

Start-up launches to bring affordable, efficient wind power to the masses

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(PhysOrg.com) -- Totempower Energy Systems Ltd – a cleantech start-up which aims to create small-scale wind turbines that are cheaper, more efficient, and easier to install and maintain than current models – has launched, with backing from City University London.

City has granted an exclusive intellectual property (IP) license to and taken an equity stake in Totempower. The company will focus on the fast-growing micro-generation market, developing wind turbines for individual households, small businesses and communities, based on an

advanced University aerodynamics patent.

It aims to enter volume production by 2012, delivering turbines that provide a much quicker return on investment for owners – both through cost savings and by selling surplus power back to the National Grid, under the Government's feed-in tariff scheme.

The company was founded and is being led by Wolf Dietrich – an experienced entrepreneur and Executive MBA graduate from City's Cass Business School – who is backed by a team comprising University engineering and business expertise, as well as cleantech industry specialists.

Dietrich says: "Renewable micro-generation has the potential to cut emissions and introduce greater security to the UK's energy mix. But, despite financial incentives from Government, consumers remain deterred from investing in their own technology, because of the initial outlay and the difficulties of ownership. Our aim is to address this issue, by making a wind turbine that is as simple to own as a gas boiler."

At the heart of the new turbines, is the patented system known as the Passive Air-jet Vortex Generator (PAVOG), which was developed by Dr Simon Prince, Senior Lecturer in Aeronautical Engineering at City. This low cost technology increases the aerodynamic efficiency of turbine blades, enabling them to harvest more energy at lower wind speeds, whilst maintaining optimum efficiency in windier conditions.

Prince says: "City has a one hundred year heritage of teaching and research in the field of aeronautics. We are now exploring ways to use this experience in related areas, with wind and wave power being a prime example. We look forward to taking PAVOG to market via Totempower and making a real difference to how energy is generated tomorrow."

With significant testing already completed at the University, Totempower's focus over the next year will be securing additional funding for final prototyping and putting two turbine models into production – a 2,000 kWh pa version for individual households and a 15,000 kWh pa version for commercial or community use, with an average return on investment of around six and three years, respectively.

More information: www.totempower.com/technology.html

Provided by City University London

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