

Some Comments Regarding H484

“Permitting of Wind Energy Facilities”

[H484](#) is a *very* needed bill that addresses a significant consequence of [Senate Bill 3](#) (an industrial wind specific permitting process). Due to this importance, it's critical to make sure that the provisions in this measure actually do what is intended — **i.e. adequately protect the NC public and the environment, during the permitting process for industrial wind turbines.** [Note: “public” = military, businesses and citizens.]

It appears that this bill was heavily influenced by the 2009 Environmental Management Commission (EMC) wind energy permitting [proposal](#), that subsequently failed to get legislative approval — for a variety of good reasons.

A major omission in the current informal NC wind energy permitting process (and the EMC proposal) is any mandated assessment of human health impacts. It is entirely appropriate that military and environmental concerns be made part of the permitting process, but human health should be *specifically* identified — *and that has yet to be done in H484.*

The following suggestions (which reference [H484v9](#) - the ratified version) are intended to more adequately protect the NC public and the NC environment:

{In earlier versions it said this law was about implementing wind “...in a manner compatible with the efficient use of resources, the State's military and economic interests...” I asked that they also include “and protecting the health and safety of NC citizens.” Instead they dropped the whole section.}

§ **143-215.116.** : A representative from the affected community should be in all pre-permit application meetings, and receive all pre-application materials that are submitted to DENR, within seven (7) days of receipt by DENR.

§ **143-215.116.:** “wind energy facility in this State without first obtaining a permit from the Department.”

This bill references the definitions in “G.S. 143-212”, but it would be helpful if the frequently used term “Department” was identified as “NC DENR.”

§ **143-215.117. (a)-(1) c** [*new*]: “Pose health risks to residents living in the vicinity of the proposed development.”

§ **143-215.117. (a)(4)** [*new*]: “Identify areas where proposed construction or expansion activities pose minimal risk to nearby community residents.”

§ **143-215.117. (b)(5)** [*new*]: “A list of potential human health impacts, as identified by the [World Health Organization](#), NC Department of Health (NCDHHS), and any other recognized Federal or state health agency.”

§ **143-215.117. (b)(6)** [*new*]: “A industrial turbines should be located at least 2500 feet from the nearest property line of a non-participating owner. If the applicant agrees to increase this minimum separation to 5000 feet, then all human health conditions herein are waived. Human health conditions herein are also waived for offshore industrial wind facilities.

Note there are dozens of communities that have stipulated **one mile** as the *minimum* turbine setback. See here for a [list](#) of examples.

§ **143-215.117. (b)** current #5 becomes #7 & current #6 becomes #8

§ **143-215.117. (c)** (add) “NC DHHS...”

§ **143-215.118. (b)** (add) “NC DHHS...”

§ **143-215.117. (c)(2)**: It sounds good that military personnel are asked for their input. However legislators should be aware that active military have been instructed not to say anything negative about any proposed wind project.

§ **143-215.118. (c)** [*new*]: The scoping meeting will be held within twenty-five (25) miles of the proposed industrial wind site.

§ **143-215.119. (a)(4)a.**: “proposed to be located within one-half mile of the boundary of the adjacent property owner.”

There are human health risks that are known to extend beyond a half mile from industrial wind turbines. To give notice to all citizens who could be adversely affected by this industrial development, this should be increased to at least one mile.

§ **143-215.119. (a)(6)**: "Documentation that addresses any potential adverse impact on military operations and readiness as identified by the Department of Defense Clearinghouse pursuant to [Part 211](#) of Title 32 Code of Federal Regulations..."

It is not clear if the applicant is required to get formal DoD approval. If so that would remove any possibility of NC military objections. This needs to be given *careful* thought so as not to undermine NC military options.

§ 143-215.119. (a)(8): “A study of the noise impacts of the turbines to be associated with the proposed wind energy facility or proposed wind energy facility expansion”.

