

## Currituck board OKs rules for wind turbine noise, shadows

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CAMDEN — With the prospect of a new wind farm in Camden and Currituck, both counties are adjusting rules for noise and shadows from turbines.

Camden has already revised its wind energy ordinance to limit sound and “shadow flicker” from 500-foot-tall turbines. Currituck may soon be following Camden’s lead.

The Currituck Planning Board OK’d changes this week to county regulations at the urging of Invenergy, a Chicago-based renewable energy company with sights on Hales Lake and Shawboro. Commissioners will also have to sign off on the changes.

Invenergy reportedly has told both counties that it plans to seek special use permits for a wind farm in the next few months. So far, no paperwork and no meetings have been scheduled. An Invenergy spokesman said last month that construction could begin in 2013.

The change to Currituck’s Unified Development Ordinance would allow turbines to cast no more than 30 hours of shadow a year on houses that are not part of the project. As wind turbines turn, the blades momentarily block the sun, creating what’s known as “shadow flicker.”

Originally, Currituck’s UDO allowed no shadows on off-site properties. April Montgomery with Invenergy warned Currituck’s Planning Board Tuesday that if the rule remained unchanged, it would “significantly limit” plans for the project.

Montgomery said the company cannot guarantee that a shadow would not at times fall on Buckhorn Road from a cluster of turbines in the vicinity. Without some allowance for shadows, the company’s layout for the turbines along Buckhorn Road toward N.C. Highway 343 would not work, she said.

She said once the company gets a special use permit, it will conduct a shadow survey to predict more precisely where and how frequently shadows will fall.

The 30-hour-per-year limit on shadow flicker for properties outside the project area is a standard used by most wind farms nationwide, she said.

Planning Board members questioned if the shadows had drawn complaints from nearby residents of other projects. Montgomery said Invenergy works with property owners who have complaints about the shadows. The company will buy shades or plant higher shrubs to minimize the impact of shadow flicker, she said.

“We have been really successful working with landowners,” said Montgomery.

Even so, the company is not always able to satisfy everyone 100 percent, she noted.

The changes to the ordinance will also limit the noise level from turbines to 55 decibels at any home outside the project area. Initially, county officials had planned to use Currituck's noise ordinance for the wind farm but found out later that those rules don't apply to turbines, said County Planning Director Ben Woody.

A buffer between the turbines and homes will soften the noise, said Montgomery.

Under the county ordinance, all turbines must be as far away as they are tall from neighbors' property lines. The turbines must be a quarter-mile away from homes outside the project area.

The proposed change would limit noise to 55 decibels at any off-site house. That's the standard already approved in Pasquotank and Camden counties. In addition, the N.C. State Wind Working Group has recommended 55 decibels in its model ordinance, Montgomery noted.

Montgomery said 55 decibels is the same as office noise. From a quarter mile away, a turbine would make less noise than a window air-conditioning unit, she said.

A couple Planning Board members said they had visited wind farms and were surprised at how quiet they were. Joe Kovacs said he didn't hear noise while driving past a wind farm in Indiana even when he neared a turbine close to the road side.

Bobby Bell said he visited a farm in Chicago and was surprised by how quiet the turbines were.

"It's not like what I thought it would be," said Bell.

Board member Jim Clark also asked how the turbines might affect the feeding habits of migratory birds in the area. Montgomery said Invenergy is already collecting data on birds in the project area and will submit a plan for protecting them to the U.S. Fish and Wildlife Service.