

ZONING BOARD OF APPEALS
238 Main Street, Cold Spring, New York 10516

MEETING AGENDA

MAY 13 , 2013
7:30 p.m.

1.) Approval Of April 8, 2013 Minutes

PUBLIC HEARING

2.) Gleick, James Appeal # 883 TM# 82.-1-42.1
200 Long and Winding Rd.

CONTINUATION

Applicant would like to install a Residential Wind Turbine that will be 152 feet in height. According to the Code of The Town of Philipstown, no structures shall exceed 40 feet in height, therefore the applicant is requesting a 112 foot height variance.

3.) NEW/ OLD BUSINESS

*** ITEMS MAY NO BE TAKEN IN ORDER AS LISTED**

received
5/11/13 *[Signature]*

ZBA ACTIVE APPEALS

#883 Gleick, James Public Hearing

ZONING BOARD OF APPEALS

APRIL 8, 2013

MINUTES

The Zoning Board of Appeals for the Town of Philipstown held a work session on Monday, April 8, 2013 at the Philipstown Town Hall, 238 Main Street, Cold Spring, New York. The work session was opened by Vincent Cestone, Chairman, at 7:30 p.m.

DRAFT

PRESENT: Vincent Cestone - Chairman
Robert Dee - Member
Bill Flaherty - Member
Lenny Lim - Member
Paula Clair - Member
Dominic Cordisco - ZBA Council
Tina Andress- Landolfi - Secretary

ABSENT: None

PLEDGE OF ALLEGIANCE WAS SAID.

Vincent Cestone- As far as our minutes for March 11, are there any changes or corrections? I will make a motion to accept the minutes as submitted. Do I have a second?

William Flaherty- I will second.

Vincent Cestone- All those in favor?

ALL BOARD MEMBERS WERE IN FAVOR.

MARCH 11, 2013 MINUTES WERE APPROVED

Vincent Cestone- How many people here want to talk about the application for the Wind Turbine? The Public Hearing is closed. I wanted to know how many people wanted to talk, because we have to do some stuff here to re-open the public hearing, so you can talk. I make a motion to re-open the Public Hearing to discuss the wind turbine.

William Flaherty- I will second.

Vincent Cestone- All those in favor?

ALL MEMBERS IN FAVOR

PUBLIC HEARING WAS RE-OPENED

Vincent Cestone- Ok. Now we can hear what you have to say. What I am going to ask you to do is come up to the microphone and introduce yourself, and say where you live, and then say what you need to say. Who wishes to speak?

Dominic Cordisco- Mr. Chairman, Could I make a suggestion?

Vincent Cestone- Sure

Dominic Cordisco- Since there are so many people here that have not been here at prior meetings, perhaps it might be helpful if the applicant made a brief presentation. We have heard it on more than one occasion, but there might be members of the audience who are not familiar with the

particulars, and maybe some of their questions could be answered if the applicant updates us on the application. I also know that they submitted some additional information.

Vincent Cestone- Ok. Can you just bring us up to speed, so that everyone is on the same page please?

Connor Kays- I am Connor Kays with Hudson Valley Wind. We are proposing a residential wind energy system, or a wind turbine at 200 Long winding road. There are double pins up on the board to show the location of the turbine itself. The reason we are all here, is because we are proposing a 140 foot tower, and the town is I believe at 50.

Vincent Cestone- The length of the blade makes it 152 feet.

Connor Kays- Yes, 152 is correct. Our total tip to base is 152 feet. We have submitted a number of different documents, Visual studies, noise data, just to demonstrate what the machine is going to do. Most recently the board asked for a feasibility study comparing wind to solar, which I will go through in a second. We did another visual impact study with a second balloon test, and took some different pictures that the board has. We also just received a letter from the Conservation Board in support of the turbine, and they have no issue with it. We contacted the Scenic Board at your request, they have asked for a little bit more information. They have stated that they can only offer an opinion, but have no jurisdiction, and I believe you guys have that as well. At this point we are looking for approval on the turbine. Our feeling is that the location of the turbine, the proximity to the nearest home is over 1500 feet, is going to make the turbine all but invisible to the public. Noise is the same thing, we are so far away in this situation, that we don't feel noise is going to be a consideration. That is where we stand at this point in time. Does the board have any further questions for us?

Vincent Cestone- Just explain why the height that you are requesting is.

Connor Kays- I will go through that quickly, I also have a representative here from NYSERDA with us from the state who issues these grants, so Mark will speak on this a little bit more, but the reason we want to go at this increased height is production, its financials and the actual amount of energy we can get out of the turbine. At this height compared to what is

allowed in the Town without a variance we are looking at anywhere from 3,000 to 5,000 more a year. That increases the amount of money the customer will get from the state, and obviously increases the amount of money he will save over the next 25 to 50 years with the life of the turbine. Financially this height makes the turbine considerably more feasible for the home owner, then it would if we went at a shorter height.

Vincent Cestone- Did you contact the Building Department about the bonding for a structure like that?

Connor Kays- No.

Vincent Cestone- I am under the impression that you would have to produce a bond for the removal of the tower if the homeowner abandoned it.

Connor Kays- Right, that is something we will have to tackle if that is the case. I am not sure if that is Zoning or Planning. If we need a bond, then that is obviously something that will have to be done.

Vincent Cestone- I think it is part of the code.

Dominic Cordisco- It is a requirement of the code.

Vincent Cestone- Yes.

Lenny Lim- I have a question, before you left the other night you said it might be a game changer posting a bond. What do you mean by that?

Connor Kays- Depending on how the bond is structured, and the amount that needs to be put in place, and how it is setup. It could add a considerable amount to the project over the next 25 years. We are hoping for an approval to move on to the next step, and obviously we would have to pull the bond in order to get the permit, so as long as we know we can do it, then we would tackle the bond situation.

Lenny Lim- Shouldn't we tackle the bond situation first? If we approve it, then comes back later, and then says I don't want to put up a bond.

Vincent Cestone- I know for cell towers, it is in the neighborhood of 40,000 to 60,000 dollars

Connor Kays- Yes, that is something we will have to tackle.

Robert Dee- Im gonna ask the attorney. Could this be made part of the variance?

Dominic Cordisco- Well they have not applied for it. They have not applied for relief from that request, and if they were, then we would have to consider it, but it is not part of the current application. I think to answer your concern Mr Lim, the code requires it and they have to comply with it or they have to request relief from it. They have not done either yet. There are a number of different ways to secure financial security, posting a bond would be one way. Posting a letter of credit which is a deposit of money in favor of the town that the town can call upon in certain circumstances such as abandonment is another way. There are fees for bonding. Fees for bonding is something that they are going to have to look at in the long term compared to the cost of actually posting the money in a letter of credit. In a letter of credit, if the town does not need it, then they get it back at the end of the day. These are all questions to look at and address, but they have to look at them and address them prior to getting a building permit.

Lenny Lim- The second thing I got, you sight that the tower on 301 is 200 feet tall.

Connor Kays- Yes

Lenny Lim- That is not in Philipstown, that is in Putnam Valley.

Connor Kays- Ok.

Lenny Lim- That has nothing to do with our town.

Connor Kays- Noted.

Lenny Lim- I want it on the record.

Robert Dee- Just a question from the attorney. You said that they can apply for relief from the bond. My question is if we approve this, then they apply for relief and he gets it, then there is no bond, and we are stuck.

Dominic Cordisco- He would have to apply for relief from this board.

Robert Dee- He would have to apply for relief from this board?

Dominic Cordisco- That is correct, and he has not at this point.

Robert Dee- Oh Ok, thank you.

Vincent Cestone- Any more questions?

William Flaherty- I have some comments that I would like to make to you, and I would like to first of all commend you on the thoroughness of your application. You did a very good job, and a very professional job in every respect. However, there are two areas that I am concerned with. The tower is 152 feet high. I do have some concerns about the safety of the structure, and therefore I would like to know how often the structure would be inspected.

Connor Kays- Sure.

William Flaherty- To determine the structural integrity. What safety criteria would be used to inspect such a structure as this? How often would this be done?

Connor Kays- Sure, per manufactures recommendations, the installer would come out one month after it is installed and re torque the tower and check gable tensions one month after we install it. That same process would be done again in six months. After that they recommend a two year inspection, so every two years the homeowner or the installer would come out and check the security of the structure itself.

William Flaherty- Would you then provide us with or the Zoning Officer with that inspection?

Connor Kays- I don't believe that would be a problem.

Vincent Cestone- That should be a requirement.

William Flaherty- You would do that?

Connor Kays- Yes.

William Flaherty- I think that is essential that he be informed of the results of your inspection. At which time in the event that we approve this issue, the Zoning Officer could revoke your permit if you don't provide it. The second aspect I have is the removal of the structure. I could not find anything in your proposal that you would do to remove the structure in the event that the technology would become obsolete over a period of time, or a new owner assumed ownership of the property, and did not want to continue with the turbine. What kind of plan do you have in place that would ensure us that the tower would be removed, and the site would be fed back into the original state prior to the construction of the tower?

Connor Kays- The turbine itself is not difficult to take down. It would probably take about a day. The crane would come back out, and take the hub down and lay the tower down, unbolt it, and scrap it eventually. All you are left with is concrete footers, and can be removed. They are easy to dig back up and soil reclaimed in there. It is fairly straight forward process. It comes down just as quickly as it goes up. You are talking about half a day of crane work, then a couple of guys to unbolt everything and remove the structure.

William Flaherty- You don't address that at all that I could find in your proposal. I think it is important that you make a statement to that affect in writing with those provisions.

Connor Kays- Sure, Ok. We can certainly add that to the application, and that is pretty routine to have a plan to dismantle the tower if need to be for whatever reason.

William Flaherty- I would appreciate if you would do that.

Conner Kays- Sure, No problem.

William Flaherty- What about insurance? Liability insurance?

Connor Kays- For the homeowner?

William Flaherty- Yes. You mention that, but you don't go into any detail.

Connor Kays- I am not sure if the homeowner has gone through all the details yet. Nine times out of ten the homeowners insurance will cover it. I have run into one or two incidents in the last five years that a rider was required by the insurance company. That will be the responsibility of the homeowner to make sure that the turbine is insured. Normally the homeowners insurance will cover it, and they just want to know about it. If a rider needs to be taken out, then he will have to do that.

William Flaherty- Will that insurance exempt the town from any liability in the event that there was a law suite in property damage or someone getting seriously hurt?

Connor Kays- Yes, That kind of thing the insurance company should cover.

William Flaherty- Would you provide us with a copy of that? You say in here that you provide New York State with a copy of the insurance, but you don't say that we would get a copy. I think it is important that we do get a copy.

Connor Kays- Sure, Again that is something that the homeowner will do on his own, but I don't see any reason why he would not be able to provide that for you. Both of those things could be added to the application without any issues.

Vincent Cestone- We can require that as a condition.

Dominic Cordisco- One of the conditions of approval, is that they have to get site plan approval from the Planning Board, so this is a two part process. Some of these issues relating to removal of the facility if it gets to the Planning Board, would have to be conditions of the Planning Board as well.

Connor Kays- Should that be part of that application, or both?

Dominic Cordisco- I don't think that you need to amend the application that is before the board right now, but I want you to be aware that it is a two step process.

Robert Dee- How many of these turbines have you installed in New York State in the past three years?

Connor Kays- Probably about 20 to 25 of the Bergey.

Robert Dee- How many in Putnam County?

Connor Kays- Putnam, how many do you got?

Doug Passeri- None

Robert Dee- How many in Dutchess?

Doug Passeri- Four

Vincent Cestone- Any more questions from the board? Anything else you wish to present?

DRAFT

Connor Kays- The last thing I wanted to go over the solar comparison. We did go over the two, and got a price from a company that does solar that would produce a comparable amount of energy similar to the the wind turbine. (inaudible) You will see on the analysis there that the payback on the solar is about twice as long in this situation.

Vincent Cestone- That is because there is no money coming from NYSERDA?

Connor Kays- There is some money coming from NYSERDA it is a considerably smaller amount. NYSERDA for the solar, they just lowered the amount, so the amount you see is about seven hundred dollars more than what they can get now. It is a much smaller cap. With wind you can get up to about 50 percent with solar there is a 10,000 dollar cap, so that is part of it. If we can put the turbine in at this height the wind is very good, so it makes the turbine considerably more productive. Solar does not have those types of restrictions, it is how much square footage of solar you can put in, so with wind having this potential and the wind on this site the payback on wind is much better.

Vincent Cestone- Any questions on that?

Robert Dee- The payback is much better on the wind, but if the owner wanted he could but solar on his roof, correct?

Connor Kays- You would have to analyze his roof, but he would need a southern facing roof to do that, and would have to be out of shade, I'm gonna say solar on the roof would get tricky. I would almost guarantee we are looking at some kind of ground mounted structure, which would result in removal of trees, probably on a bigger nature than we are looking at this point, because you do need quite a bit of space front to back and side to side.

Vincent Cestone- Anymore questions?

William Flaherty- We have addressed this issue before about the overall height. 152 feet is significant. What is the absolute minimum height you could use that would achieve your objectives?

Connor Kays- That is in the perspective of the homeowner. In my professional opinion I would think the bare minimum we would go is 120 feet at the tower so you are 132 feet at the tip of the blade. That is one step down in tower size with the manufacturer. Any lower than that I would recommend that the homeowner not look at wind in general, even there it would be up to the homeowner. At that point you are right at the cost of production, where as an installer and a seller I would say here are the numbers, how do they look to you. At 140 feet I can tell him this is a sound investment.

William Flaherty- We would have a smaller grant, we would get less money from the state, because he would anywhere from 2,000 to 3,000 kWh hours less production for the year. He is talking anywhere between 2,000 and 3,500 dollars less from the state.

Lenny Lim- You keep talking finances, I want to know about production. Would a lower tower produce enough electric for a single family home?

Connor Kays- No

Lenny Lim- A lower tower would not?

Connor Kays- It will not.

Lenny Lim- This tower wont produce 100 percent electricity for the either?

Connor Kays- Not for this home. This tower would produce 100 percent for the average home, this home uses a fair amount of electricity. We shoot for 10,000 kw per year from our turbine, that is what the average home uses. If we drop the turbine down to 120 feet we are at least going to lose 2,000 kw per year. If you get any lower than that you are getting down to the 5,000 kw range, on a turbine it is not productive.

Robert Dee- You keep saying funding, is there any cost to the homeowner? Or is it all coming out of state grants?

Connor Kays- Yes, NYSERDA will only fund up to 50 percent of the project. The rest will come from the homeowner, and they are also eligible for a tax credit with their 2013 taxes if this were to get approved that would come back to them, but even after the tax credit they typically pay anywhere from 20 to 35 percent of the project cost.

Vincent Cestone-Any more questions? Anything else you would like to add?

Connor Kays- I think we are all set.

