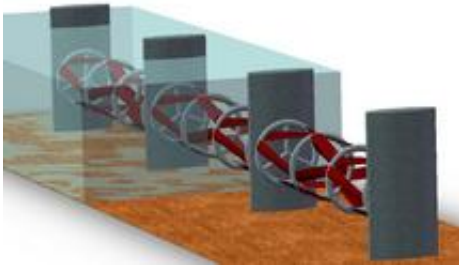


# Harnessing tidal energy

October 26 2010

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The new design of tidal turbine. Image courtesy of University of Oxford

A new company, Kepler Energy Limited, has been formed to develop a tidal turbine which has the potential to harness tidal energy more efficiently and cheaply, using a device which is simpler, more robust and more scaleable than current designs.

The turbine is the result of research in Oxford University's Department of Engineering Science by Professor Guy Houlsby, Professor of Civil Engineering, Dr. Malcolm McCulloch, head of the electrical power group, and Professor Martin Oldfield, Emeritus Professor of the thermofluids laboratory.

Kepler [Energy](#) Limited will design, test and develop a horizontal axis water turbine intended to intersect the largest possible area of current. The rotor is cylindrical and rolls around its axis, thereby catching the current. The researchers received £50,000 in funding from the Oxford University Challenge Seed fund, managed by Isis Innovation, to build a

0.5 metre diameter prototype demonstrating the benefits of the design. A full-scale device would measure up to 10 metres in diameter, and a series of turbines can be chained together across a tidal channel.

UK waters are estimated to offer 10 per cent of the global extractable tidal resource. Tidal currents are sub-surface, so tidal turbines have minimum visual impact, unlike wind farms or estuary barrage schemes.

Tom Hockaday, managing director at Isis Innovation said: 'This is the latest in a number of spin-outs from the Department of Engineering Science. Isis is fortunate to work with such an entrepreneurial department, particularly on technologies which have the potential to make a big impact on our energy supply.'

Provided by Oxford University

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