

CSEP PROJECT CASE STUDY No.12
Delabole Wind Farm (Grid Connected)
The UK's first commercial wind farm



Delabole wind farm



*Delabole wind farm,
wind weekend 2005*

Location of project	Delabole Windfarm, Deli farm, Delabole, Cornwall, PL33 9BZ Grid ref: SX081842 Lat: 50:37:33N (50.62589) Lon: 4:42:48W (-4.71323)
Project Stages	Submitted for construction in 1989 Project came into operation in 1991
Project description	10 horizontal axis wind turbines manufactured by Vestas, and rated at 400kW each were erected giving a connected load of 4MW. 10,000MWh are exported from the site onto the grid. The project was the first of its kind in the UK and attracted a large amount of local and national interest. ETSU, acting for the Department of Trade and Industry (DTI), commissioned a series of studies into the impact, performance and public acceptability of the farm
Project Partners & role	Windelectric Management Ltd - Constructed and manages the site Winelectric Ltd (part of good energy) - site owners VESTAS - manufacturers and suppliers of the turbines ETSU - information organisation, public research Good Energy - Supply end users with 100% renewable energy
Value of project / Funding & Grants received:	Total project value: £3,400,000 (1991 prices) Of the total finance 40% was equity subscribed by the landowners, National Power and South Western Electricity plc, and 60% was a loan provided by County NatWest Ltd (now NatWest Markets)
Measurable Outcomes	10 x 400kW turbines installed 10,000MWh electricity exported annually Power for around 2,500 Good Energy customers Offsets 4,475tonnes CO ₂ /year Public opinion polls show that pre construction local residents

	<p>were 17% for the construction, 32% against and 51% were not sure. 6 months after the turbines went online a second survey showed 85% approved, 4% disapproved and 11% were unsure.</p>
<p>Wider Benefits of the scheme: (social, environmental, economic)</p>	<p>Provided data that allowed the construction of more windfarms, due to the change in peoples' opinions post construction.</p> <p>By the time the NFFO contract had run out all re-payments had been made showing that the subsidies could work.</p> <p>EIA had to be undertaken pre-construction, taking into account all arguments which people use to oppose windfarm construction i.e. visual intrusion, noise, interference with TV signals.</p> <p>Demonstrated that there was no need for road construction to reach rural areas as all terrain vehicles i.e. cranes were used and it took only 5 weeks to erect all turbines (excluding foundations)</p>
<p>Issues encountered</p>	<p>Two weeks after construction one of the turbines was struck by lightning (a rare occurrence), damaging the blades, the generator and computers were left undamaged. The blades were replaced and production losses were recovered by insurance.</p>
<p>Key Lessons:</p>	<p>Since completion of the project the UK and Cornwall have had many more windfarms constructed. This initial windfarm showed that planning permission was able to be obtained and that, through consultation with the public the construction can go ahead unhindered.</p>
<p>Future Plans</p>	<p>As the site approaches the end of its lifespan there are plans to replace the current turbines with fewer larger turbines generating approximately 3 times more power than the existing installation.</p>
<p>Further information</p>	<p>Mr P. Edwards Windelectric management ltd Deli Delabole Cornwall PL33 9BZ</p> <p>Tel: 01840 213377</p>

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