This is the first mention of human health impacts, and is a good start. However the phrasing of this condition makes it effectively meaningless. Firstly, determining “noise impacts” is a highly technical matter that needs to be elaborated on to make this bill’s intent clear. For reference, here is a proposed model acoustic [ordinance](#) written by independent experts.

The health matter needs to be better understood. This [page](#) lists and explains numerous studies done by independent health experts, who have concluded that industrial wind turbines can cause significant health effects. Here is a good [explanation](#) of the sub-acoustic noise issue, written by an independent MD.

This [site](#) has over a hundred studies and reports by medical professionals concerning the human health problems attributed to industrial turbines. And then there’s “[Wind Energy: A Review of Human Health & Safety Concerns](#)” which lists sample studies for Acoustical, EMF, Shadow Flicker, Ice Throw and misc (e.g. fires) problems.

The second major issue with the **Page 4-Lines 32 & 33** paragraph is, exactly *who will conduct such a study?* This is presently worded so that a wind developer is allowed to employ their own friend. Any such study will protect the developer’s interest — not those of NC citizens. We need objective reports from **independent** experts.

A simple, no-cost solution is that the developer should provide a set amount of money (e.g. \$25,000, or a \$1000 per turbine, whichever is greater). That money would go to DENR for *them* to hire an objective expert. This would be no cost to the state, no cost to the developer (who was going to pay someone anyway), but would result in a significantly more accurate assessment.

§ 143-215.119. (a)(9) & Page 5, ✕ 143-215.119. (a)(10):

Same issues and simple solution as prior item.

§ 143-215.119. (a)(13): Asking for a “plan” is a start but is not sufficient. A common response of wind developers is that the turbine’s scrap value will cover its decommissioning cost — which is speculative. The burden should always be on the developer. Here is a good turbine decommissioning [article](#). Is an inadequate Decommissioning plan a basis for permit denial (see below)?

§ 143-215.119. (a)(14) [new]: - Certification of compliance with the full SEPA ([State Environmental Policy Act](#)) process.” {existing #14 —> #15}

§ 143-215.119. (e)(3): "...the commanding military officer of any military installation located outside the State that is located within 50 nautical miles of the location of the proposed wind energy facility..."

This is a very weak condition. For example, the Seymour-Johnson AFB may be impacted by the proposed Pantego project, which is 100± miles away. The distance should be *at least* 100 miles.

§ 143-215.119. (e)(5)[new]: “NC DHHS”

§ 143-215.120. (a)(2): “and result in a detriment to continued military presence in the State.”

This is a vague, impossibly high standard to meet in the real world, and effectively undermines the contention that H484 is protecting NC military installations. **This phrase should be removed**, as it is unnecessary and counter-productive.

§ 143-215.120. (a)(5) [new]: “Construction or operation of the proposed wind energy facility or proposed wind energy facility expansion would have a significant adverse impact the health or safety of nearby residents.” {existing #5, etc get advanced one number}

§ 143-215.120. (a)(10) [new]: an inadequate Decommissioning plan.

§ 143-215.121: What is written here is good, but it’s insufficient. In other communities, the minimum amount has been deemed to be \$100,000 per turbine — so that amount should be required (again as a minimum).

§ 143-215.122.: “... such as reports on the health impacts of persons in the vicinity, and impacts on wildlife in the location of and in the area...”

§ 143-215.122.: “Carolina Wildlife Resources Commission, NC DHHS, the North Carolina Utilities Commission, or any”

SECTION 2: Words should be added that all industrial proposed NC wind energy facilities not yet constructed, should meet the conditions specified herein.

Additional important issues that should be incorporated into H484:

1 - One of the primary problems with the Senate Bill 3 renewable mandate is that inexperienced NC communities are expected to negotiate an extremely technical contract with adversarial experts.

When a NC community is approached about hosting an industrial project, they should be able to go to some qualified NC agency which would provide them with: **1)** comprehensive, **2)** objective, and **3)** balanced information about the pros and cons of such developments. The affected NC citizens could then get accurately educated about this complex matter, and then come to their own conclusions as to whether or not it is beneficial for them.

