

Proposed Text Amendment to Chowan County Zoning Ordinance

I am opposed to approval of the text amendment to the UDO, which would allow construction of large wind turbine farms in the County, because there are many factors concerning wind turbines that do not appear to have been adequately considered. Among these are:

- Fire
 - Wind turbines can and do catch fire and burn, and
 - It is suspected that many more fires occur than are reported due to the remote location of many turbines
 - The nacelles and blades are constructed of fiberglass composites, which are flammable
 - The nacelle contains up to 200 gal of flammable hydraulic fluid and lubricants
 - The most common cause of fire is lightning and, due to their height, turbine towers are very susceptible to lightning strikes
 - Electrical or mechanical malfunctions can trigger a fire
 - Overheating braking systems pose a particularly high risk of fire
 - When a fire occurs, it is unlikely that local fire fighters will be able to extinguish it because the fire will be 300 feet above ground
 - In a fire, burning debris will be widely scattered and, due to their proposed location in a forest, a forest fire becomes a major risk
- Chowan Regional airport - I will mention some areas of concern, others will provide more details
 - The proposed wind farm is located north of the airport on the centerline of runway #1, directly on the final approach fix and in the holding pattern
 - With a height of 600 feet, the turbines would be a flight safety hazard to low flying aircraft, during landing approaches, and during low ceiling conditions. FAA approval may be required.
 - There is a possibility that the wind turbines may cause electromagnetic interference with the instrument landing system
- Environmental concerns
 - Although it may look like the turbines are turning very slowly, the blade tip velocity of a 150 foot blade can easily exceed 200 mph
 - Recently Duke energy was fined \$1 million because their turbines killed a large number of eagles and other birds
 - Bats are particularly vulnerable because of air pressure differentials caused by the blades
 - Vultures, of which we have a lot and which are protected, have a blind spot directly ahead of them which makes them vulnerable to moving blades

- Federal law prohibits killing of endangered species - including Bald Eagles, which are increasing in numbers in the county
- Health concerns
 - Although the amendment does address sound and shadow flicker, the included provisions are probably not adequate
 - In Massachusetts and Rhode Island a number of wind turbines were ordered shut down because of noise and flicker
 - There is medical evidence of “wind turbine syndrome” where sub-sonic noise, which isn’t addressed, causes actual health risks to nearby residents
- Decommissioning
 - The requirement to post a bond or letter of credit of sufficient amount to remove the turbine should include a requirement that the amount of the bond or letter of credit be increased annually to account for inflation
 - If the developing company goes out of business, who will do the removal and why should there be up to a two year delay before removal?
- Insurance
 - In Germany, the largest user of wind turbines, insurance is becoming more difficult and more expensive to obtain because of the frequency of failures and liabilities
 - The ordinance should include a requirement that liability insurance be carried to cover fire, health and other hazards
- Economic Viability
 - Construction of wind farms is not economically feasible without “Wind Production Tax credits” and laws obliging energy companies to buy the very high cost electricity produced by wind turbines
 - Production Tax Credits are actually a tax paid by tax payers, they are not free money
 - The Production Tax Credits for wind power are due to expire at the end of 2013
 - Congressman Walter Jones and a bipartisan coalition of 52 representatives are advocating against extending the credits and, under the prevailing conditions in Washington, they likely will not be renewed
- The Statement of General Zoning Objectives does not seem to have been adequately considered. Among other things the objectives include
 - minimizing land use conflicts, however there are possible serious conflicts with the airport

- Preserve the desirable features of the county's appearance and character - but 600 foot wind turbines will be visible for 30 miles or more and are certainly not in keeping with the rural and agricultural character of the county
- Protect the natural environment and other valuable resources. However, wind turbines kill protected species of birds and bats.
- Promote the overall economic welfare of the county. But a wind farm is unlikely to bring any economic growth to the county as lease fees will go to Weyerhaeuser, based in another state, construction and maintenance personnel will likely be imported from Virginia and electricity will go to a grid in Virginia or Pennsylvania.

I would like to request that the Commission deny this proposed text amendment to the county UDO or return it to the Planning Board for reconsideration because there are so many issues involving wind turbines and the location of the wind farm as proposed by Apex Clean Energy that apparently were not or not adequately considered. If it is returned to the Planning Board for reconsideration, I request that the Planning Board meetings be open for public comment, which apparently was not allowed when the amendment was first being considered.

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