



Project Profile: Crystal Rig, Scotland

Project name:	Crystal Rig
Owner:	Crystal Rig Windfarm Ltd. a subsidiary of Fred Olsen Renewables Ltd., Oslo, Norway
Power utility:	Scottish Power
Installed capacity:	50 MW
Wind turbine type:	N80/2500 kW
Tower height and type:	60 m. tubular tower
Number of wind turbines:	20
Wind speed:	8.8 m/s
Site:	In the South East of Scotland, near the Scottish town of Dunbar, approx. 50 km south of Edinburgh
Site description:	The wind farm is installed in an area of hills, near the coast.
Wind turbine siting:	The site is characterized by strong and steady wind
Building Period:	Summer and autumn 2003
Grid connection:	November 2003
Extent of delivery:	Nordex was responsible for supplying, installing and commissioning of the turbines. Nordex is responsible for the maintenance.
Maintenance:	Nordex UK
Warranty period:	5 years

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In 2003 Nordex installed the Crystal Rig wind farm close to the Scottish town of Dunbar on behalf of the Norwegian customer Fred Olsen Renewable Ltd.. Dunbar is situated in the South East of Scotland, on the coast where the Firth of Forth joins the North Sea, thirty miles east of Edinburgh. The average wind speeds at the wind farm are approx. 8.8 m/s, thus offering ideal conditions for achieving optimum yields from the 2,5 MW turbines designed for high wind speeds. In total the wind farm has an installed capacity of 50 MW.

This flagship project saw a major breakthrough for Fred Olsen Renewables as well as for Nordex UK in the promising UK market, which is currently seeing a growing number of bigger scale projects coming through planning.

The fact that Nordex produces one of the world's largest series wind turbine was not the only factor in the company's favour. "We were able to guarantee our customer optimum service for the turbines via our local after-sales office in Peebles," explains Claus Poulsen, managing director of Nordex UK, Manchester. To date, this service centre has primarily been looking after the 24 Nordex N60/1,300 kW turbines at the Bowbeat wind farm, which was completed earlier in 2003. Now the 5-year warranty- service- and maintenance agreement for Crystal Rig is also supported from the Nordex Service Centre in Peebles.

The logistical challenges of the Crystal Rig project proved to be in good hands with Nordex. A total of three ports were used throughout the construction phase; Leith in Edinburgh, Berwick at the Scottish border, and a roll-on/roll-off facility at Torness Nuclear Station was used to complete the deliveries.

In the past, Nordex has installed the N80 for such key accounts as BP, Nuon and Norsk Hydro as well as for the french utility SIIF-EDF and Airtricity, Ireland.

