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State testing wind power at airport

16 generators are being tested as electricity sources

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There's a building near the end of Lagoon Drive at Honolulu International Airport that looks like it's about to take off.

But the 16 propellers on top of the building aren't meant to lift the building off the ground. The wind turbines are intended to generate enough power to keep a key state Department of Transportation airfield electrical facility operating.

The electrical vault is the second of two that supply power to some sections of the airport. The first vault powers all of the airport's runway lighting, taxiway lighting and navigational aids, but if it fails, the entire airfield would be without electricity, the DOT said.

The new \$13.8 million electrical vault was built to ensure that there is 100 percent emergency backup power to airfield operations, the DOT said. The construction of the second vault is one of several steps state officials have taken to prevent a shutdown of the airport in the event of a blackout, such as the one after the Oct. 15, 2006, earthquake.

To cut down on the amount of energy used by the vault, the DOT in June installed the 16 wind turbines to supply the facility with power. The \$100,000 project was completed in June.

Each turbine generates about 1 kilowatt and measures 6 feet by 8 1/2 feet. The turbines are connected to the building's 120-volt power panel, which supplies power to smaller loads, such as lights, receptacles, exhaust fans, computers, battery chargers and other noncritical devices, said Dean Hayashida, DOT spokesman.

Because the areas of the airfield have different voltage requirements, the energy generated by the turbines is fed to the building, not to the airfield, Hayashida said. He added the state is collecting data on the amount of energy produced by the turbines and the amount of money saved.

"This is a pilot project, and the data will be used to determine the usefulness and cost-effectiveness of this system for future airport projects," Hayashida said.
