

# Progress in Practice

## Antrim Area Hospital Wind Turbine

Antrim Area Hospital in Northern Ireland is on track to save £90,000 a year in energy costs by generating its own wind power, to the benefit of patients and the environment.

### Summary

Antrim Area Hospital is an acute trust of 350 beds and is part of Antrim United Hospitals Trust. Spurred on by the public sector building energy reduction target, the Hospital investigated installing a wind turbine on site to provide energy.

Following a feasibility study, a wind study and an environmental impact assessment (EIA), planning permission for the project was given. From idea conception to installation took 3 years. The civil work started in autumn 2004 and the turbine was delivered in January 2005. It took only three days to install and has been fully operational since 7th February 2005.

The 40 metre high 660 kW Vestas V47 wind turbine is the largest at any hospital in the UK. It will generate an average of 1.2 million units of electricity per annum, which is used as base load replacement. It has the potential to provide enough electricity for the hospital during the night, and two-thirds of the power needed during the day, which would otherwise cost £90,000 a year. Even in low wind conditions the turbine is cost effective and the money that would have been spent on power is freed up for improved services for patients.

The turbine cost £497,000, of which 80% was a grant from the Government Central Energy Efficiency Fund. Without a grant it would take five years for the initial cost to be repaid (at 2005 energy prices).

The wind turbine has been a success and other hospitals across the UK are taking an interest in replicating what has been achieved at Antrim.



**Alistair Donaldson, Support Services Manager said:** *“So far the wind turbine has been performing exactly to expectation...we have re-couped our capital investment in energy savings and every penny saved from now on in energy costs will be available to be invested elsewhere in patient care. Wind power is good for Antrim Area Hospital, good for our patients and good for the environment of Northern Ireland.”*

### Benefits

As well as cutting Antrim Area Hospital's energy bill, the project has also reaped the following benefits:

- Reduces power generation waste
- Benefits air pollution and climate change
- No impact on biodiversity
- Easy to return the site to how it was before.

### Links and organisations involved:

Antrim Area Hospital (part of United Hospitals Trust) [www.unitedhospitals.org](http://www.unitedhospitals.org); Consulting Engineers: Angus Biggerstaff, White Young Green, Tel: 028 9070 6000, [www.wyg.com](http://www.wyg.com); Contractors: Total Communications Infrastructure (TCI), Tel: 028 9037 1122, [www.tci.net](http://www.tci.net)

**Contact:** Alistair Donaldson, Support Services Manager, Antrim Area Hospital, 45 Bush Road, Antrim, Northern Ireland, BT41 2RL, Tel: 028 9442 4609, Fax: 028 9442 4604, email: [alistair.donaldson@uh.n-i.nhs.uk](mailto:alistair.donaldson@uh.n-i.nhs.uk)