# A graceful wonder at Mablethorpe

**"We love the turbines at Mablethorpe. We cannot hear any noise. They're not at all ugly, in fact we think they're graceful. They break up the flat landscape and look lovely against the sunset"**

**Mr and Mrs Rollinson,**
**Nearest uninvolved neighbours at Bambers Farm Wind Farm, Mablethorpe, Lincolnshire**
***Note - Wind farm owned by Ecotricity***

# Who are npower renewables?

npower renewables are the UK's most experienced wind energy developer, dedicated to generating electricity using sustainable, environmentally-friendly resources. We are the leading developer and operator of onshore and offshore wind farms in the UK, with over 13 years' experience in the wind energy market. We currently manage 15 wind farms totalling 267MW of installed capacity. We also have hydroelectric plant and co-firing biomass operated through our parent company RWE npower.

## Further information

Information can be found at the following websites:

npower renewables: **www.npower-renewables.com/bradwell**

The British Wind Energy Association: **www.bwea.com** and **www.embracetherevolution.com**

For the more technical aspects of wind energy: **www.windpower.org**

## Have your say

You can make comments by e-mailing: **bradwell@npower-renewables.com**

Or writing (freepost) to: **Vicky Portwain, npower renewables Ltd., FREEPOST SCE9163, Reading, RG1 8BR.**

If you would like this in larger print, please contact Michael Pullan on 0118 959 2440.

[1] **This figure was calculated using the following:**
An average home utilises 4700 kWh per year (Ref: The Digest of UK Energy Statistics 2005 gives 2004 domestic electricity consumption as 117.589 terawatt-hours (TWh) which, when taken with the 25.2 million households,
**Wales** = 1.213 million, (http://www.wales.gov.uk/keypubstatisticsforwales/content/publication/housing/2005/sb2-2005/sb2-2005.htm),
**England** = 21.109 million,(http://www.bournemouth.gov.uk/Library/PDF/Living/Planning/Research/Mid%20year%20household%20estimates%202000%20to%202003.pdf),
**Scotland** = 2.217 million (http://www.scotland.gov.uk/Resource/Doc/933/0004175.xls);
**Northern Ireland** = 652,000 (http://www.detini.gov.uk/cgi-bin/downdoc?id=922,)
gives an average electricity usage of 4,666kWh per year per household. The energy predicted to be generated by the proposal is derived from monitoring wind speeds in the area and correlating this data to wind speeds measured at Met. Office stations. This enables a calculation to be made to estimate the average annual energy production for the site based on 10 turbines each with a rated capacity of between 1.5 and 2.5 MW. The energy capture and equivalent homes figure relating to this project may change as more information is gathered.

[2] National Grid Transco's Seven Year Statement 2004 supported the theory that an appropriate carbon dioxide emissions factor for electricity generated by wind power is in the region of 860g CO2 / kWh. In estimating the potential offset of harmful emissions it is recognised that over the life of the Bradwell Wind Farm these values may change due to, for example, variation in the generating plant mix over the 25 year life of the wind farm.

RWE Group

npower renewables

# Wind Power News

## Keeping you informed

**"The future is clean energy. And nations will look to diversify out of energy dependence on one source... By around 2020, the UK is likely to have seen decommissioning of coal and nuclear plants that together generate over 30% of today's electricity supply."**
**Prime Minister, Tony Blair**

**"We will need to look at all the available solutions.... But I believe that renewables must play a much larger role than conventional energy thinking appreciates."**
**Conservative Leader, David Cameron**

Issue 2

www.npower-renewables.com/bradwell

## Another report backs power of wind

A survey, carried out by the Environmental Change Institute at Oxford University, has brought to light fresh evidence in support of the efficiency of wind power, providing further endorsement for the UK's wind energy industry.

The findings help dispel the myth that wind energy is unreliable, and shows that wind can help drive forward the renewable energy revolution.

The survey has confirmed that Britain has ideal conditions for the generation of wind power, more so than any other country in Europe. Not only does British wind blow strongly all year round, but it peaks when electricity needs are greatest - during the day and in the winter months.

The study also found that low wind speed conditions during the winter months, when generation is not possible across 90% of the UK only occurs for around 1 hour every 5 years. Very high wind speed conditions, resulting in turbines shutting down for safety reasons, affecting 40% or more of the UK at any one time only, occurs for around one hour every 10 years.

npower renewables' Project Manager Vicky Portwain said, "This survey backs up what we already know to be true - that wind power is efficient and reliable. In the UK wind environment, a turbine will be producing useful power on average for 70 to 85 per cent of the year".

She continued: "Before submitting a wind farm application, we carry out extensive research into the suitability of sites. This process may take years, and wind resource is clearly key in the selection process.

"npower renewables is currently developing a spectrum of renewable energy alternatives, including hydroelectric power. At present however, wind energy is the most commercially and technologically viable of these renewable technologies. In fact, according to the Sustainable Development Commission, electricity generated by wind is projected to be the cheapest of all forms by 2020.

"Wind farms are now more effective than ever before and as this survey proves that. The UK, including Essex is ideally placed to make strides in their development" she concluded.

# Application submitted for wind farm at Bradwell

**A planning application has now been submitted for a wind farm on farm land south of Bradwell-on-Sea by the developer npower renewables.**

npower renewables, the UK's most experienced wind farm developer, has submitted a full Environmental Statement for plans to build 10 turbines on the Dengie Peninsula.

It brings to a close several years of development work and considerable time and effort to assess the potential impact a wind farm could have at Bradwell and Tillingham.

