High-altitude wind power reaches new milestone

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Credit: Kitepower

As part of the EU-funded REACH project, Dutch start-up Kitepower

has successfully deployed its Airborne Wind Energy System (AWES) in the Caribbean. This is a landmark achievement for the company working to bring its Falcon 100kW to market. It will provide plentiful, inexpensive renewable energy to remote communities and small power grids.

The AWES Falcon 100kW is a system consisting of a ground station, tether, control unit and kite. Its purpose is to take advantage of stronger winds at altitude to produce power. The kite generates kinetic energy as it flies—being reeled in and out—and the ground station converts the kinetic energy into electricity. The solution is ideal for remote communities because it is easy to install, portable and uses materials cost-effectively. The AWES is especially effective in locations with constant prevailing winds.

The milestone flight by the AWES took place above the Caribbean island of Aruba as part of the Caribbean Engineer 2021 military exercise, in close collaboration with the Dutch Ministry of Defense. The flight marks a critical point in the system's development as it is being brought closer to commercial release. The AWES demonstrated its feasibility in an environment ideal for the system, due to its ease of shipping and deployment in challenging terrain.

A new high point for wind power

This is the very first Kitepower operation to be conducted outside of the European continent. In a company press release, co-founder and CEO Johannes Peschel explained: "A dream finally came true: A milestone that I have envisioned since the incorporation of Kitepower five years ago. We have finally shipped and flown a Kitepower system on a Caribbean Island. It is rewarding to see one of our kites flying next to Henk's wind farm (Vader Piet in Aruba) and I believe it is truly remarkable to be able to witness what Kitepower has accomplished in

the course of the last years. I would like to thank Henk, the department of Defense, all supporters and especially the Kitepower team for the blood, sweat and tears that have been put into the system and look forward to many more Kitepower operations in Europe and overseas!"

Lieutenant Colonel Paul van der Heul added: "Kitepower is one of the interesting possibilities of energy supply. This offers opportunities, especially in remote and windy areas such as islands."

Kitepower's Falcon 100kW is a result of years of research and development undertaken during the REACH project. Its commercial release could significantly reduce fossil fuel dependence in remote regions where conventional wind farms are unfeasible due to cost or materials shipping. This could be a great boost to wind power globally as the world transitions away from fossil fuels. REACH (Resource Efficient Automatic Conversion of High-Altitude Wind) ended in August 2019.

More information: REACH project: cordis.europa.eu/project/id/691173

Provided by CORDIS

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