

Re: Wind energy a boon for farmers – tenfold returns !

Source: <http://sci.tech-archive.net/Archive/sci.physics/2004-12/1150.html>

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Date: 11/25/04

Date: 24 Nov 2004 21:20:27 -0800

"the turbines can function in a Category 4 hurricane,"

news:<418155f5.7038821@news.clara.net>...

Knight–Ridder via Kansas City Star – Nov 24, 2004

<http://www.kansascity.com/mld/kansascity/news/world/10262296.htm>

Towering windmills to cut costs for Navy at Guantanamo

by Carol Rosenberg

Knight Ridder Newspapers

GUANTANAMO BAY NAVAL BASE, Cuba – (KRT) – New York has the Statue of Liberty. Paris has the Eiffel Tower. And early next year, four colossal windmills should tower over this remote U.S. outpost – new landmarks that could someday supplant the Pentagon's prison for terror suspects as the symbol of this Navy base.

The glossy white windmills will be visible to distant ships in the Caribbean's Windward Passage, detainees at this base's terror prison and even Cubans separated by miles of minefields from this 45–square–mile U.S. enclave.

Environmentally friendly, the \$11.6 million project is designed to decrease the consumption of diesel fuel here by 25 percent. Under the plan, each windmill should generate 950 kilowatts of energy, save 650,000 gallons of diesel fuel annually and cut air pollutants and greenhouse gas emissions by 13 million pounds a year.

Best of all, the project requires no special taxpayers' outlay because of a decade–plus payback agreement with NORESKO, the Westborough, Mass., contractor building it.

Under the deal, the Navy will pay the firm with the annual savings from the Pentagon budget for diesel oil here, about six cents a minute, meaning it should be free and clear by 2020.

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"It's an ancient philosophy combined with state-of-the-art technology," said Navy Cmdr. Jeffrey M. Johnston, a Seabee responsible for all public works here – from the electricity inside interrogation cells to the toilets at the elementary school for sailors' children.

The project is so huge that the Navy brought in a crane and about 500 tons of steel and fiberglass parts on barges from the United States to assemble it.

Today they are piled, like pieces from a giant's erector set, in the parking lot of the Lyceum, an open-air movie theater up the road from McDonald's.

In coming weeks, workers will assemble the parts atop John Paul Jones Hill, the highest point on the base, where the 270-foot-tall wind-driven generators will replace a U.S. flag and "dominate the skyline," said the base commander, Navy Capt. Leslie J. McCoy.

The flag will fly elsewhere.

As Johnston describes it, the project blends centuries-old science that has harnessed the winds through the ages with leading-edge sensing devices that rotate and swivel the mills' blades in the winds.

Thanks to the sensors, the turbines can function in a Category 4 hurricane, said NORESKO project manager Dan Ingold, but will typically work hardest from morning through afternoons, when the trade winds and air conditioning consumption are greatest.

They should be fully functioning in April, a fusion of wind and diesel power producing 25 megawatts to emerge as "the largest hybrid power system in the world," Ingold said. Today's largest hybrid system is in Australia, making 15 megawatts.

Because of on-again, off-again winds, this base can never become entirely fossil-fuel free.

But the goal is to clean up the output at a plant built at the height of Cold War tensions, when the base cut the water main from Cuba in 1964 and began producing its own electricity and water.

) 2004, The Miami Herald.

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