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Wind energy takes on grassroots momentum

By: Shurna Robbins shurna@cfp.ky



Nancy and Jay Easterbrook Owners of DiveTech have installed a wind turbine at its dive shop and new condo development in West Bay.

For more than two decades, Paul Bodden has been working on getting his businesses and family completely off the power company's grid.

A couple years ago, he spotted five used commercial wind turbines for sale from an established vendor's Internet site he uses. He snapped them up and brought them on island.

Then about eight months ago, he moved into the house he built in Lower Valley. Still determined to be independent from the utilities company, the new house is not connected to CUC's grid at all. Instead it is powered by diesel generators while he works on getting planning approval to hook up one wind turbine to his home.

"My guess is the cost of oil is going to go up as high as it was last August again," says Bodden. "It is just a matter of when. When will it get so high that we can't afford it – we don't know. We don't know

when the world's supply of oil is going to run out. No one knows. And OPEC and the stock market use that to gouge people."

When installed, the wind turbine will be 116 to 118 feet high with a 51 feet blade span. Each turbine has the capacity to generate 65 kilowatts per hour, enough to power three to four houses. But whether or not there will be enough wind to generate sufficient electricity to fully service his house, he doesn't know yet.

"We are just going to set it up and see," says Bodden.

Meanwhile in West Bay, Jay and Nancy Easterbrook spend two hours or more a day answering questions from local residents who come up to have a look at the wind turbine they installed for their dive shop and eco-friendly condominium development.

The people dropping in are primarily homeowners or looking to build.

"Many people will walk up and down the dock and then come back and ask where the wind turbine is, and we will say 'You just walked past it,' " says Nancy Easterbrook. "The wind turbine is so quiet they don't even notice it."

The questions are pretty much the same with everyone: How much power does it generate? Where do you buy it? How do you get it installed? What are the steps needed to go through for planning approval?

And the biggest question: What is the bottom line cost?

While CUC's decision on proposals for a commercial wind farm is still eight months away, more residents are considering alternative energy for themselves. And while there is just a few residents such as the Easterbrooks who have made significant investments in renewable energy, their efforts are attracting enormous interest from a range of homeowners concerned about the electricity costs and the environment.

Currently going through its testing phase, Easterbrook expects the final inspections to be completed in the next couple weeks so it can be fully operational by the 1 September.

On paper, this turbine's capacity is 2.5 kilowatts per hour. Although September is traditionally a slow wind month, Easterbrook expects the first 30 days of operation will give them a realistic idea of just what the power generation will be.

Right on the coast, wind speeds can regularly reach 30 knots during the October to June months so power generation is expected to jump after the first month of operation says Jay Easterbrook.

But to be a viable energy source, the wind gusts at a location need to be at least 8 mph on a regular basis says Easterbrook

Combined with the solar panels, the Easterbrook's intend to supply all the power needs for the dive shop and nine condo units, except for the air-conditioning. Primarily because solar and wind turbine cannot

provide the initial voltage needed to start a 240 volt air-conditioning unit says Easterbrook.

The Easterbrook's decided to forego plugging into CUC's power grid and sell back any excess energy it may generate through its CORE programme. Like many people, they take issue that CUC has the right to charge them for power they generate through their turbine and solar panels even if it doesn't go back to the power grid. So until CUC takes off this charge, extra power they generate will be stored in an inhouse battery. Beyond the battery's capacity the excess will just not be used.

Unlike Bodden's commercial turbine, the Easterbrook's purchased a residential turbine. The three blades are six feet in length and made out of lightweight fibreglass and installed on a 33 ft tower.

In the event of a hurricane, this turbine is designed to be taken down in 30 minutes and completely packed up in two to three hours.

Bottom Line

Expect to pay about \$20,000 for the turbine, shipping and installation says Easterbrook. Because government has waived duty fees and there is a growing drive for clean energy, the environment is ripe for more residential investments in renewable.

But for wind turbines to be a really viable investment for residents, local suppliers will need to put packages together that will walk through the whole process from the equipment, planning and installation says Nancy Easterbrook.

Engineer and general contractor Sam Small is already starting to put the pieces in the works to offer wind turbines for residential homes and businesses. He expects to start offering wind turbine packages by the end of October.

As for Paul Bodden's home in Lower Valley. If the commercial wind turbine proves to be an effective power generator like he anticipates, with four grown children he already knows where the remaining four turbines are going to be installed.