

**Watertown Planning and Zoning Commission
Special Meeting
Public Hearing
September 19, 2007
Watertown High School Technology Center
324 French Street, Watertown, CT 06795**

7:00 P.M.

1. Call Meeting To Order

Meeting called to order at 7:00 p.m.

2. Roll Call

Mr.Minnich asks Mrs. Allen to read the roll

Present: David Minnich, M. Masayda, J. Franson, R.Russ, C.Mancini,
D. Goerge, J. Lukasavage

Absent: J. Wick, R. Rondeau, G. Martin

J. Lukasavage sits in for J. Wick

D. George sits in for G. Martin

G. Martin arrives at 7:10 and Mr. George no longer sits for Mr.
Martin

3. Hearing of Applications

**a. Text amendment to the Zoning Regulations to Article I, Section 5.2.
Definition and Article I, Section 7.25 Wind Turbines**

Applicant: Planning and Zoning Commission,
Town of Watertown,
Watertown, CT

Mr. Masayda reads the legal notice.

Interested persons will be heard and written communications will be received.
Copies of the proposed text amendment will be available at the Planning and Zoning
office 51 Depot Street, Suite 502, Watertown, CT ad the Town Clerk's Office 53 Deforest
Street, Watertown CT.

Dated at Watertown, Connecticut, this 8th and 13th day of September, 2007.

Several months ago the ZBA invited the Planning and Zoning Commission to a meeting at which several members attended. There was a meeting of Planning and Zoning following the ZBA meeting. A subcommittee was formed from there and a report was presented tonight. It is a draft report. There is no established agenda of which this will be done in this form or be done at all. A number of residents had asked the board to look at this to see if Wind Turbine regulations need to be established. That is the hearing of tonight's public hearing.

The draft is as follows:

Definition: Article I. Section 5.2

A wind turbine is defined as a device for converting wind energy into mechanical, electrical or other form of energy having a rating capacity of not more than 10Kw. A wind turbine shall not be used for commercial purposes or exporting electricity to lots where wind turbine is not located. The vertical distance from ground level to the tip of a turbine blade where the blade is at its highest point.

Article I Section 7.25

Wind turbine as defined in Article 1 section 5.2 is permitted by special permit as an accessory structure subject to the following conditions:

1. Wind Turbines are permitted in zoning districts R-30, R70, and R90 and wind turbine is prohibited in all other zoning districts.
2. Wind turbine is permitted only for continuously generating electricity to a maximum of 10Kw to dwellings on lots where they are located. Wind turbine is prohibited from exporting electricity to lots where wind turbine is not located.
3. The maximum is one (1) wind turbine per lot for the minimum setback per property line shall be wind turbine height.
4. Wind turbine may be located in side yards and rear yards.
5. Wind turbine is prohibited in front yards.
6. The maximum height as defined in article 1, section 5.2 shall not exceed 65 feet.
7. Lack of wind is prohibited as a reason for granting variances or waivers for zoning regulations.
8. Audible sound shall not exceed 55 decibels measured from wind turbine to nearest dwelling on or adjacent to lot where wind turbine is located.
9. Signs are prohibited on turbines and supporting structures.
10. Prior application for a special permit under these regulations, Connecticut Light and Power Company must have conditionally approved interconnection.

11. Wind turbine and support structures are not accessory structures after 60 days of not continuously generating electricity and must be disassembled and removed within 90 days thereafter.
12. Wind turbine may at no time be a temporary structure.

We are required under state law and our own regulations to refer text changes or suggested changes to the regional planning agency and they may or may not comment.

In this instance they have commented on the above proposal.

Town Council Chairman, Planning and Zoning Commission Chairman, Town Manager, Town Planner of Watertown, CEOs of Waterbury, Middlebury Thomaston, Woodbury and Bethlehem RBC commissioners and RBC referral committee, From Samuel Gold, Senior Planner, Regional Planning commission, Council of Governments of Central Naugatuck Valley. Dated September 10, 2007.