Vincent Cestone- With that, I am going to open up comment from the audience. You need to address your questions to the Board, do not talk to the installer, talk to us. Who would like to speak?

John Hersh- My Name is John Hersh. I am a lawyer from Peekskill, and I am here for Dr. Kien who resides at Cloudbank Rd. I do have a few questions for the board, and then hopefully the board will ask the witness. I am not clear from my review from the minutes of February 2013 or from what I heard tonight, exactly how this is being paid for. Another wards what is the state provide procedurally. How much is it going to cost, and what is the benefit to the homeowner?(inaudible) of doing something, that council indicated that might not be fitting within the surrounding community. That is one of the text. I would kind of like to flash that out a little bit. How does this happen? Who pays for it? What really would be the impact to homes in the

area? I understand there was something about a balloon test. There are homes in the area that look down upon that structure, whether it is 140 or 152 feet in height, and that is an issue in this two step major process, at least for my client. I know that Mr. Flaherty is a former accessor, and I would like to know what he thinks the impact on the fair market value of the homes that look down over that turbine, that now just look over the Hudson River Valley.

Vincent Cestone- I don't think we are going to discuss that there, because that is not within the privy of this board to discuss as far as that.

John Hersh- I understand, can we flush out

Vincent Cestone- The effects to the values and the people in the neighborhood, that is something to be determined. It is an intangible that we have dealt with cell towers, it is a similar thing. If the applicant would just go through the numbers quickly, it would be appreciated.

Connor Kays- The total cost of the turbine, lets say is 80,000. The installer, and we will go through an application process to the state for a grant. That grant comes from anybody in New York State that pays an electric bill, unless you are co-op. National grid, Central Hudson, all utilities in the state have a very small charge on your bill that the money for this funding comes from.

Robert Dee- So I am paying for it?

Connor Kays- Yes, everybody here is paying for it.

Robert Dee- (inaudible) I just caught that little one. Go ahead.

Connor Kays- Everybody is paying for it, and you are all eligible for these grants. It is a fairly involved process in design, the state reviews this design. The state reviews local laws, and they have their own mandates, and it is a two month approval process for them. Assuming that we are approved they will pay up to 50 percent of the project cost based on production, and that money goes directly to the installer and that money comes right off of the customer price. If we get a 30,000 dollar grant on an 80,000 dollar project the customer has to come up with 50,000 dollars. The installer gets the other 30,000 from the state directly. Tax credits come at

the end of the year, and we leave that up to the customer to work out. Everybody's tax situation is different, but the project is eligible for up to 30 percent of the customers expenditures that he can get back in tax credit over the next 5 years.

Robert Dee- What does he save again? Does he save about 40 percent of electric per month? Is that what your saying?

Connor Kays- We are cutting his bill in about half.

Robert Dee- So his electric bill is going to be half? So that is pretty much the whole value to one person?

Connor Kays- Yes, that is correct.

Vincent Cestone- Did he answer your questions?

John Hersh- He answered the first one, but the second one was did the board request the applicant to preform any studies from the view from any of the homes that are geographically above the 152 foot proposed tower, to see.

Vincent Cestone- We did not require that. Have you seen our packages?

John Hersh- The only thing that I could get off line were the minutes where council raised the question to the applicant back in February or October, that it was a major project, and part of the component was site plan approval, so there had to be some weight given to the homes in the surrounding community. My question would be is the applicant going to travel around the area and take some photos to show which houses will be impacted.

Vincent Cestone- He did supply us with pictures, that is really a function of the Planning Board, but we use the information that was provided, and it is very similar to what we got when we do a cell tower. If you would like to look at it, the file is downstairs. If you would like to look at it now, I can give you a file to look at.

John Hersh- How many different homes did the applicant.

Vincent Cestone- He did not go on anyones property.

John Hersh- How is he able to determine that if he did not go to their homes?

Vincent Cestone- He could not go on private property but he has pictures from multiple locations, and maybe the best thing for him to do is give you the pictures to look at.

John Hersh- I will take his answer, but I am not allowed to address him.

Vincent Cestone- Would you want to answer that?

Connor Kays- Yep. In general we picked some distances from the tower that we thought would so a reasonable expectation of what we thought the tower would look like. I am not sure how close these homes that are at a higher elevation are, but we start at about 100 feet, and work our way around to about 300 feet. We went back and did a second study with a couple of specific locations that the Conservation Board asked us for, that are quite a bit farther away, the railroad station being one of them. We canvased the area fairly well. I don't know, as I said, how close the homes that are at a higher elevation are, but typically anything that is not within a mile or so would be very difficult to see the turbine.

Vincent Cestone- This board did have the opportunity to look at the balloon test. I did myself. I happen on Saturday, even though the Public Hearing was closed, and I could not use it in my deliberations. I was across the river, and I saw the balloon test, because I knew where to look. If you did not know where to look, you would not see it, but the point being, you could see it across the river.

John Hersh- You could see the balloon test?

Vincent Cestone- Yes

John Hersh- At 152 feet?

Vincent Cestone- Yes

John Hersh- From across the Hudson River?

Vincent Cestone- Right, but I knew where to look, and the balloon was, I don't know how big it was, but it looked like it was this big, but I am sure it was quite large.

John Hersh- Thank you. I have no further questions.

Vincent Cestone- That gentleman in the back over here had his hand up. If you would come up and introduce yourself.

Robert Cutler- I am Robert Cutler, and I live at 540 Route 9d, so I am a neighbor below and north. I have a number of questions. Should I ask them one by one?

Vincent Cestone- What ever you feel comfortable with.

Robert Cutler- I am curious of how this will be built. What is the actual process of building this thing? What size trucks? How will they get up and down safely? What effect will it have on the road, because it effects us directly.

Vincent Cestone- From what I understand, and the applicant will correct me if I ma wrong. There will be some clearing of trees and groomed for the wind turbine itself, its tower and its guide wires. The trucks will be of substantial size. It comes in pieces, and assembled on site, then tilted up, and the guide wires are used to hold it with the wind turbine on it. Is that correct?

Connor Kays- That is correct, except the trucks of substantial size. We bring this in on an 18 foot flat bed that we tow in with a standard pickup truck. The cement truck and the crane are sizable, but they are the only two commercial vehicles that will be coming in.

Robert Dee- So you will be poring the pads from a concrete truck?

Connor Kays- Yes.

Robert Cutler- Those are tight turns, and the board could probably notice that.

Vincent Cestone- They are tight turns. You are not going to have to do any clearing to the road to get in there?

Connor Kays- I do not believe so, no. We should be able to work our way in there.

Greta Passeri- It was pre tested.

Connor Kays- Ok, it has all been pre tested, so we are good on that.

Robert Cutler- If there is a failure to inspect down the road, I gather every two years. What happens if there is a failure to inspect?

Vincent Cestone- What the town is suppose to do, the Zoning Officer who is downstairs, would contact the homeowner, and ask for the inspection. If it is refused to do the inspection, and it is part of the conditions of this application, then he has the right to have the structure taken down. That is what the bond is about. It has never gotten to that point in the town. Usually when the Town threatens to take your thing down, then it is amazing, they get an inspection. That is what happens.

Robert Cutler- I have been told on good authority that towers above a certain height have to have lighting to alert migrating birds.

Vincent Cestone- That is for planes. Two hundred feet is the height that you have to have a blinking light. This is below that.

Robert Cutler- There is another question. What reassurances do we the neighbors near by have that this thing wont make a lot of noise? I know the Berg is supposably silent, but I have been near these things, and they do make quite a racket.

Vincent Cestone- They don't make a tremendous racket, because when this application came, I did a lot of research on this, and I went to a commercial site to see what a wind turbine makes when it is in production. It is a low woof woof woof sound. It is not one of those things, it does not sound like a train or something like that. There is also lots of information out there about the decibel level, and if the applicant would like to talk about the decibels.

Robert Cutler- I love the sound of the train, but they come and go. I cant imagine woof all day long.(inaudible)

Vincent Cestone- Yea.I am going to ask the applicant to talk to that, because I was at a commercial site which is orders of magnitude larger.

Connor Kays- That is commercial turbines which are anywhere from 5 to 10 times or more larger than this. The average blade there is 300 feet, and our entire structure is only 150 feet tall. That low base woof that you here is far and away different from what these turbines produce. We gave these distances, and we talked about this at the last meeting. At about 150 feet to 200 feet, they only add 50 decibels. the nearest residence is about 1700 feet from the turbine. We don't anticipate anyone being able to hear this period from the surrounding properties. Are you at the base of the driveway?

Robert Cutler- Yes I am at 540 right down at the bottom.

Connor Kays- You are the closest.

Vincent Cestone- You may or may not hear it, and you might hear it more in the winter time when the leaves are off.In the summer time you probably wont hear it, because 50 decibels, is there something you can analogize what 50 decibels sounds like.

Connor Kays-A refrigerator is about 50 decibels. It is very very slight. I would be very shocked if you could hear the turbine at any point in time.

Robert Cutler- Will be and my neighbors be able to see the turbine from where we are? We are down at the bottom.

Vincent Cestone- It depends. It depends on how many trees you have on your property, and my guess is if you are heavily wooded, then you wont see it.

Robert Cutler - It is all woods.

Vincent Cestone- There is a chance that the people that are up high looking down towards the river might see it.

Robert Cutler- Last question. We all know that storms are becoming more severe. What projections have been done to make sure (inaudible) projections have to be done to take that into consideration. Have their projections done that?

Vincent Cestone- This board has asked that kind of question, and one of the things that we want is if it falls down, it wont it the house, and someones property, because of the size of the property, if it did fall down, it would not hit the house or fall off of his property. It is not feathering, they change the direction of the wind turbine once it gets above a certain wind level to slow the blades from spinning. When we had Sandy come through, and we are getting 90 to 100 mph winds, then it would feather away from the wind so it would not spin. Excuse me?

Robert Cutler- You go right into it so the thing would not be pushed.

Vincent Cestone- Right

DRAFT

Connor Kays- The blades would be perpendicular to the wind direction. They will still rotate, but at a significantly lower speed.

Vincent Cestone- Does that answer your question?

Robert Cutler- Yes, Thank you.

Vincent Cestone- You are quite welcome.

Paul ?- My name is Paul ____ I live on East Mountain Rd South, and I read about this only today, and I was rather taken aback by the fact that this particular person is asking for a variance that should not be granted in my opinion. The reason I am saying that is, and I am just giving an opinion, I am just making a statement. I think that if you do that you are making a bad precedent. What happens is the next person coming along is going to say you did it there, I can do it on my property, I can do on this property, and so forth. It does not seem logical to me, for the sake to save 40 percent of your electrical bill, for which you have to pay 80,000 dollars for a home, it does not make since to me. I am also surprised that Mr. Gleick is not here at this particular hearing. I don't know where he is, but I think it is only appropriate if an issue like this comes up in front of the town, he would be here to answer questions. As to visibility, I know that Mr. Gleick bought the

land, and he is from New York, and He bought the land. I travel from New York for work as well, and you know I could see Long and Winding Road for years. I was a little upset about that, because it takes away from the mountain range that you have there. I think it was rather a little arrogant frankly to make this big road in this mountain. I find it a little bit arrogant that someone comes along and puts up a 150 foot tower, a 100 feet above the town requirement. I think that it is silly.

Vincent Cestone- It is a very large variance that they are asking for.

Paul- My suggestion is, that I would oppose that, and I think if you do that, the next person is going to come along and do it. I am going to do it on my East Mountain Road property as well, if this is the case. I think you are setting a bad precedent in my opinion. You see what I am saying? I don't think it is economically feasible. A single home does not consume that much energy that it requires an 80,000 dollar tower for which you and I are paying. On a piece of property that I hope that he builds on a mountain, there is something illogical there. I think that you should really think hard about the precedent that you are setting here.

Vincent Cestone- That is a big concern of mine, the precedence.

Paul- I could come along, and a neighbor could come along and say you did it for so and so. I think that the town in its wisdom has created a certain height for the town not to be interrupted by whatever it is. A 150 foot tower is a little bit self serving I think. It is wise to keep the town in mind. The town is beautiful, and it is not wise to interrupt it with things sticking up. I can see the Polhemus tower. I can see it from down there from across the river. This is going to be visible.

Vincent Cestone- Absolutely.

Paul- That is my opinion.

Vincent Cestone- I was wondering why we did not have residents here, because we advertise every application, whether this size or not in the Putnam County News and recorder, and we contact people in a certain distance of the applicants property by mail. I really surprised that no one came till tonight. I am glad to see that people have come.

Allen Smith- The mailing just arrived three days ago.

Vincent Cestone- If you wish to speak you can come up here and speak.

Allen Smith- The mailing did not arrive. I just found out, it came in the mail box probably i the middle of the week.

Robert Dee- That is the first time you got notified?

Allen Smith- The first time I got notified. I am at 524 Route 9D.

Tina Andress- Landolfi- What is his name?

Allen Smith- I am Allen Smith. I was going to ask one question that he just asked. Can I put up a tower, now that you have granted my neighbor a tower. Can I do it?

Vincent Cestone- We did not grant anything

(inaudible multiple speaking)

Allen Smith- If you grant it, would it set a precedence that allows me who is an adjoining property to do the same thing? Or are you going to restrict me, because I am not on top of the mountain like Mr. Gleick

Vincent Cestone- The law is written in a way that everyone has a right to apply for anything. You would not be denied from that.

Allen Smith- My neighbor addressed the idea of storms. It seems that an inspection every two years, at least you should shorten that cycle, because we do have severe winds. The other thing, what about the wildlife? I have deer, turkey flocks, it is a part of my life to watch the animals come up and down the hill. As far as noise goes low frequency is not what matters. When you have a 300 foot thing vibrating, and it has a low hum is one thing for distance that will travel. When you have a small thing you have a high frequency noise, and it is in the middle of a mountain, it is going to echo and travel. High frequency travels much more direct, and I believe that I will constantly hear a pitch.

(inaudible multiple speaking)

Allen Smith- You only went and heard a commercial low frequency tower.

Vincent Cestone- We have a sound study.

Allen Smith- A sound study. 50 DB does not mean anything. It is how it travels, how it echoes, and what the frequency is .

Vincent Cestone- Absolutely, but the frequency is similar to what the commercial is.

Allen Smith-With all do respect if you are going to tell me a 24 foot blade puts out the same frequency as a 300 foot blade.

Vincent Cestone- I did not say the same frequency.

Allen Smith - I am saying frequency. I am not saying DB. 50 DB at thirty cycles does not bother you as much as 1000 cycles.

Vincent Cestone- I agree with you 100 percent.

Allen Smith- It just appears that there is no need for this, since I am hearing what you are saying. The only thing is to reduce the cost to the homeowner, half of which is being absorbed. My electric bill is high, So let me put a tower up. Do you care if I put a tower up?