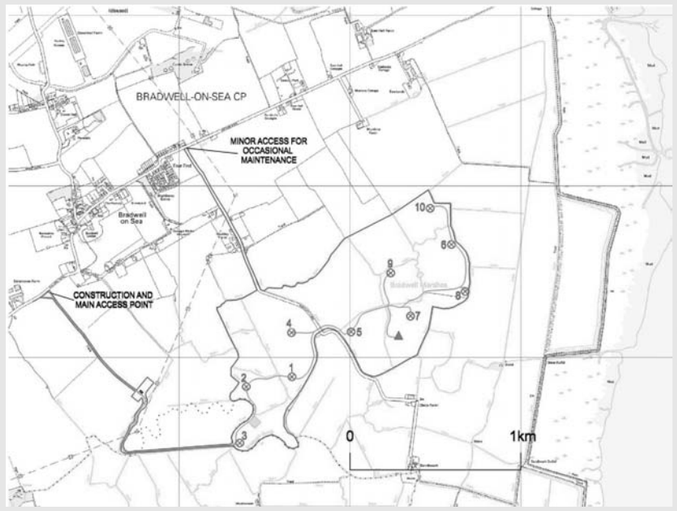
Ten turbines on the Essex site would provide enough clean electricity for the average annual needs of between 8,100 and 10,600[1] homes, each year.

If constructed the site would make a valuable contribution towards the government's commitment to provide 10% of electricity from renewable sources by the year 2010. It would also help offset the release of between 32,800 and 42,800 tonnes[2] of carbon dioxide, the main greenhouse gas, into the atmosphere.

The draft East of England Plan published at the end of 2004 sets out a target of 14% of the region's electricity needs to come from renewable sources by 2010. It is anticipated that 10% of this target would need to come from onshore technologies.

Project Manager Vicky Portwain said, "The Environmental Statement is now complete further to lots of hard work by consultants and the team at npower renewables.

"It is now up to the planning authority, Maldon District Council, to assess the scheme and decide whether it should be given the green light. If it is approved Essex can start making a contribution to its renewable energy targets through onshore wind."






# What happens now?

The local authority Maldon District Council will register the planning application and advertise locally.

A statutory consultation period will then begin during which anyone who would like to make a comment can do so by writing to the planning office at Maldon District Council.

The Environmental Statement will be available to be viewed at Maldon District Council and Essex County Council. However those who would like a Non-Technical Summary of the Environmental Statement can visit www.npower-renewables.com or contact us using the address on the back of this newsletter.

We would urge those who haven't yet done so, to visit an operational wind farm to view for yourself what the potential impact could be. The nearest wind farm to Bradwell is at Coldham, near March in Cambridgeshire.

# What our studies have found

**Over the past year npower renewables has conducted various studies with regard to a wind farm at Bradwell. Here are some of the results:**

**Turbine size** We have submitted a planning application for 10 turbines of a maximum height of 121m to the tip. The turbines could each have a capacity of somewhere between 1.5MW to 2.5MW.

**Climate change** The International Panel on Climate Change (IPCC) suggests climate change could lead to a loss of wetlands and associated bird life, an increase in infectious diseases, the increase in pests and the migration of species. The Journal Nature estimated that up to 37% of all species of wildlife in the regions it studied could be faced with extinction due to climate change by 2050.

**Hydrology and flood risk** The assessment has demonstrated that the residual impacts of the development on hydrology are not likely to be significant. The proposed project has been designed and would be built so that a flood would not significantly affect the operation of the wind farm and not impact on the flood risk to the area.

**Birds** Bird populations within the wind farm site itself were found to be generally low because the wind farm was located and designed to avoid the more important populations and protected areas. The suveys, which extended outside the site, found several species of conservation importance albeit most bird assemblages were concentrated on the coastal strip. Habitat enhancements would be implemented to ensure that the proposed scheme delivers a net gain to the local bird populations.

**Other ecology** Surveys of habitats and fauna including badgers, water voles, bats and great crested newts have been carried out and the wind farm has been designed to ensure minimal impact on them and have an overall ecological beneift.

**Landscape** The landscape assessment concludes that the local landscape would be strongly influenced by the proposed wind farm, however, it would not be transformed by it. The Environmental Statement includes computer generated images of how the wind farm would look in the landscape.

**Noise** Operational noise from the wind farm has been assessed in accordance with the methodology set out in the 1996 DTI Report ETSU-R-97, 'The Assessment and Rating of Noise from Wind farms'. It has been demonstrated that both the quiet day-time and night-time noise criterion limits can be satisfied at all properties across all wind speeds.

**Cultural heritage** In relation to the setting of listed buildings, the assesment concludes that the proposal is acceptable. There are four known or suspected Iron Age or Roman salterns of local importance within the site and the wind farm has been designed to avoid these.

**Traffic and transport** The total traffic associated with the project construction is likely to be up to 3,089 loads resulting in a maximum of 6,178 vehicle movements over 13 months.

# Energy saving in the home

If you're considering making improvements to your home you might be interested to know there are a range of grants and offers available to save you money and help the environment.

However there are some simple measures you can put into action today:

1) Turning your thermostat down by 1ºC could cut your heating bills by up to 10 per cent.
2) Is your water too hot? Your cylinder thermostat shouldn't need to be set higher than 60ºC/140ºF.
2) Close your curtains at dusk to stop heat escaping through the windows.
4) Always turn off the lights when you leave a room.
5) Don't leave appliances on standby.
6) If you're not filling up the washing machine, tumble dryer or dishwasher, use the half-load or economy programme.
7) Only boil as much water as you need (remember to cover the elements if you're using an electric kettle).
8) A dripping hot water tap wastes energy and in one week wastes enough hot water to fill half a bath.
9)Replace your light bulbs with energy saving recommended ones
10) Do a home energy check.

You can find out more by contacting the Energy Saving Trust helpline on 0845 727 7200 or visiting the website at www.saveenergy.co.uk.