Description of Proposal:

The Watertown Planning and Zoning Commission has proposed an amendment to the Watertown Zoning Regulations. The proposal would permit small wind turbines by a special permit in Zoning Districts R30, R70, and R90. Wind Turbines would be limited to 65 feet in height and 10 Kw in electrical generation. Under this proposal, wind turbines are not allowed for commercial purposes and the electricity generated cannot be exported to lots where the turbine is not located. The proposed amendment also sets minimum setbacks, maximum noise limits and acceptable color for a wind turbine.

Staff recommendations:

Regional planning agency does not address the issue of wind power generation. In the past, the council of governments has worked to promote alternative and renewable energy sources such as passive solar. Permitting wind turbines in residential land would be consistent with past COG efforts. The state plan strongly recommends the use of renewable energy sources. The proposed zoning amendment is in conformity with the state plan of conservation and development. Staff does have a few concerns about the liability of electric generations under the conditions of this proposal.

1. The maximum height allowed under this proposal is 65 feet. According to the American wind energy association, a tower between 80 and 120 feet height is necessary to raise the wind turbine above the turbulent generating obstacles on the ground and trees.

2. For wind turbines to be economically viable, the American Wind Energy Association suggests a minimum average wind speed of 10 mph. According to the US Department of Energy's national renewable energy laboratory, wind potential map for Connecticut at 50 meters, 164 feet above the ground. Watertown, on average has poor wind power potential. The map shows average wind speeds of between 0 and 12.5 mph in Watertown* (see attached map). Average wind speeds at 65 feet will generally be lower and less consistent. Nevertheless, there may be pockets in Watertown that may have greater wind energy potential at a lower height.
3. The Proposal does not allow for the export of electricity to lots where wind turbine is not located. When wind turbine is generating more electricity than is being use outside, electricity will be exported to neighboring lots through CL&P's electrical grid.

Mrs. Mulcahy adds that the paperwork passed out did not have #13 which adds that wind turbine shall be a neutral or natural color. This is an amendment.

Mr. Minnich asks for comments from the Commission.

Mr. Martin states that the document he read is quite enlightening on wind turbines and to move forward with this means we will be doing selective zoning because only those houses that are high enough will be able to use the turbine. Most of the town will not be able to use them. He is not sure how he feels about it. He fees the commission should either allow the height of the turbine necessary to operate in Watertown or not allow them at all.

Mr. Mancini states the minimum setback should be wind turbine height and he calls attention to examples of wind turbine ordinances they received a while ago from around the country. Most of them are at least 1.1 the turbine height or greater and is wondering why it is being limited to just the height of it. He feels it should be greater than that. The maximum height shall not exceed 65 feet, he states the ordinance is currently 35 and was passed to 55 and Mr. Minnich clarifies that ZBA approved 55 feet and the draft of the new one is 65 feet. He states the manufacturer requires 55 feet and why are we going to 65 feet. Audible sound shall not exceed 55 decibels measured from wind turbine and states he remembers the ZBA meeting and the manufacturer stated it would not exceed 45 decibels and why are we exceed manufacturing requirements.

Mr. Minnich asks the public for comments

Dave Daddona, 48 Farm Circle

Mr. Daddona is an adjoining neighbor. The issues are noise, 55 decibels. He states they were supposed to have an example of what 55 decibels sounds like, and that didn't take place. He is concerned on what that sounds like.

Shadowing is another concern. This same turbine was installed in New Jersey and there is a lawsuit because the neighbors complain of constant flickering and shadowing on their property from noon to sunset, everyday, every week throughout the year. He brought this to ZBA and the minutes reflect ZBA telling them to close their blinds. He feels the board should help the neighbors as well. There is potential interference in TVs and radio. Ice buildup would cause ice to spin off. Lightning surges. The manufacturer states that they are designed to take a lightning hit. Mr. Daddona feels that they will attract lightning. The windmill can accept a hit so it doesn't damage itself but the electricity will still go into the ground and surge into the ground and dissipate. If the unit is too close, the surge could go into the neighboring electrical apparatus. He shows copies of other towns' setbacks. He goes over the setbacks with the commission.