Audience Member- You bet I do

Allen Smith- They are granting a tower

Robert Dee- We are talking about it

(inaudible multiple speaking)

Allen Smith-you are talking like It was done if we did not find out. You started out by saying this meeting was closed, and the public that lives next door did not even know about the meeting.

Tina Andress- Landolfi-Yes, Every adjoining property. The last Public Hearing that we had, adjoiners were sent notifications.

Allen Smith- I did not get one.

Tina Andress- Landolfi - If they are not returned then it is deemed received.

Allen Smith- I did not receive.

Tina Andress- Landolfi- I don't know what to tell you, I just checked the list.

Allen Smith- If he did not come and tell me about it, then I go and find it.

Tina Andress- Landolfi- Did Dr. Kien get his? Did your client get one?

John Hersh- No. He gets the Putnam County News Recorder. It was published.

Tina Andress- Landolfi- He did not get the adjoiners notification that was sent to his address in New York City?

John Hersh-No, It was in the newspaper, and he asked me last week, showed it to me and faxed it to me and said that you cant put a six foot fence in this town. You cant get a soil screener in this town, and they are going to put a turbine up on the mountain.

Tina Andress- Landolfi- So who you are here for never got got any notification at his New York City address? Where he gets his tax bills he never got anything?

John Hersh- He sent me a copy of the Putnam County News Recorder.

Tina Andress- Landolfi- Right, Because I sent him a copy of the public hearing.

John Hersh- Then that answers your question.

Allen Smith- I never got it, when the Kellies, when I lived at 627 Route 9.

Vincent Cestone- We send it to where you get your tax bill.

Allen Smith- I got nothing

Tina Andress- Landolfi- We send a letter with a copy of the public hearing.

Allen Smith- Well I did not get it, sorry. When the Kellies lived across the street from me when I lived at 627., and they went for a variance, I got a notice. Not only did I get a notice, I got a package of information. I got nothing here.

Dominic Cordisco- The Towns obligation is to send only the notice.

Vincent Cestone- We did send the Notice, and we have record that we did.

Allen Smith- How do I know you sent the notice? How can you tell me you sent it?

DRAFT

Vincent Cestone- Im not going to argue with you, unless you have something else to say.

Allen Smith- Im done, only because you wont let me say anymore. It sounds like your mind is made up.

Jim- My name is Jim _____ from 18 Howland Road in Garrison, although this does not impact me directly, I think this impacts all of us in some way. There is clean energy, if the client is going to have to pay for it, then does not really, I mean he gets grants, but that money is being collected by energy companies anyways. I think for our location, it might prove to be something we could look at, but obviously there is a lot to learn. I don't see how this hurts everyone else's pocket book. It is already being collected anyways, what is the harm.

Vincent Cestone- Ok. Thank you. Anyone else wish to speak? Sir?

Louis Lanza- Hi my name is Louis Lanza, I live in Garrison on Nelson Lane. I have a home, dairy business and a maple farm, and I would like to applaud the application, because New York State is in big trouble, and there is so much going on with the energy, and we need to find renewable energy. I am filling out an application right now for a Wind Turbine. I will be looking with you guys I guess in a few months. I think it is true, if the money

is being given by New York State, if we can save money, and reduce the carbon footprint, then it is a great thing all around. Especially for myself. I have a dairy barn, a maple business all using electricity, so if I can reduce my cost, then it is a great thing for myself and my family. I am definitely in favor for it, and I am the second guy sorry to say who is going to make an application. Thank you.

Vincent Cestone- Anyone else wish to speak? Yes ma'am?

Rep from Manitoga- I am with Manitoga, and I did want to say that the first Notice that I did receive was last week. I started in January, so I am not sure if they got one before this. I think it is a difficult decision. I think we all want new ways of energy. on the other hand, we are open to the public. We are a 75 acre woodland landscape park, and I have concerns about the sound, and the view shed. I think that I would like to add to other concerns of our neighbors, and that people are on the property. What we offer is the experience of man and nature. If there is, and I know it is hard to quantify what that sound will be, and I am not a scientist or engineer to know what that will be, but it is something that we are concerned with, to have a low hum, if we are equating it to a refrigerator. I think it would be louder, or a large scale refrigerator. It is a concern of ours, as people explore and use that property. One was the lights, but we are assured that there wont be lights, then that would not be problematic for us. I don't know, I don't think on our site we would see the tower. We might, but we have a concern about the sound.

Vincent Cestone- Ok, does anyone else wish to speak? Yes Sir.

Mark ? - Mark _____ project manager NYSERDA wind program. Basically this application will come to my desk if it ever gets approved here, and goes through the who;e process. I guess first what I will talk about is the height, and wind turbines need clean wind to function effectively. If you put a turbine into turbulent wind you will have that. Our program requires that the bottom of the blades have to be 30 feet taller than anything within 500 feet. That is to try and minimize the turbulence that the turbine will see. If you are ever in a plane and the pilot says you are going to experience some turbulence, you know what you are going to be up against. There will be excessive sound when a turbine is put in a turbulent wind event. I guess I want to make sure that you understand that it does happen. The higher you make it, you are minimizing those chances of extra sounds of it. For

the view shed, I think you said it very eloquently, when you looked at the balloon, you knew where to look, so you could see it. This is always a concern people have, is the view shed. I have gone out and around the state and looking at our turbines, and finding spots from public highways from 1/2 mile, and a mile and 1 1/2 miles to try and see these turbines, and really they are not utility turbines, these are small. From a 1/2 mile you can see it. From 1 mile you can see it, but you better know where you are looking. From a mile and a half, if you can see it, it is like a blip on the screen. It is very difficult to notice. The fact that it is going to constantly make a sound, if there is no wind, then it is not going to be turning, so it will not be making a sound. I can guarantee it will not be making sound 100 percent of the time, because you will not have wind 100 percent of the time. You asked about how it works in high winds. I guess I will point out that these are manufactured in Oklahoma, so tornado alley. They have videos showing that these things survive tornados, so they are a robust machine that is built to withstand elements of nature. If the board has any questions I would be happy to answer.

DRAFT

Vincent Cestone- No, so you are talking about the _____ flow of air. I guess the air foil, I guess it is important to be in clean air?

Mark- yes, exactly.

Vincent Cestone- Ok, Any questions from the board? Thank you. Anyone else wish to speak on this. Yes ma'am?

Mary Finger- Good evening, I am Mary Ellen Finger.

Vincent Cestone- Could you speak a little louder, I am hard of hearing.

Mary Finger- Me too. I am Mary Ellen Finger, thank you for listening to us. I just wanted to say that this is a ground breaking application in Philipstown, particularly, because this is the first one that is trying to build a real sustainable structure for energy production. I think that I have to commend the board for all of the questions and thoroughness of your review on this project, and there may need to be more review, because I did not hear anything about setbacks, and acreage requirements and stuff. My question is and a few comments is, all of the work that you are putting into this, obviously we are going to have to amend the code, in order to make such energy production infrastructure more available to the public and establish

rules, that many have concerns about. If one can put up a turbine, then why cant neighbors. If we have requirements, I'm just asking that perhaps we can work on an amendment to the code that will make this process much easier, much less expensive so that we can work towards addressing climate change.

Vincent Cestone- The code is created and amended by the Town Board. We interrupt it. We don't have the authority to amend the code.

Mary Finger- Do you have any authority to make recommendations based on this really intense review of this project/

Vincent Cestone- Yes, but the town is under no obligation to act upon it. Sometimes they do, sometimes they don't. My suggestion is, if you feel that strongly about it, I tend to agree that this is a hole in the Town code, that you approach the town at one of their town meetings. Richard Shea, and the Town Board are very agreeable to listening to the citizens speak about things like this. I think it would be to the advantage of a citizen to discuss it with them.

Mary Finger- I do have one comment.

Vincent Cestone- Ok Sure.

Mary Finger- I am on the Planning Board, and this application did come to us last year, and I have been somewhat interested in following along, and I did want to address the issue about view sheds, because that has been discussed a few times, and that has been covered at the June 22, 2011 training for the Zoning Board and the Planning Board, I went to that, and I did quote what Gram Trist had said at that meeting regarding view shed He said that, a structure such as this has to have a significant negative impact on the enjoyment of the view from a public place, that it cant just be because it can be seen. I think that said is pretty significant, because there are so many things that can be seen in Philipstown, and a few other things in the Zoning. Changes were made to make it so that it would be reasonable, and we would have to use common sense, and our discretionary approval of some of these projects that come before us. Instead of the visibility of certain items like storage, was changed to should not be visible should be screened from adjacent versus other, because

there are people that live on top of the mountain who can see everything all around. This could create a _____ of applications looking for a variance.

INAUDIBLE

Vincent Cestone- These kind of things are unique because, and I can only speak from my experience from cell towers. People within a certain distance from a cell tower that cant see it, their property values are effected. That is a concern for me, because our goal here is administer the code and protect the residence. I have to think about that. Yes, this is something unique, and I think that sustainable energy is the wave of the future for the United States as a whole. I don't think it should be on the backs of the citizens.

Mary Finger- I agree with you about the cell tower issue, because it has been (inaudible) from the damage from the EMF's within 200 feet of those towers. I don't know what the safety studies have produced, I don't know if enough information has been presented to you today. I have missed one of the meetings, so that will be your ____.

Vincent Cestone- Anyone else wish to speak?

Andy Schmar- Im with Hudson Highland Land Trust. As with any application to the town on a particular project, our organization does not take a position. It is the towns responsibility to make its decisions and what is in the best interest of the town. The balance between sustainable energy and less reliance on fossil fuels from other countries is a powerful one. This is one of the most scenic areas in the United States. This particular applicant, and I don't want to speak to this location, but the Hudson River is in a state wide area . The application I presume, and I only found out about it today addresses that. I hope that the state I the Appalachian Trail Conference if it reaches that point are asked their opinions of the impact of a project like this. I like Mary's point, several points. This is more of a policy decision, then an individual application decision, because undoubtably the precedence that you will set in deciding for or not in favor of, or approving or disapproving this application will set a precedent for the future, and to me, just the fact the people in this room, only a few are aware of this application and the implications of a cell phone tower in a very visible location. Also the implications for cell phone towers through out Philipstown is really a public policy issue. One that the town and its residence should

consider in great detail, and with great public involvement, and the town should decide, as you suggested Mr. Chairman, an amendment to the Zoning Code if this is in the best interest of the town. I don't know whether it is or not. I would love to be engaged in that public debate about alternative energy sources, and wind turbines in particular, because of their implications. I think we have heard about this same dialogue off the coast of Cape Cod, and ultimately the permit was granted to allow that commercial wind turbine farm, so I would, again without suggesting that you take one position or the other. I would just like to agree with the proposition that this may be a Zoning issue and a Zoning Code issue. It deserves the full and complete involvement in the community before it is decided. Then the applicant can offer its application if the Zoning is adopted. This puts a pause in this, but this decision is a multi generational decision. I think the residents in this town deserve the opportunity to have their. I am holding a piece of paper, and there is a 150 foot cell phone tower being proposed in the heart of Fort Montgomery right now right next to the Holiday Inn express, and that has implications for Philipstown, just as it does for that town. It requires a variance as well, so your counter parts across the river, not the same thing, but it is a 150 foot tower they are considering putting there as well. I think this is a philipstown wide issue.

Vincent Cestone- Anyone else? Sir you can speak again.

Robert Cutler- I just have one more question, and that is that as he suggested this may be part of a process. Is this part of a process? Is this the only hearing? I did indeed only find out a few days ago.

Vincent Cestone- If I did not see the residents here, and this Public Hearing was closed, and this board was probably going to vote tonight. This Board is not closed to the Public, and when we see that citizens wish to speak and add value into a meeting, it is the policy of this Board that we let them speak. That is why it is open. Are you suggesting that it stay open longer?

Robert Cutler- I would like to see if there is more interest from my neighbors. I was able to tell Mr. Smith, and I am delighted he is here, and I was able to tell Andy a few hours ago. Probably a lot of people don't even know that this is going on.

Vincent Cestone- I am surprised, because we have not changed our procedure. We handle things like this, and I tell you we do certain applications, and the room is filled, and other times no one comes here. I was so surprised that there were not more citizens here to discuss this with us.

Robert Cutler- Curtis who is at 544 or 546 I think, he did not know about it.

Vincent Cestone- I am truly surprised, because we have not changed anything that we have done for years and years.

Robert Cutler - I did get the letter, but a lot of others did not.

Vincent Cestone- Only adjoining get notified. Only the people who touch the applicants property. In a densely populated area, I think it is 500 feet.

Robert Cutler- There are few who are contiguous, but many who will be effected.

DRAFT

Tina Andress- Landolfi- That is why the Public Hearings go out, they are notified in the paper.

Vincent Cestone- That is why it is advertised in the paper.

Robert Cutler- I would hope that there would be more. I mean it is your decision, but I would recommend it.

Robert Dee- How many meetings have we had so far with this?

Vincent Cestone- We have had four meetings.
(inaudible)

John Van Tassel- Two Town Board meetings as well, I have read the report discussing this entire topic, which is televised as well, so it is out there.

Paula Clair- I think that even though we did what we normally do to advertise this, and the Town Board has done what they do to advertise this. Obviously people were not informed in much of a manor that we would like

them to be. I would vote to extend the public hearing longer, because more people will know about it from this group, I am sure.

Lenny Lim- I would second that

Vincent Cestone- I don't think we are going to have a problem. If we come to the next meeting, and there is only the same people, then we are not going to proceed. It is not fair to the applicant. It is not fair to the homeowner to extend this out forever. I think it is justified that we get all the public comment that we can get. It can be important to a lot of people. Im going to say that we will have one more meeting, unless there is something earth shattering. Monday, May 13 will be our next meeting. At that time my goal will be to close the meeting and possibly if the board agrees to vote on this. We never do anything behind closed doors, even if it was allowed, and it is not, it would not be right, and we don't do that.

Paula Clair- I want to say that in as much as this is a ground breaking issue, and if the board decides to allow it, it would open the door for a lot of people who wish to take advantage of this. My personal opinion is that I am concerned about the carbon footprint, as we heard from other people, and even though it may not benefit a person financially right now, if it helps to reduce the carbon footprint, then I think that is a good thing. That is only my opinion.

William Flaherty- I would like to say that this is the fourth public hearing that we have had on this issue, and this is the first time that we have had the adjacent property owners participate in the meeting. I don't know why that did not happen earlier, and I am sure that there was a legal notice in the paper, and adjacent property owners were notified?

Tina Andress- Landolfi- Yes

William Flaherty- But for some (inaudible multiple speaking)

Vincent Cestone- You had your point, no more please.

William Flaherty- I think that we have heard this issue significantly over the past three months, and we have to look at. This is historic ground breaking. This is the first issue we have had before this board relative to solar energy.