Currently no state agency provides such information, so NC communities are entirely on their own in this highly technical matter. To make it worse, these communities are dealing with very experienced and extremely aggressive developers — **on an issue that will impact their community for at least twenty years.** This bill should assign some NC agency this responsibility.

2 – Another known detriment to proximate citizens (and host communities) is property devaluation. Numerous studies by independent experts (e.g. appraisers) have concluded that property values near wind developments *will* decline, often substantially. See this [list](#) for numerous examples. This will not only be a personal **financial loss** to some local citizens, but it will also reduce the host county's tax base — which will result on other financial burdens to the whole community. H484 should require a [Property Value Guarantee](#).

3 - A third large area of concern that goes unaddressed in H484 is conflicts of interest. This bill should specifically state that no elected or appointed representative (e.g. county commissioner, planning department member) can participate in any part of the approval process for a local wind project, if they (or any relative) stand to personally profit from such a development.

It is standard practice in the wind business that developers frequently select such representatives to lease turbines on their property. The developer then has an inside voice supporting them during the permitting process. It got so bad in New York state that the NYS Attorney General had to institute special [ethics standards](#) for wind development.

4 – As H484 is currently written, there will be some confusion as to what is different in the permitting process between onshore wind development and offshore wind development. There are significant differences in almost all aspects of the construction and operation of these two types of wind energy. As such H484 should carefully address these distinctions.

5 – H484 states that it is about protecting the environment — but do the authors really understand the numerous environmental issues caused by industrial wind energy? Anyone doing careful research, will find startling results. For example, one place to look would be to check out the conclusions of conscientious citizens who investigated this matter, *prior* to approving an industrial wind application for their community.

Case in point: look at the excellent [study](#) that local citizens created in the small town of Bethany, NY. This proves that objectivity and competence is possible if people start with an open-mind on this matter. The health/safety/environmental considerations that they researched and dealt with included:

1. Aesthetic / Quality of Life Impact
2. Backup Power Issues
3. Construction Disruption
4. Seismic Effects
5. Electronic & Electromagnetic Interference
6. Fire Risk & Fire Department Needs
7. Ground Water Impact
8. Hazards to Aviation
9. High Wind Failure & Other Breakdowns
10. Ice Throw
11. Lighting
12. Lightning Protection
13. Monitoring
14. Noise, Including Infrasonic
15. Road Upkeep & Repair
16. Security (Vandalism / Terrorism)
17. Shadow & Flicker Effects
18. Siting & Placement Issues
19. Storm Water Runoff, Erosion & Sedimentation
20. Stray Voltage (*aka* Ground Current)

These 20 matters were identified as *every one* of these can be a problematic matter! How many of these will actually be addressed by H484?

As an example, let's take what may appear to be an obscure item:

#4 – *Seismic Effects* of industrial wind turbines

In every case to date, applicants for NC wind energy development approval have failed to address the consequences of seismic vibrations caused by their project.

However, there have been several studies done about this (e.g. see [here](#), [here](#), [here](#), [here](#) and [here](#)). Note that some of these discuss **military investigations** and their concerns for such seismic vibrations (“which can propagate for tens of kilometers”). [Here](#) and [here](#) are seismic studies that discuss the human and wildlife consequences of these vibrations.

Is the seismic matter (as well as the other 19 identified issues) all going to be adequately addressed during the NC industrial wind permitting process, so that citizens' health and safety, military interests, and the environment are fully protected? The manner in which H484 is currently written, that seems unlikely.

6 – An Escrow Account. Approving and monitoring an industrial wind turbine project is very complicated, time-consuming and expensive. (Note this [comparison](#) to a Big Box store.) This very profitable business should not have such expenses borne by taxpayers. Instead the developer should reimburse the Town/County for related expenses incurred. See these [sample words](#).

Based on the numerous items identified on the prior pages, I respectfully request that H484 be modified with the inputs stated in this overview. This is important legislation that needs to be done right.

Let me know any questions.

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