

A NEW TYPE OF VERTICAL AXIS WIND TURBINE FOR CITY SPACES

A 5 Kw prototype of a new type of wind turbine with vertical axis and horizontal blades is ready to make its market debut. It is a product developed by the company Indesmedia (IDM) EOL, based in Cantabria (Northern Spain). It is designed to be installed in urban spaces like buildings and industrial plants.

The installation of two prototypes was recently completed at the Besaya Business Park (Cantabria). Both devices are being tested by technicians from Indesmedia before being moved to Barcelona, where they will be reinstalled in a building for an R+D project headed by the engineering arm of the Spanish utility Endesa.

The current phase is testing the structural resistance, electronic controls and power electronics of the wind turbine, as well as the performance of different types of blades.



The product is the result of a project funded by the wind and solar energy program from the Spanish Ministry of Science and Innovation. Its main objectives are minimising the visual impact and noise of the wind turbines, simplifying their manufacturing process and installation and finding new spaces where to take advantage from wind energy, such as urban spaces, ships and marine platforms.

Another important factor considered in their design was reducing risks for birds and bats, hence they rotate at low speeds (under 10 rpm) and the towers are no more than 13 yards high. Two other key institutions collaborating in this project are INTA and Robotiker-Tecnalia. INTA, the Spanish Institute for Aerospace Technology, did the design of the blades and the rotor. Robotiker-Tecnalia, a technology center specialised in ITC technology and product development, assisted in the development of the power electronics.

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