Vincent Cestone- Wind

William Flaherty- You are contemplating on doing the same thing, and (inaudible) The big difference here is the fact that we have a variance which is significant. It is 152 feet with our standard 40 foot code, and that is significant. I don't suspect that other turbines will be that much greater than what we are talking about now. We have to be constantly aware of the fact that technology is changing, and we have to change with it. Renewable energy is a very hot button no matter where you go. You want renewable energy. This is one aspect of it, and it is an important one as well. I am a very strong opponent of renewable energy.

Vincent Cestone- You mean you are in support?

William Flaherty- Yes I'm in support (inaudible) We can't put our head in the sand and say it does not exist. This board is concerned with one very important aspect about it, and that is the height, there is no question about it. It is larger than and greater than the 40 foot maximum that we have in our code. I can understand some of the adjacent property owners, how this is going to effect the resale value of your property. I can't answer that. I don't really know what kind of impact it will have on adjacent properties. Given the fact that this is going to be on forty acres, I think if I remember correctly that the nearest land owner is what?

Connor Kays- The nearest home is 1,700 feet. Where that property line is I am not sure

(inaudible)

William Flaherty- This gentlemen said you go a mile away, and you can hardly see it, or maybe you could not see it. I was not available at the time the balloon test was done, I know you had seen it, and you knew exactly where to look. I am one who is very _____ of this environment, and the scenic beauty that we have in our community. I don't want anything that is going to effect the overall beauty of our town. Whether or not that fits that description, I really have to look at that and study that, and see that it would. The blades are going to be 18 feet

Vincent Cestone - 12 feet

William Flaherty- Oh, 12 feet. I have visited wind farms out west where 100 towers were involved, and yes there was noise. This is only one tower. According to the information given to us seemed to be within our code. It really is not going to have in my judgement the impact of noise level that the adjacent homeowners will experience the result of this tower being constructed on that property, unless I am missing something, I don't think it will. I think this board is breaking ground here, and never before have we had an opportunity to do so. I think our code should be and will be amended to cover this more thoroughly than it currently does. The only thing that we have reference to is the towers. We are stretching it when we say it is similar to the cell towers, but it is not the towers. We are going to have to look at that very carefully, and this new zoning that is before us, and codes (inaudible) so we can look at these more intelligently in the future, and come up with a decision quicker than we have. I am glad that we had the opportunity this evening to have participants from the area here, so we can get your input as well, as to what direction we are ultimately going to be taking on this issue. That is all I have to say at this point in time.

Vincent Cestone- Unless anyone else, I am sorry

Kim Connor- My name is Kim Connor. I just wanted to say that I am glad you are going to continue the Public Hearing, because I think a lot of people will have some input. I think what the board is going to consider is if this is appropriate for Philipstown. This does not just effect the adjacent properties. It effects the whole town, and all of our view shed, even if you don't live right next door, it will be something visible from across the river, and it is not going to be the only one. I think when you consider this, you need to think about whether or not it is going to be appropriate. I did not get into the first part of the meeting. I would like to know if the energy production is significant from this turbine, whether this is an area really appropriate in terms of the kind of wind that we have. (inaudible speaker speaking very low)

Allen Smith- Will you allow me to make one more statement?

Vincent Cestone- Yes

Allen Smith- I will be less belligerent. I have heard what people have said about the idea of renewable energy. I don't think by any means you should

think that our position is that we are against renewable energy, or that we don't recognize the need for us coming up with different energy sources. I don't know if addressing it as an individual tower on one person's piece of property is addressing the issue of what we should be doing for renewable energy. Yes, it would save on that one piece of property, but if it is going to take putting a tower on everybody's one piece of property, to bring about a different form of energy, then we are failing as a public. If money is being directed from grants and it goes to individuals, then that means that it is money taken away from a larger kind of project. There is a limited amount of money, and if you keep assigning pieces of it away, by the time you turn around it's gone. I think our focus, if you want to have a Philipstown focus, have a bigger focus. Have a focus looking for a wind farm in a way that is commercial and provides energy for all of us, not just one person who can afford it.

Vincent Cestone- Anyone else?

Robert Dee- I just want to say one thing. You have to understand that there is no town code for wind energy. Basically we are dealing with one thing, and that is a variance. The man is asking for a 112 foot variance over normal conditions. Normally it is 40, and he is looking for 152 feet, that is a big variance. We have nothing else to go by, and what I mean by that is he has 40 acres. The next guy that wants to put one up might only have one acre. We have no ordinance that says he can't do it. The only thing we can decide on, and correct me if I am wrong, is a variance for the height.

Allen Smith- He is looking for a variance of over 200 percent.

Robert Dee- Correct. I agree.

Allen Smith- That is a major variance. Try and get a variance to build a fence one foot higher on your property.

Robert Dee- I built a house here seven years ago and tried to get a variance of six inches, and I could not get it. Believe me I understand it.

Vincent Cestone- With that we are going to continue that on to the May meeting date, which that is Monday the 13th of May. At that time, unless something significant is being produced. The applicant, this will be his 5th meeting that he has been with us. It becomes a matter of balance. If there is something significant that we need to keep it open, then we will keep it

open. My intention is to close the Public Hearing, out of fairness to the applicant.

Andy Schmar- I have got just one question. When the Zoning was adopted in 2011, it was clearly understood that there were things missing from the Zoning. Does this board, I know that one of the Town Board members is here, have the authority, regardless of what ever decision you make. Can you ask the Town Board to deal with this issue?

Vincent Cestone- We have, but it is the privy of the Town.

John Van Tassel- You guys directed the applicant to come before the town, and unless I have missed something, we have not seen anything.

Andy Schmar- In fairness to the applicant, is to get a decision for them that reflects this board's authority. I think there is no reason (inaudible) to address Mr. Lanza's desire to build one, and undoubtedly others. The Town Board should put this on the front burner, because there is obviously a gap in the current zoning, and needs to be addressed, so you are not put in the same position time and time again on this one area. I was very much involved in the Zoning for the five years that it was discussed, and this just never arose. Sustainable energy, renewable energy, just I don't recall it ever being addressed. It is definitely a need that the Town Board needs to address and recognize on that. I would encourage you once again to ask them to take the burden off you, and the unfairness to the applicants that you are posed with to try and make a policy and a zoning decision as opposed to a variance decision.

Vincent Cestone- Better to do it by changing the code than by case law.

Andy Schmar- Exactly, and you are not a case law court. We all know the challenges that the Supreme court has, and the precedence that they are setting, and how much that irritates all of us that they are making the law through their decisions, and you all should not be making law from those decisions.

(inaudible)

Vincent Cestone- Without a doubt, I have no doubt in my mind that the town will take this on and do what needs to be done.

Andy Schmar- Thank you sir.

Vincent Cestone- With that I will make a motion to adjourn.

William Flaherty- I will second

Vincent Cestone- I have a second. All those in favor?

ALL MEMBERS VOTED IN FAVOR

MEETING WAS ADJOURNED AT 8:50 pm

DRAFT

NOTE: These minutes were prepared for the Zoning Board of Appeals and are subject to review, comment, emendation, and approval thereupon.

DATE APPROVED: _____

Respectfully Yours,
Tina Andress- Landolfi, ZBA Secretary

Philipstown, New York
Zoning Board of Appeals
Additional Information Suggested from
the April 8, 2013
Gleick Small Wind Public Hearing

From the ZBA Board

Bond

Structure Inspection Form

Letter from the Conservation Board

Questions from the Audience

Major Equipment & Structure (Crane, Tower & Cement truck)

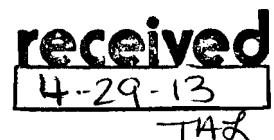
Property Values

Noise Levels

FAQ for Small Wind (AWEA)

Model Zoning Ordinance (DWEA)

EXHIBIT # 12



Douglas Passeri

From: "Kevin Donohue" <kcdonohue@philipstown.com>
Date: Monday, April 22, 2013 9:35 AM
To: "HVWE" <hvwindenergyllc@fairpoint.net>; <vcestone@yahoo.com>; <dcordisco@drakeloeb.com>
Cc: "Richard Shea" <supervisor@philipstown.com>; "John VanTassel" <Jvantassel@philipstown.com>
Subject: Re: Bond for Gleick Small Wind Project
Doug Passeri,

Please be advise that for a Special Use permit, the Zoning Board of Appeals should review section 175-62 G.(2) of the Code of the Town of Philipstown. The Town Engineer, Town Planner and Legal Council have historically provided guidance on performance and surety bonds.

Zoning section 175-62 G.(2)

G. Action

(2) In granting a special permit, the Planning Board may impose any conditions which it considers necessary to fulfill the purposes of this chapter. These conditions may include increasing minimum or decreasing maximum dimensional or area requirements, requiring the set-aside of perpetual open space land pursuant to § **175-20**, specifying location, character, and number of vehicle access points, requiring landscaping, planting, and screening, requiring clustering of structures and uses in order to preserve environmental resources and minimize the burden on public services and facilities, and requiring action by the applicant, including the posting of performance bonds and furnishing of guarantees to insure the completion of the project in accordance with the conditions imposed.

As for a Variance or Appeal of Decision, section 179-59 of the Code of the Town of Philipstown does not authorize the posting of a bond as a condition of approval.

I have not been involved with Planning Board nor the Zoning Board of Appeals in the process of or in establishing the amounts of performance bonds.

Kevin Donohue, CFM
Code Enforcement Officer
Town of Philipstown
PO Box 155
Cold Spring, NY 10516
(845) 265-5202

On 4/19/2013 3:54 PM, HVWE wrote:

Hi Kevin,

I haven't heard back from you regarding conformation of the small wind bond that the ZBA asked about for the May 13 meeting.

I would appreciate something in writing to submit to the board to satisfy their question.

I will be in Garrison this Monday to follow up with some final additional documents for the

4/29/2013

board.

If you could either reply in an email or have something in writing from me Monday that would be great.

Thanks,

Doug Passeri
HVWE

From: HVWE
Sent: Wednesday, April 10, 2013 10:00 AM
To: Kevin Donohue
Cc: Tina Landlofi ; Vincent Cestone
Subject: Bond for Gleick Small Wind Project

Hi Kevin,

Thanks for speaking with me this morning.

Following up with an email to our phone conversation; I mentioned I was asked by the ZBA during the Monday, April 8 public hearing to check with you as to whether we needed a bond, and if so, what the bond amount would be for the Gleick Small Wind project. From what you know and understand, there is no bond required for small wind. Correct?

Thanks,

Doug

Douglas A. Passeri
President
Hudson Valley Wind Energy, LLC
70 County Route 7
Pine Plains, NY 12567
Tel: 518.398.5060
Fax: 518.398.5070
Cell: 518.821.9761
Web: www.hvwindenergy.com





To: Philipstown Planning Board
From: Conservation Board (CB) & Wetland Inspector
Re: Gleick, 200 Long and Winding Rd.
Tax Map # 82.-1-42.1
Date: 4-8-13

Dear ZBA:

The CB and the Wetland Inspector/Natural Resource Officer have read and reviewed the information submitted by Hudson Valley Wind Energy regarding placement of a residential wind turbine on the above mentioned property.

At our March 12 meeting, we met with a representative of the turbine installation company and discussed the proposal. We considered impacts on the viewshed, migratory birds, bats and resident wildlife, local habitats, and the effect of ambient noise produced by the turbine. Overall, we have had our questions answered satisfactorily, and have no objection to the proposed installation of a residential-use wind turbine of this scale and size.

Please feel free to contact us if you need further information.

Eric Lind
Conservation Board Chair

David Klotzle
Wetland Inspector/Natural Resource Officer

SERVICE INSPECTION CHECKLIST

Customer Name: _____

Date: _____

Inspector: _____

Location: _____

Directions: Inspect ALL applicable areas. Check off all inspections performed. Make note of anything unusual or interesting, and describe all adjustments made. Include numeric settings (torque, tension, frequency, etc.) where appropriate. Submit pictures with this form.

**GUY CABLES
&
HARDWARE**

☐ Tension Checked

☐ Tension Adjusted

Cable Tensions or Frequencies: _____

☐ Equalizer Plate Hardware

☐ Threads Peened

☐ Double Grip Clips (Three on upper cables, two on lower and middle cables. Check torque.)

☐ Stainless Steel Cotter Pins on Turnbuckles and Shackles (where applicable)

☐ Safety cables in place

☐ Thimbles in good condition

☐ Grounding rods

☐ PAL nuts in place

Anchor lengths showing above ground _____ in _____ in _____ in

TOWER HARDWARE

☐ Locking Hardware Installed at all Flanges and Connections

☐ Missing Hardware Replaced Location(s): _____

☐ Tower Wiring Secure and Properly Connected

POWERHEAD

☐ Blades

Observations: _____

☐ Tail Pivot

Observations: _____

☐ Furling Hardware

Observations: _____

☐ Damper & Tube

Observations: _____

☐ Electrical Connections

Observations: _____

☐ Spinner & Hardware

Observations: _____

ELECTRICAL

☐ Controller Connections

Controller S/N: _____

☐ Other Components (Surge Arrestor, Transformer, kWh meter, etc.)

NOTES

WINDLETTER

THE MONTHLY NEWSLETTER OF THE AMERICAN WIND ENERGY ASSOCIATION
Volume 23 Issue No. 10 - October 2004

SMALL TURBINE COLUMN:

Residential Wind Turbines and Property Values

--Mick Sagrillo, Sagrillo Power & Light

Doing battle with the Not-In-My-Back-Yard crowd (NIMBYs) at zoning hearings can be a never-ending occupation. Whenever a myth-pulled-out-of-thin-air or wild accusation by wind opponents is debunked by examining the facts, another one arises. This is part of the NIMBY strategy.

One accusation that occasionally arises at zoning hearings for residential wind turbines is that neighboring property values will decrease if the turbine is installed. The rationale is that the neighborhood view shed will be compromised due to the installation of a home-sized wind turbine, and, as a result, the neighbors will not be able to sell their property for its true value. This is "one of the most widespread NIMBY issues with wind farm siting," according to AWEA executive director Tom Gray.

The hypothesis about diminished property values actually comes from opponents of commercial utility-scale wind farms, and has been around for a number of years in that arena. Fortunately, several studies have been done analyzing the speculation that property values have diminished in the wake of wind farm developments. One study done by the Renewable Energy Policy Project (REPP) titled, "The Effect Of Wind Development On Local Property Values," presents data to counter the threat of decreased property values. The REPP study "found no evidence that property values decreased as a result of wind farms." Quite the contrary, "for the great majority of projects the property values actually rose more quickly in the view shed than they did in the comparable community. Moreover, values increased faster in the view shed after the projects came online than they did before."

There is no question that wind generators, which require tall towers to access an unobstructed flow of wind, are highly visible. But does visibility necessarily equate to reduced property values? Lots of human-made structures are visible in the immediate and distant horizon, including buildings, silos, grain elevators, water towers, telephone and utility poles, transmission line towers, bill boards, and communication and cell phone towers.

