



O-Wind turbine

Innovation > Science & Environment > Single-axis wind turbine generates energy for apartment blocks

SINGLE-AXIS WIND TURBINE GENERATES ENERGY FOR APARTMENT BLOCKS

 SCIENCE & ENVIRONMENT

A patent pending design for a single-axis wind turbine makes use of wind approaching from all directions and can take urban energy harvesting to the next level.

Sustainability has taken a new turn with O-Wind, an omnidirectional, single-axis wind turbine catered to serve apartment buildings facing chaotic winds in urban environments. Patent pending, the O-Wind takes advantage of horizontal and vertical winds without requiring steering. It would enable apartment block residents to sustainably generate electricity. Due to its unique design, the turbine makes use of wind approaching from all directions in three dimensions. This is not the case for other wind turbines available at present. The simplistic design of a single axis requires less maintenance than traditional wind turbines. The size and shape of the turbine also means it can be placed in various locations compared to traditional turbines, which require more space.

Created by Nicolas Orellana Olguin and Yaseen Noorani, the structure of the turbine is lined with vents that have large entrances and smaller exits for air. In the presence of wind, there is a pressure difference between the two terminals and this causes the turbine to move. The vents are placed all across the sphere, making it receptive to wind from all directions. This turbine rotation is used to power a generator that can produce electricity. It also has the capability of feeding into the national grid, providing financial incentive to users. In addition to improving the region's sustainable energy production. The innovation was the UK national winner of a [James Dyson award](#).

Sustainable energy is growing in demand and has expanded far further than solar panels. A flexible fabric generates energy using the wind created on [London's underground](#) transport system. Similarly, we have seen a smart wind turbine that [learns wind patterns](#) to optimise the power generated for family homes. How could you incorporate sustainable energy into your operation?

23rd October 2018

Website: www.jamesdysonaward.org

Contact: www.linkedin.com/nicorellana

Takeaway:

Methods of creating sustainable energy are emerging en masse from the tech industry. The public has never had a bigger appetite for incorporating sustainable methods into their home, and innovators will be smart to utilise this passion and create the products consumers don't even know they want yet. What could your business create to appeal to the sustainably minded?