

ENVIRONMENT DIGEST

Partnership boost for wind power

A COLLABORATION between universities and energy companies has made improvements to offshore wind turbines, which they hope can help generate more renewable energy and reduce reliance on fossil fuels.

The £7.7 million partnership between the universities of Sheffield, Durham, Hull and two global energy companies, Siemens Gamesa Renewable Energy and Ørsted, could help offshore wind turbines run for longer periods of time, boosting the amount of energy each wind farm generates.

The collaboration includes several projects at each university.

For example, a project at the University of Sheffield's Department of Electronic and Electrical Engineering has made important improvements to the direct-drive generator – the technology that enables wind turbines to run without a gearbox. This is often the most vulnerable part of a turbine and can require expensive maintenance and repairs, according to the university.

The Sheffield researchers have made improvements to the materials used in many of its components, so the generator is much more reliable, efficient and lighter. The improvements have also reduced manufacturing costs of the generator system by 20 per cent, the university reports.