The upshot of studies like the REPP report is that there was no evidence that property values in general decreased as a result of the wind farms. Residential wind turbines, with very small rotor areas and tower heights relative to wind farm turbines are even less obvious on the landscape than larger commercial turbines, and most other human-made structures.

If this is the case, why do NIMBYs use such arguments at zoning hearings for a residential wind turbine? The answer is obvious: any doubt that the NIMBYs can instill into the minds of the zoning officials might help defeat – or at least delay – anything they don't want in their neighborhood, be it a housing development, a new road, a utility power line, or a wind turbine. The game the NIMBYs play is all about delay and obfuscation in an attempt to thwart the applicant, or simply make him or her go away.

In AWEA's "Permitting Small Wind Turbines: A Handbook," residential turbine manufacturer Mike Bergey is noted as saying that "in 20 years of business he's never heard of a customer's wind turbine

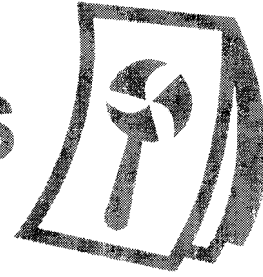
adversely affecting the value of neighboring real estate.” A survey of other manufacturers and dealers supports Bergey's statement. In fact, quite the opposite might be true. David Blittersdorf, quoted in the same handbook, notes that his new neighbors bought the house next door because Blittersdorf's machine indicated to them that “the community cared about the environment.”

What a positive attitude and interesting counter-viewpoint to the NIMBY's muddled contention that the installation of a residential wind turbine will ruin the neighborhood's property values.

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[Editors Note: The opinions expressed in this column are those of the author and may not reflect those of AWEA staff or board.]

SMALL WIND FACTSHEETS



How Much Noise Do Small Wind Systems Make?

Few moving parts

Most residential-sized wind generators are direct-drive devices with few moving parts. Unlike the utility-scale turbines used in wind farms, they do not have high-speed transmissions. Thus, most of the sound that comes from a residential sized wind turbine is aerodynamic noise caused by the blades passing through the air. The noise level of most modern residential turbines measures close to the ambient noise levels under average wind conditions. It is audible, if you are out of doors and listening for it, but no noisier than your average refrigerator.

Most residential turbines do not begin turning until a certain threshold, or "cut-in" wind-speed is reached - typically about 7 m.p.h. So, on a calm, windless day (or night), the turbine is still and silent.

Background noise masks aerodynamic sounds

Just how audible depends on the distance of the listener from the turbine - and also on the level of existing background noise, including traffic, farm machinery, barking dogs, children playing, lawn mowers, and even the environment itself. Residential-sized wind turbines are variable speed devices, turning faster and thus creating more sound as wind speed increases. At the

same time, the wind itself creates sound, rustling through trees, shrubs, and fields, and even rattling buildings. These natural back-ground sounds also increase with wind speed, thereby effectively masking much of a small turbine's aerodynamic sound. The sound of a wind turbine may be distinguishable from ambient (background) noise even though it is not louder. However, the same can be said for all of the other components of ambient noise, including things like barking dogs, traffic, kids playing, tractors, and even trees.

Sound levels fall with distance

Sound levels fall off significantly with distance. In one sound test carried out on a Bergey Windpower 10 kW BWC Excel wind system at a distance of 300 feet and in 25 mph winds, the BWC Excel generated sound with a 54 dB(A) to 55 dB(A) rating, making the wind generator barely audible over the 52.5 dB(A) rating of the surrounding environment's background noise. At about 500 feet, the BWC Excel sound rating was 53 dB(A), making it just another part of the background sound.

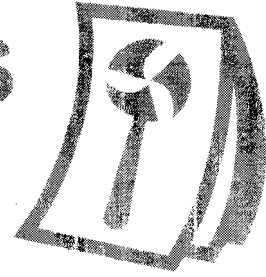
In another instance, sounds from a 10-kW Jacobs wind system were measured by a representative of the Clinton (Iowa) Detective Bureau. "In wind speeds between 16 mph and 36 mph and at a position only 50 feet from the wind generator, the decibel meter registered the



For more information, contact AWEA at windmail@awea.org or call 202-383-2500.

Visit our web site at www.awea.org, or write us at 122 C Street, NW, Washington, DC 20001.

SMALL WIND FACTSHEETS



continued...

sound of the wind generator between 55 dB(A) and 59 dB(A). The detective noted that, 'at this location, the sound output from the generator was observed to be partially masked by the sounds from the rustling of leaves in the trees.' When the decibel meter was pointed at the trees (which were 300 feet away), the meter registered the tree sounds at 60 dB(A) to 62 dB(A).'" The conclusion: "the wind generator sounds were 'inconsequential in total noise emission.'"

References

Mick Sagrillo, Windletter Feb/Mar 1997

Other Fact Sheets Available on Small Wind Energy:

What is Small Wind?

Do Small Wind Systems Kill Birds?

What About Visual Impact?

Small Wind Systems and Public Safety

How Do Small Wind Systems

Affect Property Values?



For more information, contact AWEA at windmail@awea.org or call 202-383-2500.
Visit our web site at www.awea.org, or write us at 122 C Street, NW, Washington, DC 20001.

**AWEA**AMERICAN
WIND ENERGY
ASSOCIATION

FAQ for Small Wind Systems

General Information about Small Wind Systems

Small Wind Turbines are electric generators that use the energy of the wind to produce clean, emissions-free power for individual homes, farms, and small businesses. With this simple and increasingly popular technology, individuals can generate their own power and cut their energy bills while helping to protect the environment. Unlike utility-scale turbines, small turbines can be suitable for use on properties as small as one acre of land in most areas of the country.

What size turbine is needed to power an entire home? On average, a typical American home would require a small turbine with a 5-kilowatt (kW) generating capacity to meet all its electricity needs. A machine of this size has a diameter of approximately 18 feet. The exact size needed to power a home, however, can range from 2 kW to 10 kW (12-25 ft. diameter) based on a home's energy use, average wind speeds, and the turbine's height above ground (which affects its productivity).

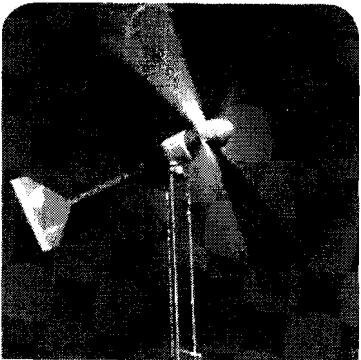
How tall are they? The average height of a small wind turbine (of any capacity) is about 80ft. (about twice the height of a neighborhood telephone pole), with a range of 30-140 ft. Generator size and tower height are not generally related; a 5-kW turbine could be on a tower anywhere from 30-140 ft. in height, for example.

What is the average payback period? The length of the payback period depends on the turbine, the quality of wind at the installation site, prevailing electricity rates, and available financing and incentives. Depending on these and other factors, the time it takes to fully recover the cost of a small wind turbine can take anywhere from 6 to 30 years.

How much do they cost? The purchase and installation of a system large enough to power an entire home costs, on average, \$30,000, but the price can range from \$10,000 to \$70,000 depending on system size, height, and installation expenses. The purchase and installation of very small (<1 kW) off-grid turbines generally cost \$4,000 to \$9,000, and a 100-kW turbine can cost \$350,000. The federal government and many states have rebate or tax credit programs in place to encourage investment in small wind (see <http://dsireusa.org>).

What happens when the wind does not blow? For grid-connected systems, the user will not notice a difference when the wind is not blowing. The utility provides electricity when the wind does not blow, and any extra electricity the turbine generates is sent back to the utility system to be used by a neighbor. Off-grid turbines store power in batteries for on-demand use and are often complemented by solar electric panels to provide more consistent generation.

Do I need to take wind measurements? Taking detailed measurements to gauge your wind resource is usually unnecessary. Individual installers/dealers or manufacturers can determine whether your property is suitable for a system by inspecting the surrounding area.



FOR MORE INFORMATION,
PLEASE CONTACT:

Ron Stimmel
Small Wind Advocate

rstimmel@awea.org
202-383-2546

For a complete list of
AWEA member
equipment providers see:
www.awea.org/smallwind/smsyslst.html



FAQ for Small Wind Systems

How much land and wind are required? Will my town let me install a turbine?

Installers recommend sites with average wind speeds of at least 12 mph, but specific land requirements vary from place to place. Zoning codes sometimes impose a minimum requirement on lot size or on the distance a turbine may be placed from a property line, and may vary depending on the height of the proposed turbine. Also, it is essential to have a site with unobstructed access to winds, which most often requires higher towers, larger land lots, and non-urban locations. Currently, less than 1% of all small wind turbines are used in urban applications partly due to zoning restrictions, but mostly because wind quality is much poorer in densely built environments. Contact your turbine factory dealer or see AWEA small-wind permitting guide at www.awea.org/smallwind for help navigating the permitting process.

How does the rated capacity of a small wind system compare to its actual performance?

Rated capacity indicates the rate of energy production at a given wind speed, so the answer depends on wind speed - and the turbine. A more accurate indicator of energy production, however, is blade length. A 5-kW turbine (average residential size, 18ft. rotor diameter) produces around 10,000 kWh per year in 12-mph average winds, which is about 100% of what an average U.S. home requires. At the larger end of the spectrum, a 100-kW turbine (60ft. diameter) in these conditions will generate around 250,000 kWh per year.

Are batteries or other storage needed?

For very small systems, yes, but not for residential-scale turbines or larger. There are two types of systems: those connected to the electricity grid ("on-grid") and those used off-grid for battery charging or backup power. Most systems sold today are off-grid, but demand is rising for on-grid systems which essentially use the grid as a "battery": when the wind blows, the owner uses electricity from the turbine; when winds are low and consumption is high, the owner uses electricity from the grid. A small wind turbine is more commonly used in conjunction with solar photovoltaic technology than it is with a battery storage system.

How are small wind systems maintained?

Routine inspections are performed once every few years of a turbine's 20+-year lifespan. A professional installer or trained technician (usually the manufacturer or dealer that sold the turbine) maintains the turbine and tower through physical inspections, though some turbines can be monitored remotely from a home computer.

How can I advocate for good policies?

AWEA, our members, and our allies actively engage state and federal lawmakers to promote good policies for small wind, such as tax credits, streamlined zoning and permitting, net metering, and standardized grid interconnection rules. Grassroots activism is a key component of our efforts. To join, visit the following links:

www.awea.org/legislative/grassroots_activities.html

www.awea.org/smallwind/toolbox2/drawer_2_promotion.html

Where can I go for more information?

The American Wind Energy Association has a toolbox of information on its Web site for people interested in installing a small wind system at www.awea.org/smallwind. On this site, you can find advice from an expert, some state-specific information about buying and installing a small wind turbine, success stories, technical information, and much more.

Also see "Wind Turbine Buyer's Guide" by Mick Sagrillo and Ian Woofenden in *Home Power* magazine (June/July 2007) http://www.homepower.com/view/?file=HP131_pg38_Sagrillo.



DWEA Model Zoning Ordinance, Final

Permitted Use Regulation for Small Wind Turbines

Section 1 Purpose

It is the purpose of this regulation to promote the safe, effective and efficient use of Small Wind Energy Systems that are installed to reduce the on-site consumption of utility-supplied electricity.

Section 2 Findings

The [city, town or county] recognizes the common good of small distributed wind systems and finds that wind energy is an abundant, renewable, and nonpolluting energy resource. Its conversion to electricity will reduce our dependence on nonrenewable energy resources, encourage stewardship and conservation of our non-renewable energy resources for future generations and decrease the air and water pollution that results from the use of conventional energy sources. Small distributed wind energy systems enhance the reliability and power quality of the electrical grid, reduce peak power demands, and help diversify the State's energy supply portfolio. Small distributed wind systems also make the electricity supply market more competitive by promoting customer choice, as well as fostering economic stability through job creation which encourages the growth of local, small businesses.

The State of _____ has enacted a number of laws and programs to encourage the use of small-scale renewable energy systems including rebates, net metering, property tax exemptions, feed-in-tariffs, and solar easements [as appropriate]. However, many existing zoning ordinances contain restrictions that discourage the installation of small wind turbines and substantially increase the time and costs required to obtain necessary zoning and/or construction permits.

Therefore, we find it necessary to standardize and streamline the proper issuance of zoning and building permits for Small Wind Energy Systems so that this clean, renewable energy resource can be utilized in a cost-effective, responsible and timely manner.

Section 3 Definitions

- 3.1 Small Wind Energy System: A wind energy conversion system consisting of a wind turbine, Tower and associated control or conversion electronics, which has a Rated Power Output of 100 kW or less.
- 3.2 Total System Height: The height above grade of the fixed portion of the Tower, plus the wind turbine and extending to the uppermost reach of the rotor.
- 3.3 Rated Power Output: The power output of a wind turbine at a constant Hub Height wind speed of 11m/s (25 mph).
- 3.4 Tower: A guyed or freestanding structure, anchors and foundation that is specifically engineered to support a small wind turbine.

- 3.5 Hub Height: Height of the center of the wind turbine rotor above the terrain surface. For a vertical axis wind turbine, the Hub Height is the height of the equator plane.
- 3.6 Obstruction: Anything that interferes with the laminar (straight, smooth) flow of wind, causing a level of turbulence that could interfere with the proper function and/or productivity of a small wind turbine.
- 3.7 Swept Area: projected area perpendicular to the wind direction that a rotor will describe during one complete rotation.

Section 4 Permitted Use

Small Wind Energy Systems shall be a permitted use in all zoning classifications where structures of any sort are allowed; subject to certain requirements as set forth below:

- 4.1 System Height: Wind turbine systems shall be allowed to be tall enough to facilitate proper function. Specifically, they shall adhere to the industry standard that the entire wind turbine should be at least 30' above both (a) any Obstruction within a 500' radius, and (b) the surrounding tree height.
 - 4.1.1 Minimum System Height: In no case shall the Hub Height be less than 60'. In cases where the manufacturer's minimum Hub Height recommendation is higher than 60', that recommendation shall be used as the minimum allowable Hub Height.
 - 4.1.2 Maximum System Height: There is no limitation on system height, except as imposed by FAA regulations and the required setbacks.
 - 4.1.3 Building Mounted Systems: Wind turbines mounted on buildings are still required to follow the industry standard that the entire wind turbine should be 30' above all Obstructions within a 500' radius of the turbine, including the structure to which it is mounted, and the surrounding tree height.
- 4.2 Setback: Local building and zoning ordinances for structures shall be followed with the express provision that that no part of the wind system structure, including guy wire anchors or any other appurtenance may extend closer than ten (10) feet to any property boundary line. No setback requirement shall exceed the Total System Height as measured to the center of the base of the Tower.
 - 4.2.1 Neighboring inhabited dwelling: The Small Wind Energy System shall be located at least the Total System Height from any existing, neighboring, inhabited dwelling.
 - 4.2.2 Neighboring property line: The Small Wind Energy System shall follow all setbacks, unless written permission is obtained from the existing owner of the affected adjoining property at the time of application.
 - 4.2.3 Overhead power lines and other setbacks: Wind turbines shall follow existing ordinances for structures in regard to setback from overhead utility lines, roads, easements public buildings and other utilities, provided the setback requirement shall not exceed the Total System Height.

