

New wind harvesting invention to bring cities to life

April 9 2013



Artist's impression of how the invention could be installed on city buildings.

Is this what the cities of the future will look like? Towering skyscrapers fitted with softly rotating panelled windows that harness wind energy and convert it into electricity? It is if Professor Farzad Safaei has anything to do with it.

Professor Safaei, Director of UOW's ICT Research Institute, and his

team, have invented a new kind of wind turbine with big possibilities. Its unique design means it can be installed on the sides or tops of skyscrapers and large [apartment buildings](#). It is also quieter, cheaper to run and safer than current [wind turbines](#) – it doesn't have large rotating blades that might be dangerous for humans or birds.

PowerWINDows is the culmination of four years of work and UOW has just signed an initial two-year deal with one of Australia's leading engineering companies, Birdon, to build a commercial viable prototype to enable more extensive testing and evaluation in the hope that the product may one day be brought into production.

Professor Safaei says he started this line of research to overcome some of the key shortcomings of current wind turbine technology, in particular, to enable modular manufacturing, easier transportation and installation, and reduce noise, as well as land usage footprint.



PowerWINDows can be used in both wind farms and metropolitan areas.

"I wanted to create a wind turbine that better integrated with living environments", he says, adding that the [invention](#) "looks like a window with a sparse venetian blind – the blades move vertically up and down."

He says the invention can be easily blended into existing environments because of its window-like form, which can be painted to match buildings.

Director of Innovation & Commercialisation Research at UOW Elizabeth Eastland says in order to make the switch to renewable [energy](#)

technologies, which will help cut greenhouse gas emissions and lessen the impact of fossil fuels shortages, we need to come up with innovative, but workable solutions.

"PowerWINDows has the potential to help us harvest [wind energy](#) in a much more effective way," she says.

"We are pleased to have Birdon working with us to advance this technology."

Group General Manager of Birdon, Ian Ramsay, says he looks forward to working with UOW on this nationally important project.

"We see this is an opportunity to apply our engineering expertise in the green energy area, and contribute to the reduction of greenhouse gas emissions, whilst bringing to market a strong and viable commercial solution for the renewable energy sector."

Provided by University of Wollongong

Citation: New wind harvesting invention to bring cities to life (2013, April 9) retrieved 11 August 2024 from <https://phys.org/news/2013-04-harvesting-cities-life.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.