

DANISH NOISE REGULATIONS:

The poor and the lower middle class sacrificed on the altar of Big Wind.

The Danish government cares more about Vestas than it does about the health of its citizens.

Poorly insulated homes, i.e. about 33% of the rural population, will NOT be protected against infrasound and low-frequency noise emitted by wind turbines (ILFN). If their owners can't afford to sell them at a loss of up to 50%, nor to make them ILFN-proof by rebuilding or insulating everything from walls to roofs to windows, they may get seriously ill.

From the Danish State Radio Station - P1 Documentary

<http://www.dr.dk/P1/P1Dokumentar/Udsendelser/2012/04/012345.htm>

INFORMAL TRANSLATION – [with clarifications by translator]

Politicians turn a blind eye to the effects of wind turbine noise on 33% of neighbours

Here is the informal translation of:

P1 Documentary 19th April 2012 at. 14:03 on P1 [*The Danish State Radio Broadcasting*]

[*Denmark's*] new noise regulations for wind turbines are such that every third neighbor may be exposed to low frequency wind turbine noise above the limit of 20 decibels indoors. This limit has just been introduced to ensure neighboring families against the adverse health effects of wind turbines' deep bass sound, one that stresses the body and disrupts one's sleep.

The authorities refuse to make indoor control *measurements*, which could reveal whether turbines really are too noisy. Independent researchers' measurements show that approved Vestas turbines violate the rules.

Wind turbine noise may not be measured

Rigmor and Erik Nielsen is a neighbor of eight Vestas 3 MW turbines at Bindesboell near the small city of Tarm in westmost Jutland. The noise from the turbines makes Rigmor Nielsen often have difficulties sleeping.

-“It is many times as if I stand next to a truck with the engine running, other times it sounds like there is a helicopter on our lawn”, says Rigmor Nielsen to P1 Documentary.

The new noise regulations for wind turbines, which came into force on 1 January 2012 to ensure that neighbors of the turbines should not experience severe discomfort of the so-called low-frequency noise that can make them sick.

Neighbors to factories, power stations or fast ferries can complain to the municipality if they are plagued by noise. It will release a measurement at home with the annoyed family and a subsequent order to the noise culprit, if the noise be above the legal limit.

If these rules were applied to wind turbines, however, it would have caused problems for about half of Vestas Danish wind turbine projects. It appears from a letter from Vestas CEO Ditlev Engel to the then Environment Minister Karen Ellemann in June 2011.

Neighbor noise measurements were never a part of the new legislation on noise from wind turbines. Instead, noise is only measured at the source - ie close to the turbine. Then, the noise in the living room is calculated by an ingenious form which is based on an average of all Danish homes.

This applies both when they must be approved before they are put up, and then if the neighbors complain that they can not stand the noise.

Violation of the noise limit

Even with the new noise limit, the turbines near Erik and Rigmor Nielsen's house at Bindsboel were installed without any difficulty from the official noise limitations, says Henrik Moller, acoustics professor from Aalborg University.

His **calculations** show that the turbines at Bindsbøll do not violate the general noise limit of 44 dB outdoors, or the new low-frequency limit of 20 dB indoors. There should therefore be no low-frequency noise above 20 dB at Nielsen's home.

But the noise is there. It keeps the family awake at night, and it can actually fairly easily be documented, if you put a professional measuring up. This was shown by a measurement noise expert from Aalborg University who has been measuring at home with the family.

The measurements show a **dramatic difference** between noise levels as calculated by regulators and industry, and the actual noise. In several places in the house, the researchers' measurements reached 23, 25 and 27 decibels.

- "We have confirmation that there is not a shadow of doubt that the people living there are exposed to more noise than what may be calculated if you use the government's formula", explains the professor and noise expert from the University of Aalborg, Henrik Moller, to P1 Documentary radio.

But Niensens can not use the scientists' proof for anything. The new noise regulations prohibit that the municipality may use measurements of the actual noise in the house in any supervisory matter. It must be based on calculations that actually exempt turbines from noise.

Therefore, also future turbines could be built as big and as close to residential areas, such as those plaguing Niensens around the clock.

Had to reassure neighbors

The noise limits were launched last year, in the words of the then Minister for the Environment Karen Ellemann's, to 'reassure the neighbors'.

At the time, neighboring protests were spreading across the country and led several municipalities to defer and partially completely cancel the planned wind projects. The protests took particularly strong momentum since the first large wind turbines over 125 meters was erected and many more were planned. Denmark must, according to Parliamentary decisions, be independent of fossil fuels. And wind turbines play a major role in the plan.