- 4.2.4 Multiple wind turbines: Applications for multiple small wind turbines on a single property shall follow manufacturer or installer recommendations regarding minimum separation between turbines.
- 4.3 Access: To prevent unauthorized climbing, climbing pegs shall be removed from the lower ten (10) feet of the Tower, or ladder access shall be restricted. Fences shall not be required as they deny critical access to the Tower base.
- 4.4 Signage: A “Danger, High Voltage” sign shall be installed where it is clearly visible by persons standing near the tower base.
- 4.5 Sound: During normal operation, Small Wind Energy Systems shall not exceed (a) the sound levels allowed in existing zoning ordinances for the township or municipality; or if no clause exists, (b) five (5) dBA over ambient sound as measured at the closest neighboring inhabited dwelling that exists or is permitted for construction at the time of permit application for the wind energy system. This sound level may be exceeded during short-term events, such as utility outages and storms. Complainant shall bear the burden of proof until and unless the wind turbine system has been proven to be out of compliance with the ordinance.
- 4.6 Certified Wind Turbines: Small wind turbines with Swept Areas up to 200m² shall be certified to the most current version of AWEA 9.1 by the Small Wind Certification Council or a Nationally Recognized Testing Laboratory. Applications for provisionally certified or non-certified turbines with Swept Areas over 200m² must include a description of the safety features and sound emissions of the turbine and must show compliance with IEC61400-12-1 and IEC61400-11 and may be considered on a case by case basis.
- 4.7 Compliance with Building Codes: Permit applications for Small Wind Energy Systems shall comply with all applicable state and local building codes.
- 4.7.1 Tower and foundation drawings provided by the manufacturer or the project developer shall be submitted with the application. Independent engineering review or wet-stamped drawings shall not be required.
- 4.7.2 Applications for roof-mounted (or other non-traditionally mounted) turbines must include a wet stamped structural engineering analysis for the turbine mounting system and for the suitability of the building to which the turbine is to be mounted.
- 4.8 Compliance with FAA Regulations: Small Wind Energy Systems must comply with applicable FAA regulations, including any necessary approvals for installations close to airports.
- 4.9 Compliance with National Electrical Code (NEC): The installation of a Small Wind Energy System shall comply with section 694 (or the most-current applicable section, if updated) of the NEC. Applications must be accompanied by a single-line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the NEC. Wet-stamped drawings shall not be required.

- 4.10 Utility Notification: No grid-tied Small Wind Energy System shall be installed until evidence has been submitted that the applicant's utility company has been informed of the customer's intent to install an interconnected customer-owned generator.
- 4.11 Antennas: Wind turbine Towers installed under this ordinance may also be used to host antennas, so long as the structure is shown to meet the state and local structural code requirements.
- 4.12 Fee: The building permit fee for a small wind system shall follow the existing fee structure for permits required of other structures in the appropriate district. In the absence of such fee structure, the permit fee for a small wind turbine shall not exceed \$20 per kW of Rated Power Output. Additional charges for inspections shall apply at the standard rate used for other structures.
- 4.13 Decommissioning: A small wind system that has reached the end of its useful life shall be removed within 6 months of such determination. A small wind system is considered to have reached the end of its useful life when it has been inoperable for 12 consecutive months. Time extensions are allowed when good faith efforts to repair the turbine can be demonstrated. Foundations need not be removed.

April 12, 2013

Mr. Vincent Cestone
Zoning Board of Appeals
Town of Phillipstown
238 Main Street
Cold Spring, NY 10515

Dear Chairman Cestone:

Thank you for allowing me to address the Board at your April 8th meeting. I would like to take this opportunity to provide the Board with more information on small wind turbines to help you make an informed decision regarding James Gleick's request for a height variance for his proposed wind turbine.

I put together a package of pictures and other information that I hope will provide an overview of small wind projects. Included are: ten pictures of the Bergey Excel turbine installed at various locations, pictures of the Bergey Excel turbine taken ½, ¾, 1, and 1½ miles from the site, four NYSERDA case studies on small wind projects, a close-up picture of a Bergey Excel turbine, a DWEA fact sheet on Property Values, and a list of ten NYSERDA-funded installations "close to" the Town of Phillipstown.

By "close to," I am referring to installations that are up to 65 miles away (as the crow flies). I haven't talked to these owners, but I'm sure if you call them, they would be willing to talk about their installations.

These ten projects have tower heights ranging from 100 to 140 feet. The tower must be tall enough to take the wind turbine out of the turbulence zone. I try not to use phrases like "laminar flow" because I've seen too many eyes glaze over, but everybody knows about turbulence and that turbulence is bad, whether you are riding in a plane or if you are a wind turbine. Turbulence creates vibration, reduces performance, and creates undesirable sounds.

For more information, please contact me at:

Albany
17 Columbia Circle, Albany, NY 12203-6399
T (518) NYSERDA | F (518) 862-1091

nyseda.ny.gov | info@nyseda.ny.gov

Francis J. Murray, III, President and CEO

Buffalo
726 Exchange Street
Suite 801
Buffalo, NY
14210-1484
T (716) 842-1832
F (716) 842-0156

New York City
485 Seventh Avenue
Suite 1006
New York, NY
10013-6915
T (212) 874-5342
F (212) 682-1091

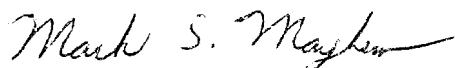
**West Valley Site
Management Program**
9030-B Route 219
West Valley, NY
14171-9500
T (716) 942-9500
F (716) 942-9961

A properly sited wind turbine will make very little sound, most of the time. If the turbine can be heard, it will be in the wintertime. The lack of leaves and snow cover aid in the transmittance of sound. In addition, there is more wind in the winter. A typical small wind turbine will generate 50% of its annual production from December through March. High wind events (> 35 mph) will cause the turbine to furl. Furling is the process where a wind turbine will turn the blades out of the wind to protect the turbine from spinning too fast and overheating. When a wind turbine furls, the blades will emit sounds caused by their resistance to the wind.

There is very little data on the effects of small wind turbines on property values. The Distributed Wind Energy Association (DWEA) is an industry-sponsored organization, but their fact sheets are not opinion-based. Two Department of Energy funded studies show no negative effect on property values for property located near large wind farms.

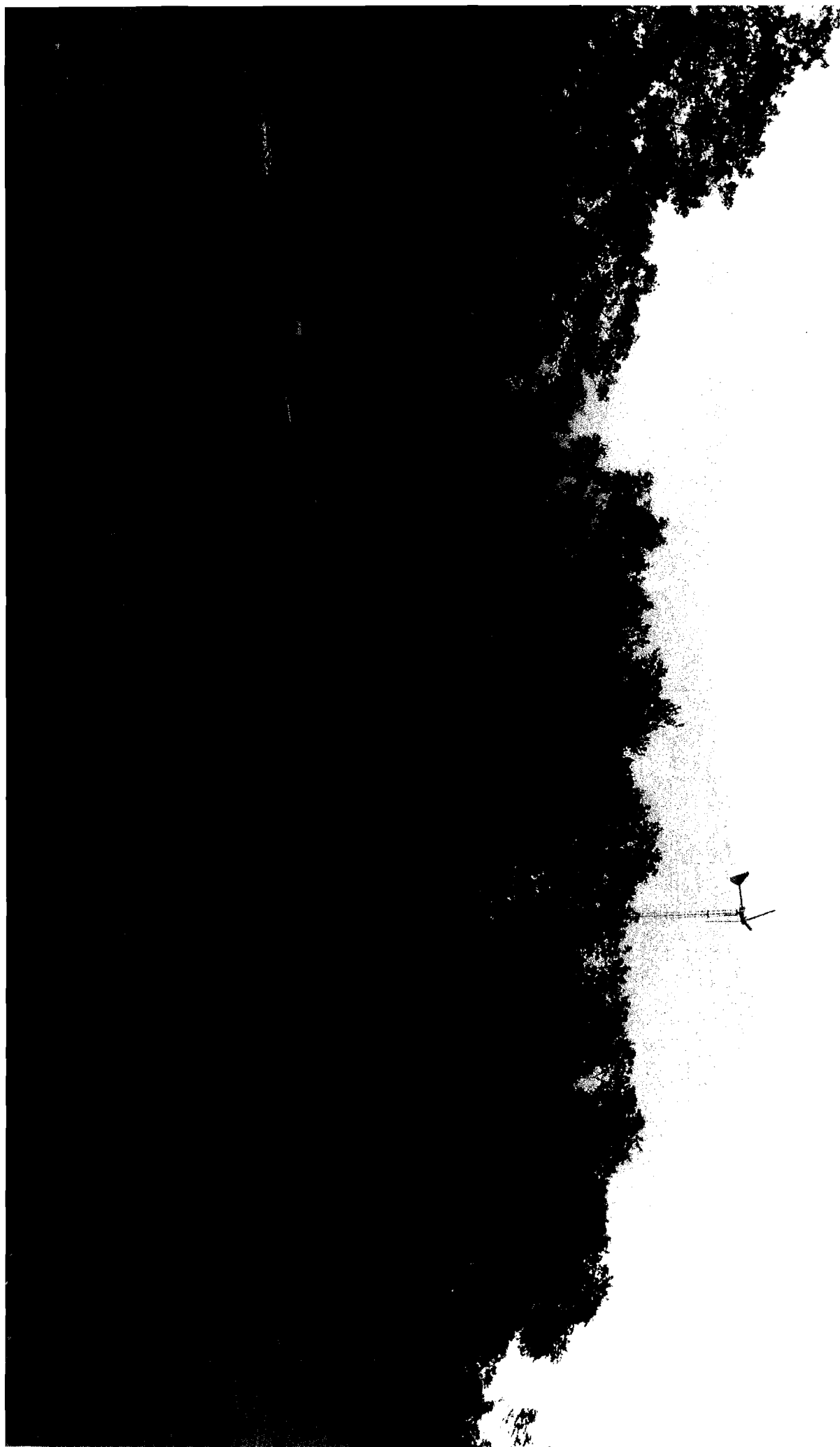
A board member from a western New York town was quoted as saying, "Wind energy and cell towers are part of our fabric now." Unfortunately, this philosophy is not widely accepted, but renewable energy is important for New York's future. Even a small wind turbine on private property does benefit the community. It helps reduce our dependence on fossil fuels, it minimizes loading on the local utility grid, and serves as a symbol that the community believes in sustainability. Your decision will not only affect one project, but it will affect the future of the Town of Phillipstown. Thank you for your time.