Mr. Daddona points out that in New Jersey, the regulations state that the proposed windmill will not block, interfere, or otherwise impair a scenic vista or corridor or the view of an adjoining residential structure. He states that in this neighborhood, inside the cul-de-sac, the homeowners paid 20% more for the properties because they had a view and it is actually stated. The view he speaks of is a 100' wide corridor which is where the proposed windmill would be put in.

He asks that the board revise item #4 and look at the setbacks and create larger setback and in doing so, add 150 feet which is an average of what other towns have done and add 150 feet to the height of the windmill and that would reduce the issues at hand.

Further, the 1.8 kW that this produces is 1800 watts, which is the amount of a blow dryer. He feels it is going to create pollution to market and manufacture this item than it what it can do to help.

Mr. Masayda asks how far the proposed windmill is from his property line. Mr. Daddona states it is 55 feet. And how far is it from the house structure. He states the residence is the minimum setback or 25 feet. Mr. Masayda asks about flicker and what time of day it would be an issue. Mr. Daddona answers that in his situation it would be the morning as the sun rises till about noon. The neighbor on the other side will get it from noon until sunset and it will change for every applicant. Mr. Masayda asks his opinion of the maximum potential of the windmill versus normal noise created by wind. He states he doesn't know what 55 decibels sounds like. The concern is on a cool evening with open windows at night it is normally very quiet.

Mr. George asks if he knows what an air conditioning compressor decibel level. Mr. Daddona says he does not.

Mr. Mancini states he feels that the setback should be changed because as it reads, the setback is determined by the height, so if there is a 35 foot windmill, the setback only has to be 35 feet.

Mr. Masayda asks Mr. Daddona that if you were to put a lightning rod on a tall house, where would the energy dissipater rod be in relation to the house. He states that a ground ring with ground rods around the perimeter, but it is to protect your interior and to bypass it from the inside and get it to the outside of the house. In this situation, you could make it come back to the house.

Kurt Karpavich, 60 Farm Circle.

Mr. Karpavich speaks of roof mounted turbines that he has seen. Connecticut does not have a very good wind resource. There are pockets of good resources and he states that where he is there is a pocket of very good wind resource. For setback of 150 feet from sidelines, rear lines, you would need approximately 3 acres of land and would not enable many people to have one of the units. The blades of the equipment will stop as ice builds. Flickering – he states the unit he is proposing produces a maximum of 45 decibels with a 20 mph wind and he feels no one will have windows open with that wind speed. The decibel blends in with the wind and rustling leaves, and is difficult to hear.

He explains that 85 dB requires hearing protection, but 50 is double 40 and 60 is double 50. He states the unit is very quiet. He further adds that it is UL listed, grounded properly and lightning is a roll of the dice. He reads a couple state ordinances regarding setback ordinances. Westport, Ma is 140 feet high, setback is turbine height, California is 1 acre and their decibel rating is 60dB. Wisconsin is 1 acre. Cherry Hill, New York is 55 dB rating. Illinois is 1.1 times turbine height for their setback and certain localities with large acreage, the setbacks are extensive. If it is pushed to 150 feet, about 90% of the people in Watertown would be excluded.

Mr. Mancini asks Mr. Karpavich what the equivalent of a 45 Db Level? He recalls the manufacturer liking it to a swimming pool pump. Mr. Karpavich states he equated it to a ceiling fan, but that 45dB is at a 20 mph wind speed, 100% rated. At 8 mph it wouldn't be 45 db. Mr. Mancini states that nobody understands what the 45dB would be.