Had to not bother the industry

But even before the limit of 20 decibels was reported in public, [*Denmark's*] Environmental Protection Agency (EPA) officials gave wind industry a handshake on that the new limit would not result in new restrictions for wind turbines. It happened at a meeting on 14th of March 2011. The record says that "what is possible to establish today should also be possible after the summer [*when the new limits were planned to take force*]...... it's a challenge."

The industry had otherwise cause for concern at the prospect of a limit of 20 dB. The industry's consultant Delta, which also happens to be EPA's Reference Laboratory [*an obvious conflict of interest*], had done measurements that showed that many large turbines would produce about 23 dB low-frequency noise at the nearest neighbors.

In a letter from June 2011 the CEO of Vesta, Ditlev Engel, wrote to the Environment Minister: "Our analysis shows that with the new rules the most economic turbines - Vestas 3 Megawatt-class - will be severely affected."

It is exactly eight Vesta 3 MW wind turbines, which stands near the Rigmor and Erik Nielsen's house.

Manipulated protection level

At the meeting of March 2011 between EPA and the wind industry, it was the authorities' attitude that they would accept that 10-20 percent of the neighboring houses are so poorly insulated that they can experience noise above the limit. But the agency later wrote: "Ultimately it's a political decision which protection level is desired."

Evidence suggests that politicians moved on to fulfill the industry's desire to erect more turbines [*in Denmark's already saturated landscape*]. Later, when among others Vestas had complained that the EPA draft new rules would mean "a serious crunch", the authorities reduced the level of protection. The rules are now such that 33% - every third neighbors – are at risk of living next to turbines exceeding the low-frequency noise limit of 20 decibels indoors.

Doctors warn of health risks

In a consultation call the doctors in the Danish Society for Occupational and Environmental Medicine found it "unacceptable" that the regulations allow that 33% of the neighbors may experience exceedances of the new threshold.

"We estimate that with current levels of noise from wind turbines, an unacceptable number of citizens within the distance from wind turbines as the Order regulates, will be disturbed or seriously bothered by the noise."

D-EPA will not allow neighbor measurements

Claus Torp, Deputy Director of the Environmental Protection Agency, said to P1 Documentary that, although every third neighbor might be able to experience noise above the limit, it will not be a big problem.

- “There may be situations where the noise goes over the limit, but the reality of these projects are - as I hear it - that you rarely design your projects in a way that you drive right up to the limit.”
“Precisely”, says Claus Torp, “because afterwards, when you go out and control the noise levels, you may have some problems with the turbines. So my impression is that turbine producers in most cases put wider noise margins into their projects.”

Claus Torp maintains that the neighbors of wind turbines should not be allowed to document whether the noise exceeds 20 dB in their living rooms by measurement.

-“It is our view - and we are not alone - that it is best to calculate rather than measure the noise inside each house, because there will be a series of uncertainties in each house. There may be a lot of background noise, for example district heating plants and machinery, which is around the house and make the measurements uncertain, he says.

Producers [*of the radio programme*]:

Tanja Rasmussen Madsen, Thomas Street, Morten Bergholt, Agnete Seerup

[It could be added that the politician who was present, Ms. Lene Loklint (Radikale Venstre), Chairman of Environmental Committee of the Parliamentary group of the Radical Left Party (which in Denmark is a purely right wing party, now in office – the name is from historical reasons misleading, established in 1905 when it was in opposition to its "mother" party, Venstre (the left – a liberal type party)!) had a hopeless task when the inquisitive journalist asked her whether she could take responsibility for this new WT-Order and its consequences for neighbors. She had to promise very soon to bring the noise regulations to new discussions in the Parliament due to these not foreseen consequences. Time will show, but she had deep troubles answering the questions.]

Another wind turbine story on the same radio station:

Summary by the informal translator:

Another story was presented in the Television tonight (19.4.12). It was about the 10 big wind turbines (2 MW+ turbines) owned by the Swedish Vattenfall in Lammefjord, Holbaek Municipality, in Sealand, Eastern Denmark. The last ones were started up in October 2011 and in a few days they caused severe problems for the neighbors, well within 500 meters from their homes. Vattenfall is obligated by the noise regulations to present to the municipality satisfactory control measurements [*right under the turbines, not at the homes of neighbors*] two months after the start, but this has not happened yet. Several complaints from neighbors has caused the municipality to close down all the 10 turbines and probably for several months, due to the requirements that the calculations must be done under defined weather conditions (so only heaven knows when). The neighbors cheered but the municipality representative was gruff and the information chief from Vattenfall refused to be interviewed.