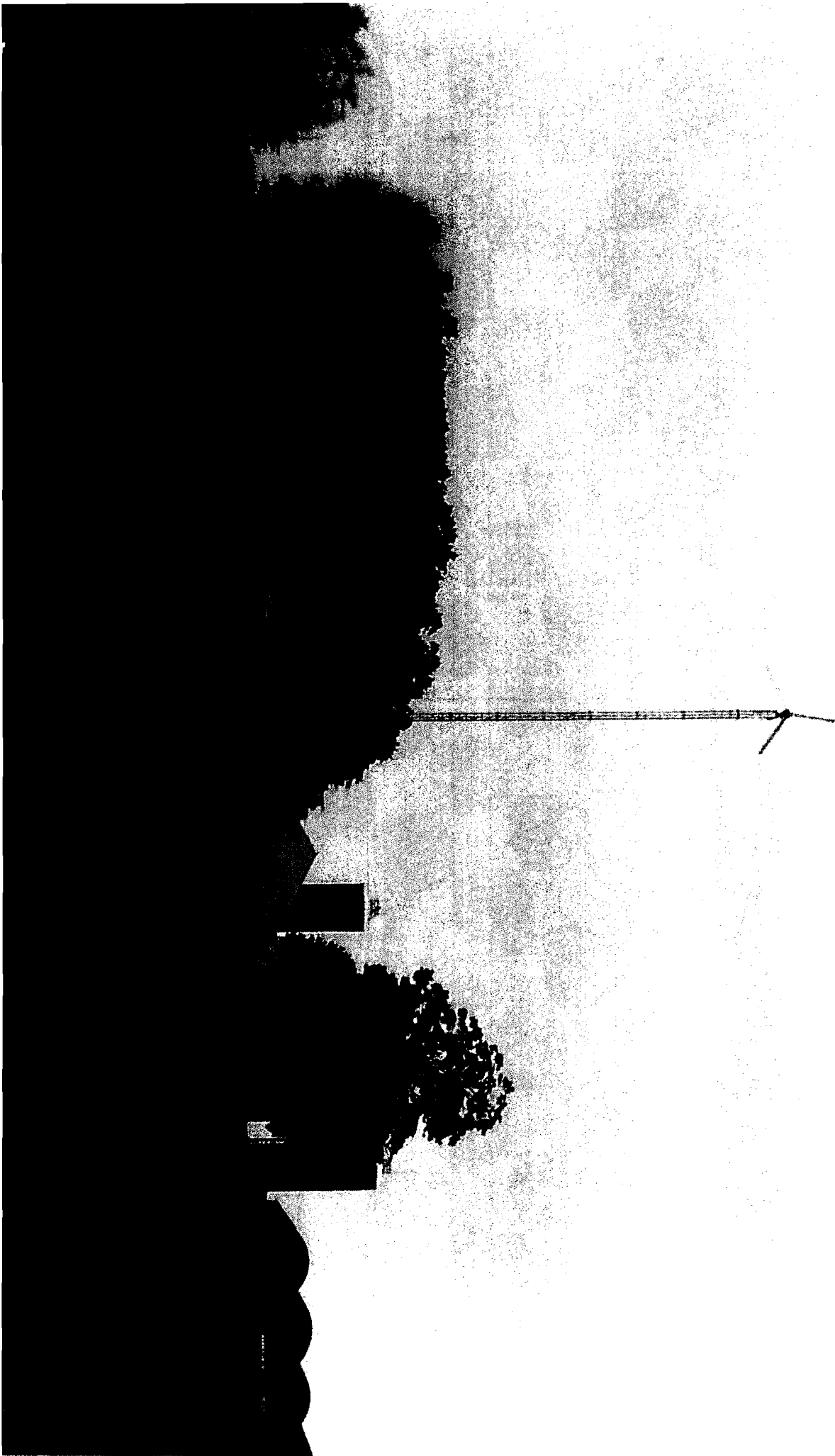
Sincerely,

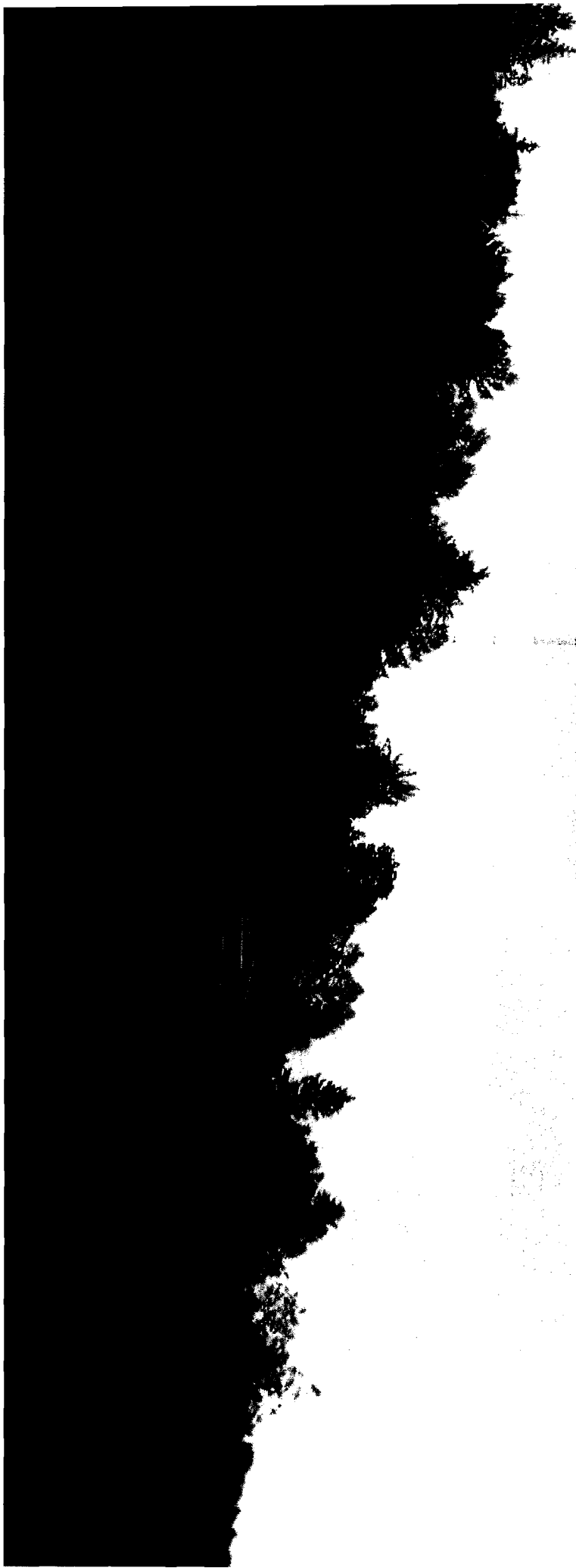


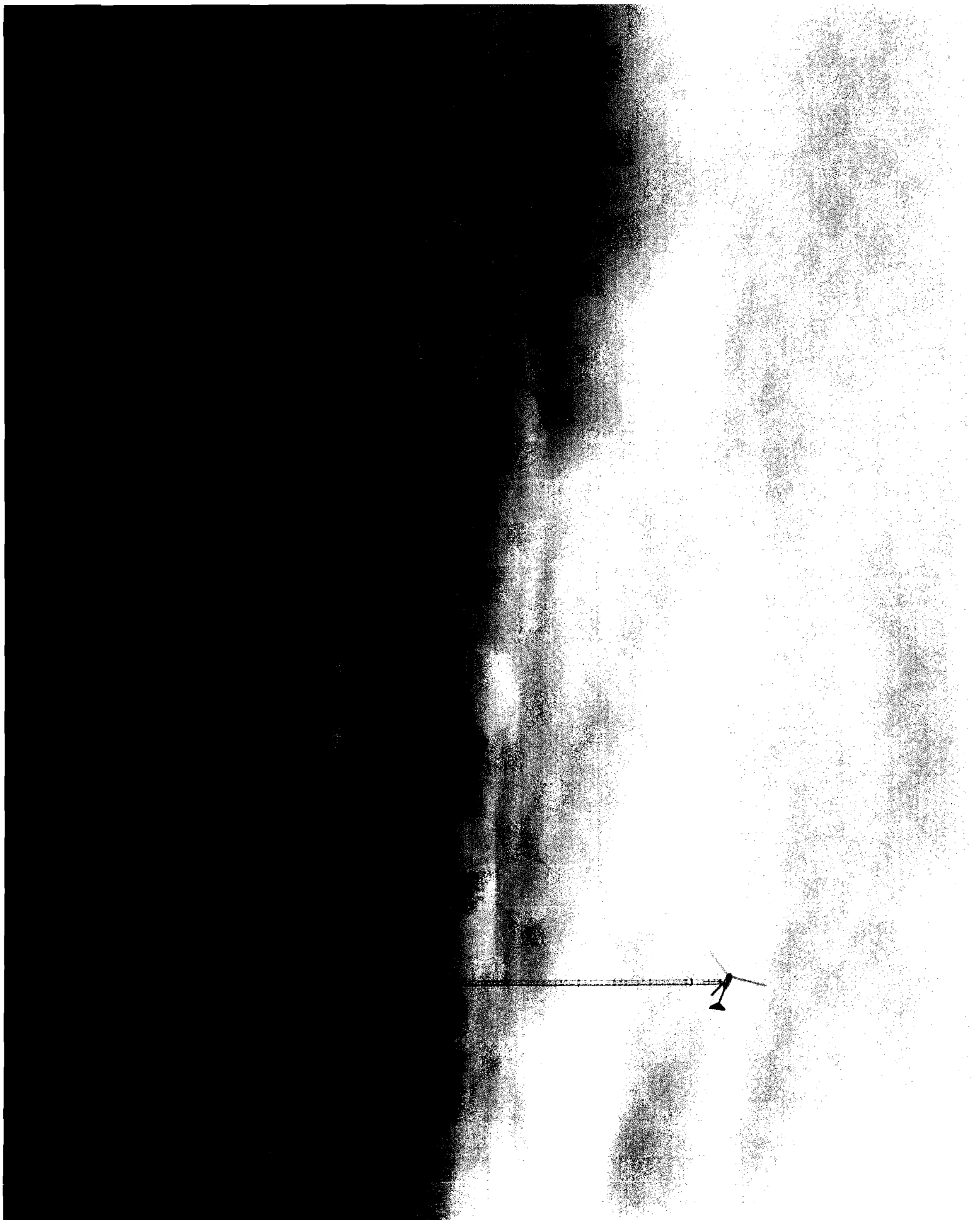
Mark S. Mayhew
Project Manager
NYSERDA's On-Site Wind Turbine Incentive Program

