

**2011:** Start installation of turbines

**2011:** Project completed



## About StatoilHydro:

StatoilHydro is an integrated technology-based international energy company primarily focused on upstream oil and gas operations. Headquartered in Norway, the company has more than 30 years of experience from the Norwegian continental shelf, pioneering complex offshore projects under the toughest conditions. The company's culture is founded on strong values and a high ethical standard. The aim is to deliver long term growth and continue to develop technologies and manage projects that will meet the world's energy and climate challenges in a sustainable way. StatoilHydro is listed on NYSE and Oslo Stock Exchange.

## About Statkraft:

Statkraft is Europe's largest generator of renewable energy, with a total installed capacity of more than 14,800 MW. The company develops and generates hydropower, wind power, gas power, solar power and district heating, and is a major player on the European energy exchanges. Statkraft opened its first wind farm in 2002 and now owns and operates three onshore wind farms in Norway with a total installed capacity of 244 MW. In the UK, Statkraft has one hydropower plant in operation in Wales, one wind farm under construction in Wales and planning consent for another in Scotland. The company has around 3000 staff in more than 20 countries, and is wholly owned by the Norwegian state.

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