# A Drone that will save Time and Costs in Wind Turbine Inspection

Iberdrola and Arbórea spearhead a project which can detect damages of just millimetres.

Photo top left: José Antonio, Alberto Moreno, and Carlos Bernabéu pose with the aracnocóptero in the Sierra Dueña Wind Park.

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**SALAMANCA.** Within a few years, drone technology will arrive in a big way, and that's why in the United States—always one step ahead in regards to aerial space—is considering regulations that will avoid a legal chaos, through a series of standards and requirements. Living with drones will be so natural, affirm the experts, that no one will be shocked when one of these devices delivers a pizza to the front door.

That's one of the uses that are being thrown around. But that's tomorrow. Currently, these remotely controlled flying devices have other capabilities such as capturing aerial images, examining skyscrapers or inspecting irregularities in places that humans can't access.

City halls, universities, and private companies are already working with drones in order to take advantage of the multiple possibilities and also, the significant cost savings that they offer. Iberdrola has already been able to test out the advantages of these drones—specifically, the aracnocóptero Eol6—for wind turbine inspections. The first trials have become a reality; in the Sierra Dueña Wind Park yesterday, a small demonstration was performed by Arbórea, the firm that has designed and developed this project on the Scientific Campus of the University.

Its debut, according to José Antonio García and Alberto Moreno of Iberdrola, will diminish the time it takes to perform a blade inspection of one of these machines which, in turn, will lead to cost savings. Their efforts have simplified what used to be performed by cranes and terrestrial telescopes with a micro-camera that captured images of potential damages that the wind turbine could have suffered. Barely two 15 minute flights with the aracnocóptero are sufficient to detect the exact location of the problem, as Carlos Bernabéu confirmed, the director of Arbórea. "Without freight, that is, without the camera, the battery can last up to 25 minutes, with freight the approximate flight time is 8-10 minutes," he pointed out shortly after the demonstration. "Our software allows for the diagnosis of damages in a reduced amount of time. Small damages, of only a few millimetres, can be detected", he added, noting that only a few days ago one of the training courses offered to handle these types of devices concluded. Bernabéu also added that this type of helicopter began to be commercialized in 2011 and after being adapted, can be charged by the wind turbine itself, which means it uses clean energy.

"Reducing the inspection time helps us by providing the necessary information in order to plan with greater certainty" noted José Antonio García yesterday, the regional head of Wind Energy Operations in Iberdrola's central zone, who assured additionally that the device can operate on windy days. "The information that we obtain is much more precise; when erosion is acted upon quickly, blade removal can be avoided, an operation that implies longer wind turbine downtime" added Alberto Moreno, Iberdrola's regional head of Operations and Maintenance in Castile and León.

Iberdrola and the Centre for Technological Development in Industry, an organism affiliated with the Ministry of Economy and Competitiveness, signed an agreement last year with Arbórea Intellbird, S.L. in which both entities invested €500,000. It is the first investment that has been made in the Energy and Environment area of the program 'Innviert; according to company sources, it means that Iberdrola (through its Perseo funds) and CDTI have become a shareholders in Arbórea.

Link to original story (Spanish)