David Puentes, 153 Wheeler Farm Road

Mr. Puentes states he has the requested data and disagrees with Mr. Karpavich's statement about the manufacturers specs. The Skystream 3.7 sound report shows the 45dB is at 13 mph and at 20 mph the dB can be as high as 58 dB. He states the EPA has proposed 45dB as a safe level for a neighborhood during nighttime. Research shows that anything between 40 and 50 inhibits a person's sleep pattern.

This is per their spec sheet. The rating is at 1.8 kW at 20 mph wind speed. According to the wind study at 8-12 mph, you will only produce .4 kW which is not even equal to a hair dryer. In order to get to the 58dB which is the maximum noise level at 20 mph, you have to move the structure further away from other structures. For every doubling of a distance a structure is from a source, you drop 6dB which is a mathematical law. So at 58dB maximum at 20 mph and at 55 feet (proposed) then it needs to be doubled to 110 feet to obtain 52 dB. To obtain 46 dB would have to be 220 feet as per their specs.

Mr. Puentes states he is a huge proponent of alternative energies, but not at the expense of the neighbors or safety. Lack of sleep is a huge safety issue.

Diane Fasano, 62 Lake Winnemaug Road

She is not part of the neighborhood, but she questions wind speed and if anyone thought about the consequences of hurricane and tornado warnings, etc. Can they be shut off to prevent from possible consequences?

If it can be shut off and the homeowner is not home, what would be done?

Rick Sanandrea, 21 Emile Avenue

Mr. Sanandrea answers Mrs. Fasano telling her that all the paperwork when it was approved, the manufacturer told them at 20 or 30 mph the unit shuts down by itself and it will only go to 325 rpm. He compares it to a car which idles at 1000 rpm. As far as setbacks, the manufacturer stated that if it was 65 feet tall, there should be 65 feet drop area and nothing can be in the way in the whole circumference.

Mr. Sanandrea feels that it wouldn't be fair to set it to only R70, R30, R90 zones because there are residents in R12.5 who have 7 and 8 acres of land. He asks they look at industrial zones as well. He feels it should be left at the 35 foot variance because if it set at the 65, people may just buy the 65 instead of the 35.

Mr. Mancini asks Mr. Sanandrea if the 45dB is equal to the sound of a swimming pool pump. He states he never heard that, but further explains that he has heard it would be just like a fan or an air conditioning unit which he feels is pretty loud. It was explained to him that it was no louder than office noise.

Lou Cavallo, 97 Joshua Town Road

He states the setbacks and noise levels need to be figured out. While living in Oakville, he claims that he couldn't sleep with his windows open because the neighbor had an air conditioning unit in their window and his wife couldn't sleep with the humming noise from it. Further, he states that noise levels affect everyone differently. Some people can sleep with an air conditioner running and some cannot. He makes the point that if you want a billy goat you would need 5 acres, but a big structure such as this, not much land is needed. He states the setbacks of 150 feet or better would be more acceptable than what we have now. A well needs 75 foot distance for a 2 foot high structure.

Engle Puentes, 163 Wheeler Farm Road

Mr. Puentes speaks of his concerns regarding the structure. First, he believes that the country believes renewable energy is an appropriate goal if it is a passive resource. In this case it is not a passive resource. He states it is an active source and it is apparent that it is an energy resource when you see it. He states it has a strobe light effect and feels it will drive a man crazy. He feels for the price he paid for his property he should not have to worry about this type of structure. Secondly, he also questions the noise as far as what 45dB sounds like. He feels that the commission should find out the answer to this question before a regulation is passed. Thirdly, you can't discount the fact that this is going to be a novelty that may increase traffic flow. He state he has friends asking about it already. He feels the concerns that this neighborhood has will be the same for all of Watertown. Given the way the turbine operates, he thinks the best benefit would come from a greater height otherwise it will not generate enough energy to support the price paid for it. The impact of these regulations are going to be on neighborhood with large lot sizes. The imposition of these regulations are going to impact larger lots and those with the higher taxes versus those with a smaller lot who pay less in taxes.

