

Kites Could Soon Power An Entire Region of Scotland

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Image: [Wikimedia](#)

The kite-powered system could reduce the cost of offshore wind energy by about 50 percent.

by [Madison Margolin](#)

Kites are no longer just kids' toys gliding in the wind. By 2025, they will provide power to an entire region of Scotland.

A 500-kilowatt system of kite-supported power stations is soon to be installed at the Ministry of Defense's West Freugh Range, near the town of Stranraer.

Even Bill Gates, co-founder of Microsoft, has [called](#) kite power the "magic solution." Kite power systems, or kytoons—hybrids of kites and balloons—make use of the jet stream energy circling Earth at around 20,000 feet. The kites work simultaneously, one going up, the other going down, and hence generate constant electricity.

Kite Power Solutions, the British company installing the system, expects that within nine years, it will not only generate hundreds of megawatts of energy, but will also be so cheap it won't require any government subsidies, like most alternative energy projects.

David Ainsworth, business development director of Kite Power Solutions, [told The Independent](#) the project will be "tariff-free," though it's backed by Royal Dutch Shell oil company and the UK government. They say the kite system could reduce the cost of offshore wind energy by about 50 percent.

Traditional techniques using wind turbines require energy that keeps kites upright in the sea, which adds to the cost. "They are talking about 10 euro cents per kilowatt-hour, we're going to halve that," said Ainsworth.

Securing kites is much cheaper than wind turbines, for example, because the kites float themselves up to 450 meters in a figure-eight, meanwhile pulling a tether attached to a turbine in order to generate electricity. "Our systems basically float and the cost of the mooring is much lower than a wind turbine," Ainsworth.

The kites will be about 40 meters wide and able to generate two to three megawatts of electricity each—which is about the same as what a typical 100m turbine can do. Moreover, Scotland is a fairly windy country, where eight of the top 10 windiest spots in the United Kingdom are located, according to the Met Office. Ainsworth suspects that fewer than 10 days a year will the kites not generate energy, given how seldom the region experiences a lack of wind. When that does happen, a fan will keep the kites up until the wind comes back.

"Kite-power technology offers the prospect of an exciting new way to harness the power of the wind, particularly in places where it might be impractical to erect a wind turbine," said Lang Banks, director of WWF (World Wildlife Fund) Scotland.

"Alongside energy reduction schemes and other renewables, this technology could contribute to helping us to end our addiction to climate-changing fossil fuels."