Mr. Minnich asks if there were any more questions.

Tom St. Onge, 1110 Main Street

He states he's been here most of his life and feels that this will bring the town. Larger lots are needed and states that he's traveled across the country where he has seen these turbines out west and they are usually in a group of 30-50 in an unpopulated area with nothing around. This is not like that. He states these should be put on large properties and not in this type of neighborhood. He feels it is not fair to the neighbors. He speaks of the water tower and how it is seen from Litchfield Road and at that time there was no choice and now there is.

Carl Perugini, 186 Wheeler Farm Road

He is against the windmill in a residential area. He asks how they would like to see this when they walk out their front doors. He feels it will take away from the town's aesthetics.

Beverly Winters, Torrington CT

Growing up in New York City, she states she's seen a lot of eyesores, and a windmill, she feels is not an eyesore.

Carl Perugini, 186 Wheeler Farm Road

In response to the woman from Torrington, he appreciates her being from New York City, but states this is Watertown, and they are speaking for Watertown.

Mr. Minnich asks if there are any other comments. He then asks the board if they have any comments. Mr. Masayda asks what is this windmill at its' maximum turning, is the wind louder than the windmill or is the windmill louder than the wind. What percent of the town has the highest potential to accommodate a windmill such as this? Is it limited to just residential areas? Maybe it should be promoted in industrial areas and why isn't being allowed there?

Mr. Martin states that the point here that he doesn't know if a decision can be entertained because of property devaluation, view obstruction, when extra money has been paid for that. Is that something that can be brought into this discussion? He wants to know in the terms of an education standpoint. He wants to know if there is anything else he should take into consideration for his decision making information.

Mr. Minnich states that as a zoning board they have an obligation to protect the property defined and zoned so that when a change is being made, they have to look at the impact being made upon the zoned properties it is affecting. Some feel that property values is a means of addressing that and that is fine individually and collectively, they must keep in mind the land in town has been designated for certain purposes and this has already been defined and now it being challenged.

Dave Daddona, 48 Farm Circle

He asks the board to possibly do a site walk to see what is actually being proposed and for which they would be writing regulations for.

Kurt Karpavich, 60 Farm Circle

Looking at the dB data and the decibel rating is blended in with background noise and he sees no outstanding differences with the wind turbine overpowering background noise at all. It is the quietest unit on the market and very aesthetic as well.

Dave Puentes, 153 Wheeler Farm Road

He shows a chart of the dB noise and points out that the noise from the structure will be louder than the ambient noise.

Sandra Greenwood, 156 Belden Street

Mrs. Greenwood states she is neither for nor against this windmill but would like to know if Kurt would be getting the strobe effect as well as the neighbors?

Mr. Hoyt, 39 Farm Circle

Lives directly across from Kurt and is about 30-40 feet higher than his house. He states he knows Kurt has had a wind measuring gauge on top of house for several years so he knows how much wind he gets. He states the wind is pretty constant. He states he's only run his central air 25 times in the 9 years he's lived there because of the wind he only needs to open windows. From an energy perspective, he is saving because of the wind which is natural. He asks why he isn't putting the windmill on the other side of the house where the neighbor isn't as close and ground is the same level. He feels the reason is that it would block Kurt's view because of his large deck and windows.

Mr. Hoyt will see it directly across from his front yard and probably get more flickering because there are no trees. Further, he states that sound carries through the valley of this neighborhood.

He asks for size acreage and height to be considered by the board before approval.

Mr. Perugini states that as far as he knows that if the unit is generating more energy than the house is using, it will be sent back into the grid. How dirty is the energy going into the system?

MOTION: To close public hearing.
Motion By: Mr. Martin
Seconded by: Mr. Mancini

Motion passes unanimously.

Michael Masayda
Secretary
Planning and Zoning Commission