Enclosures

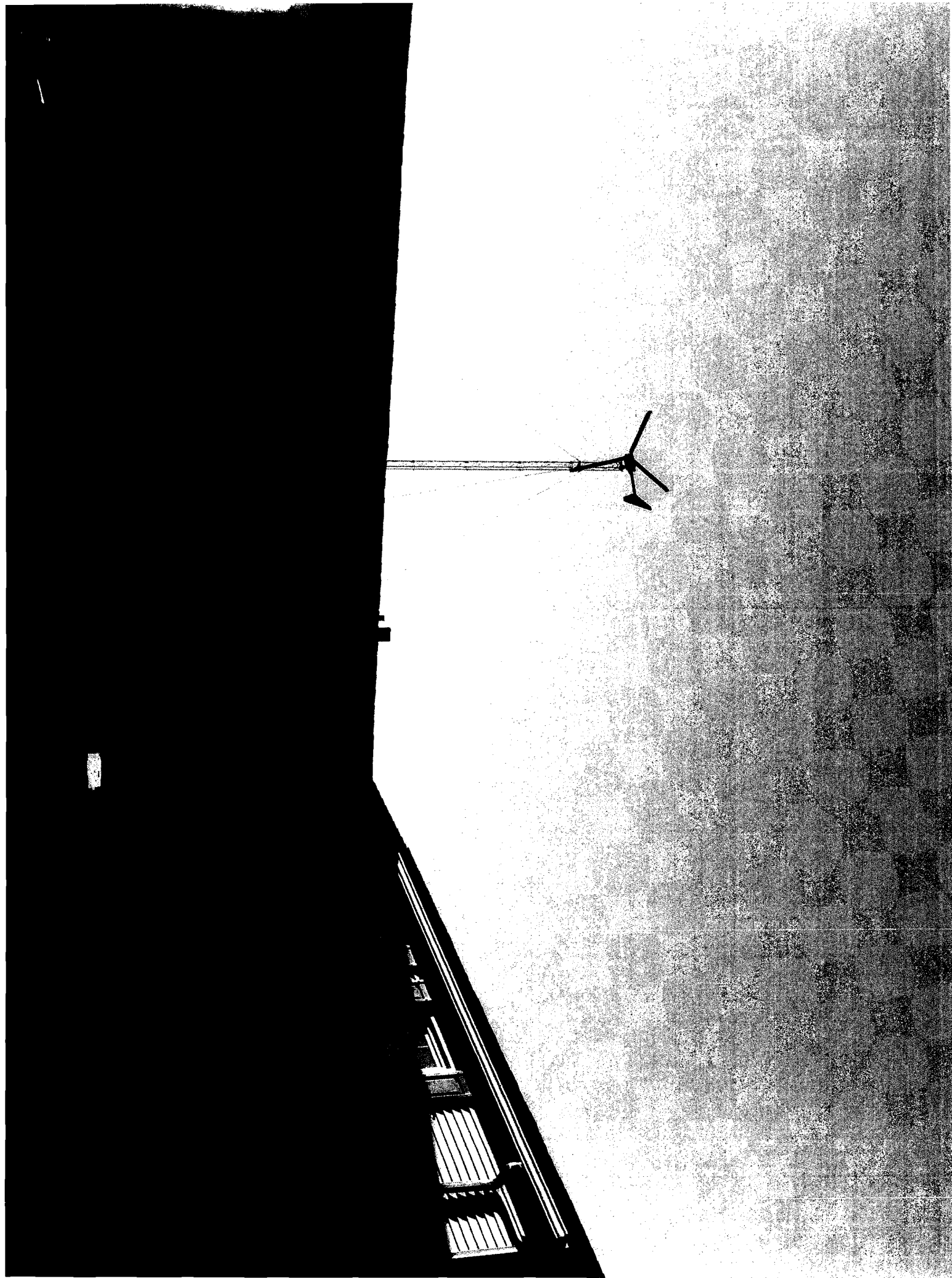


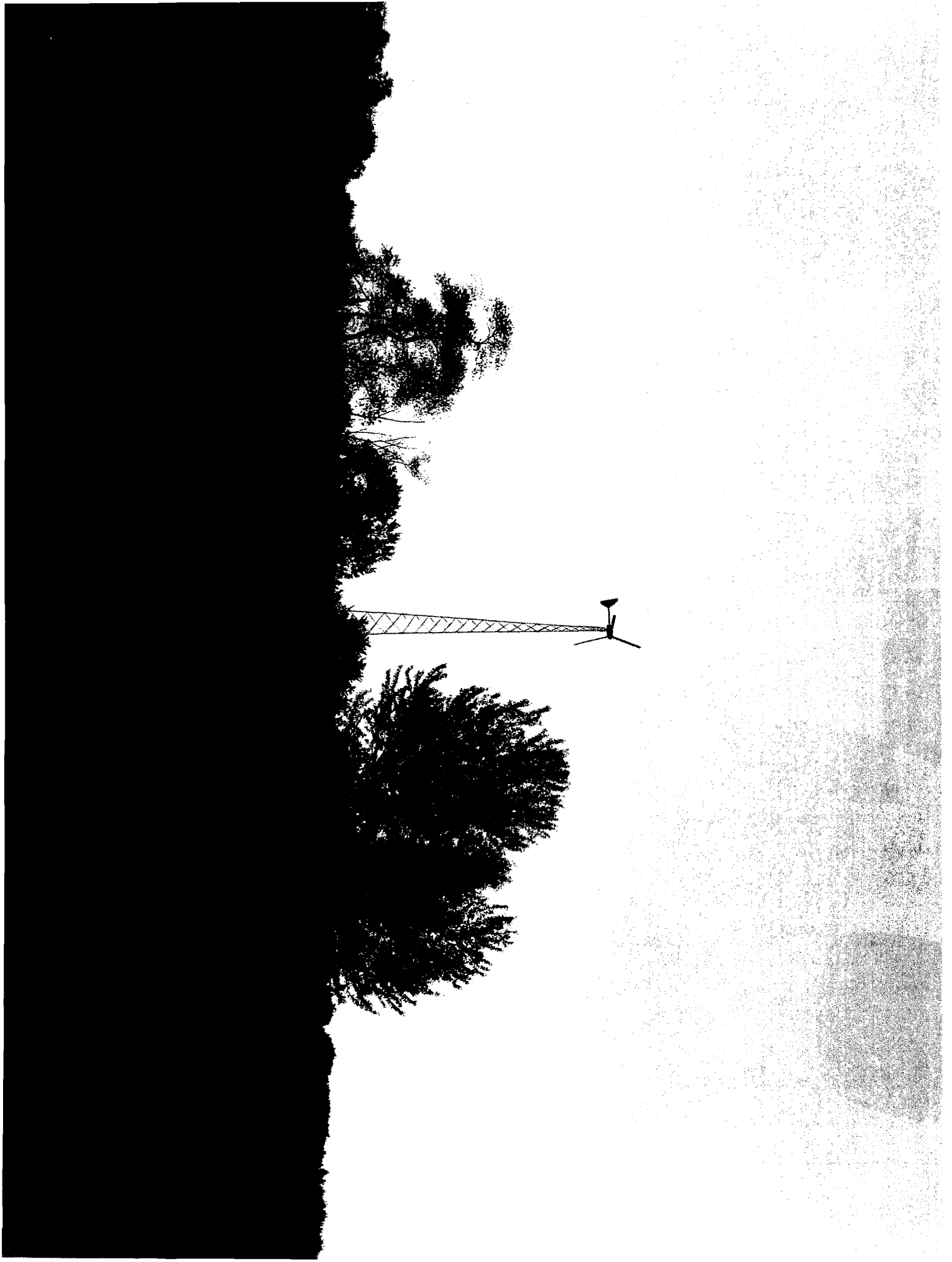


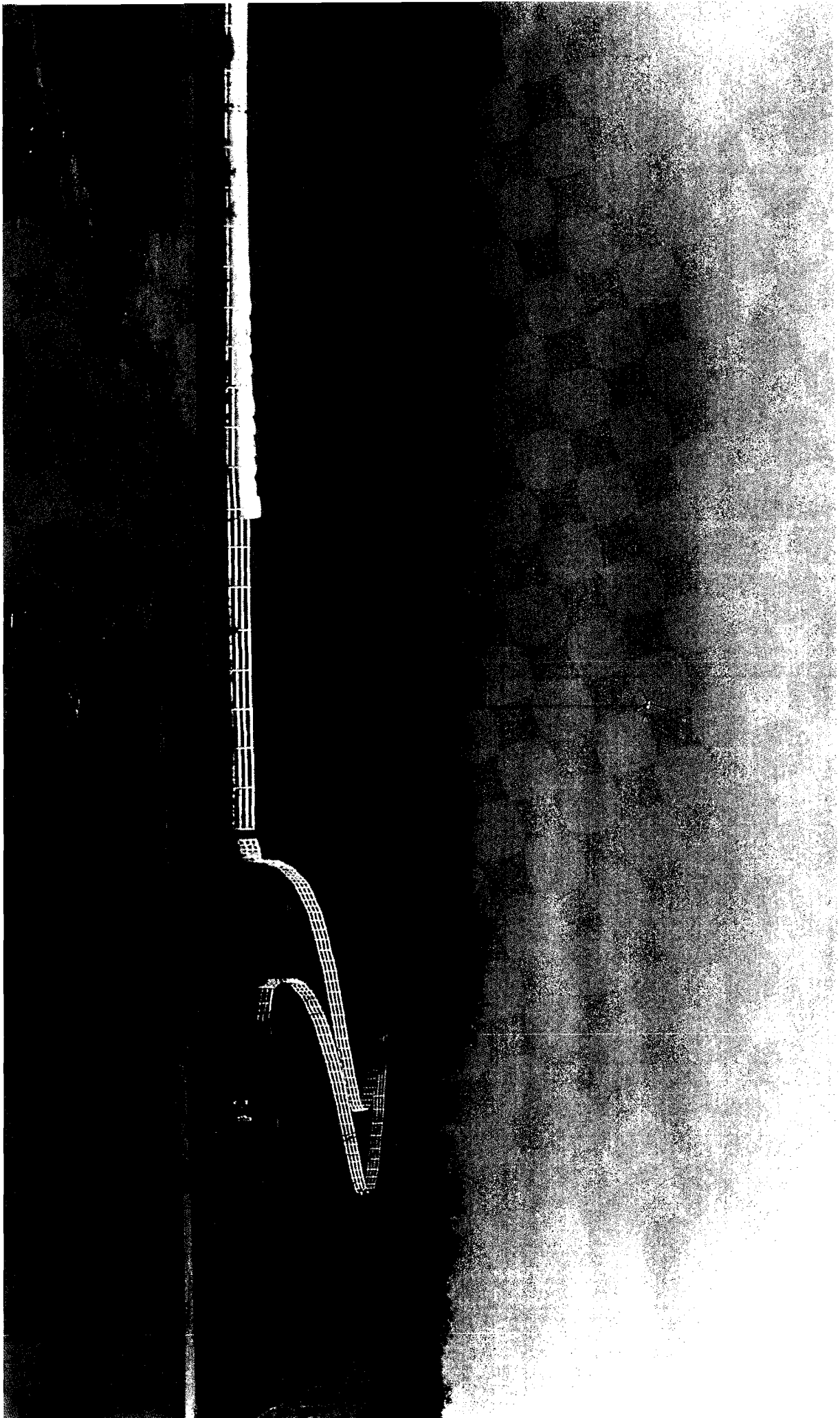




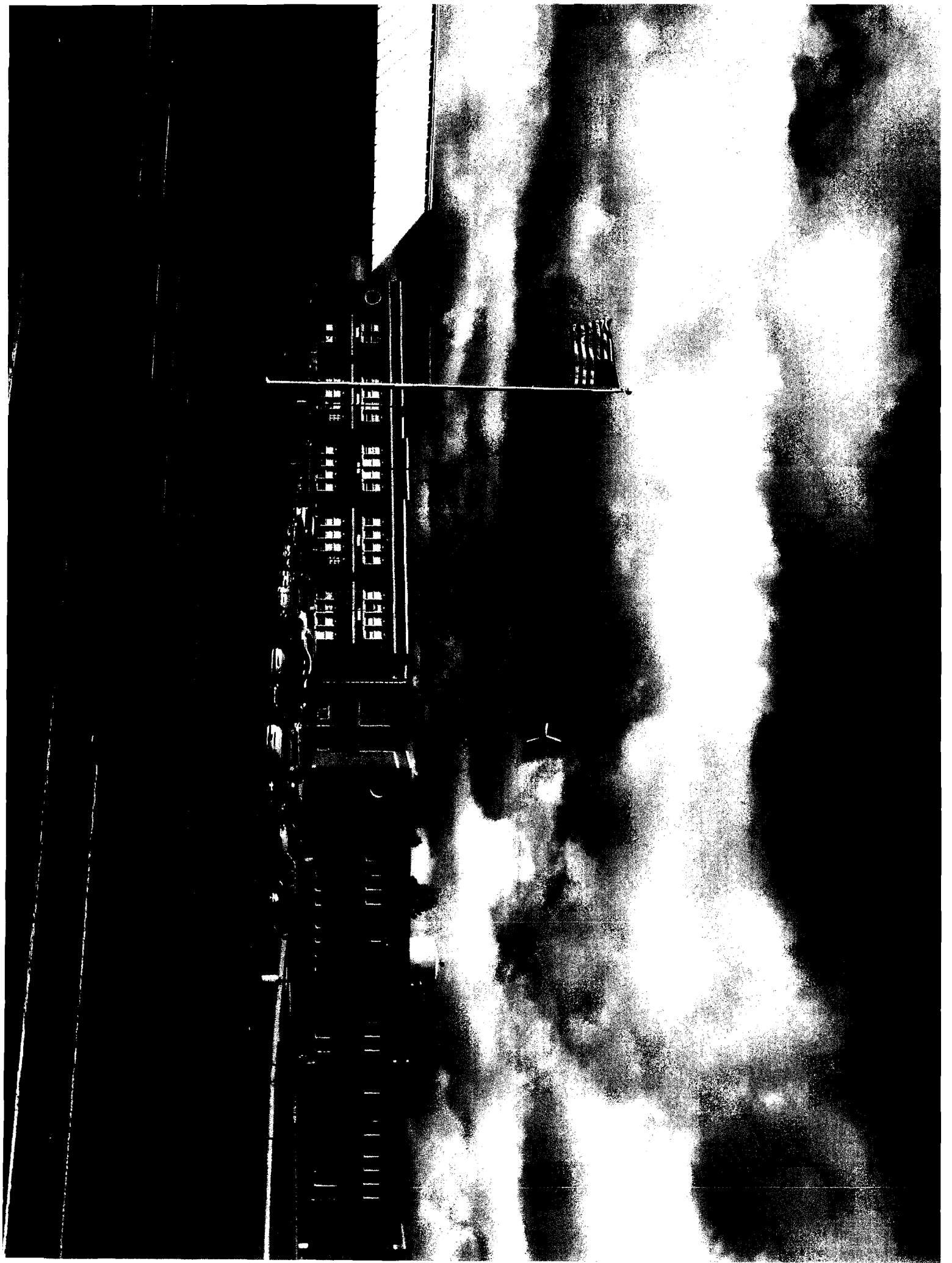


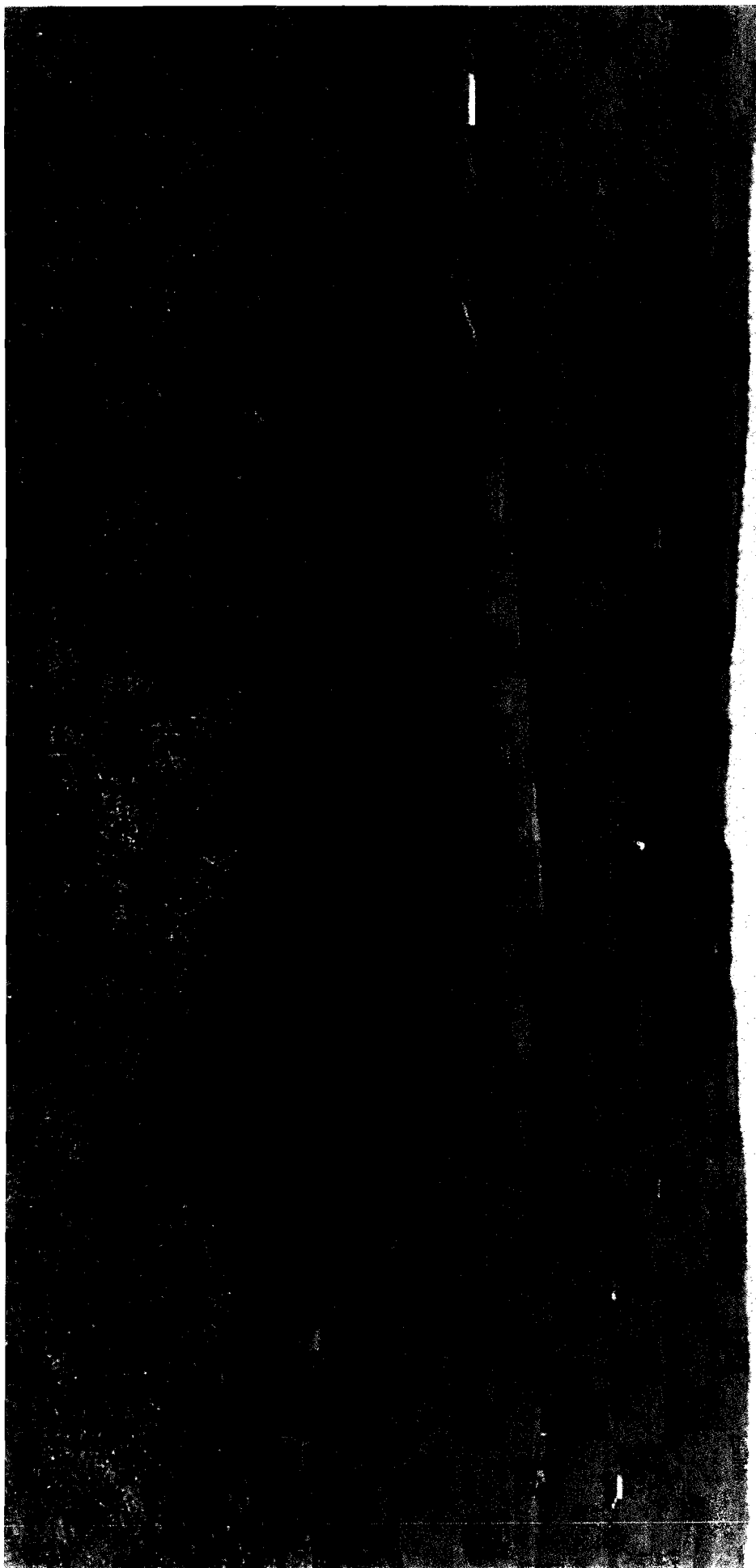




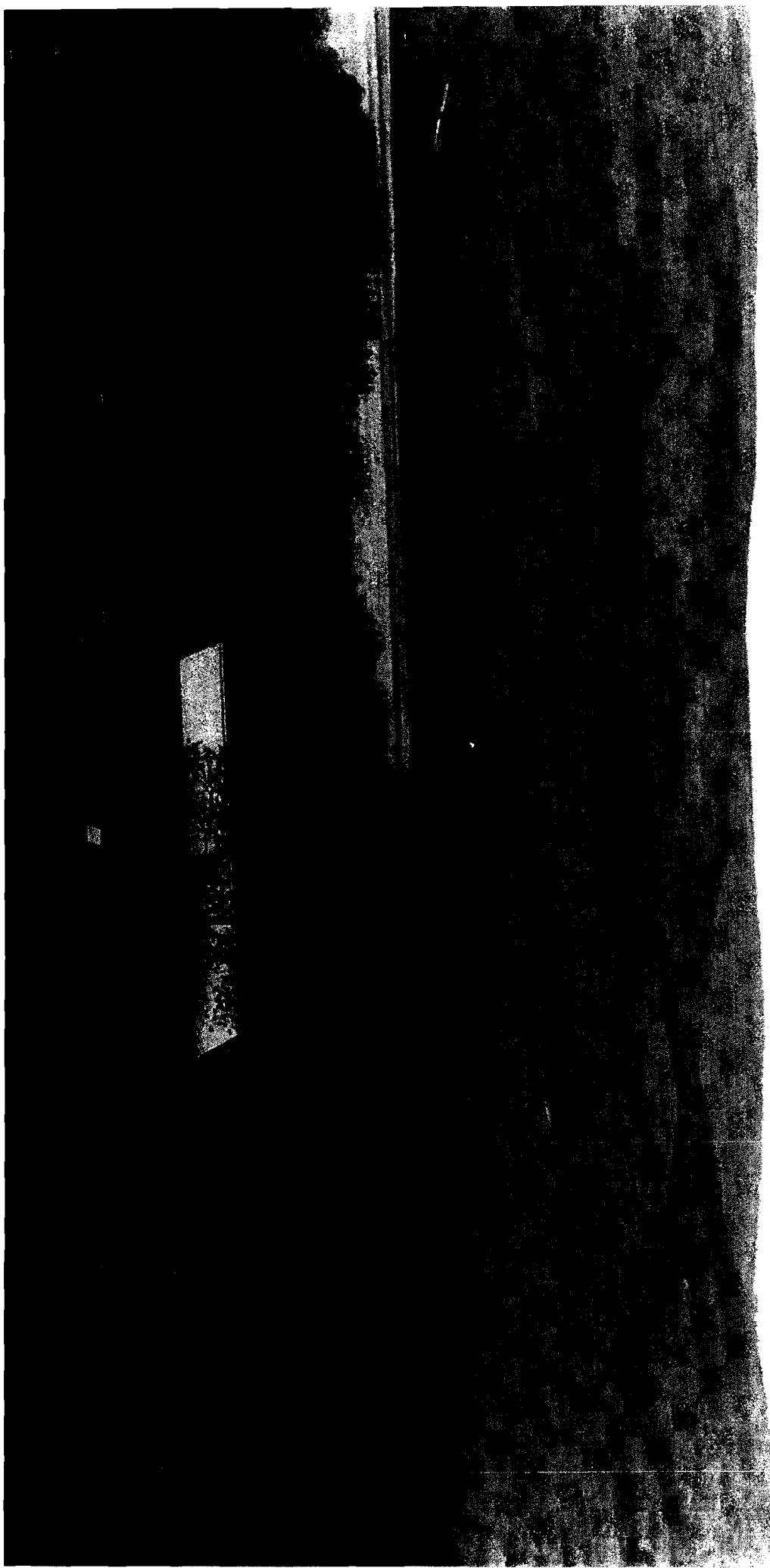


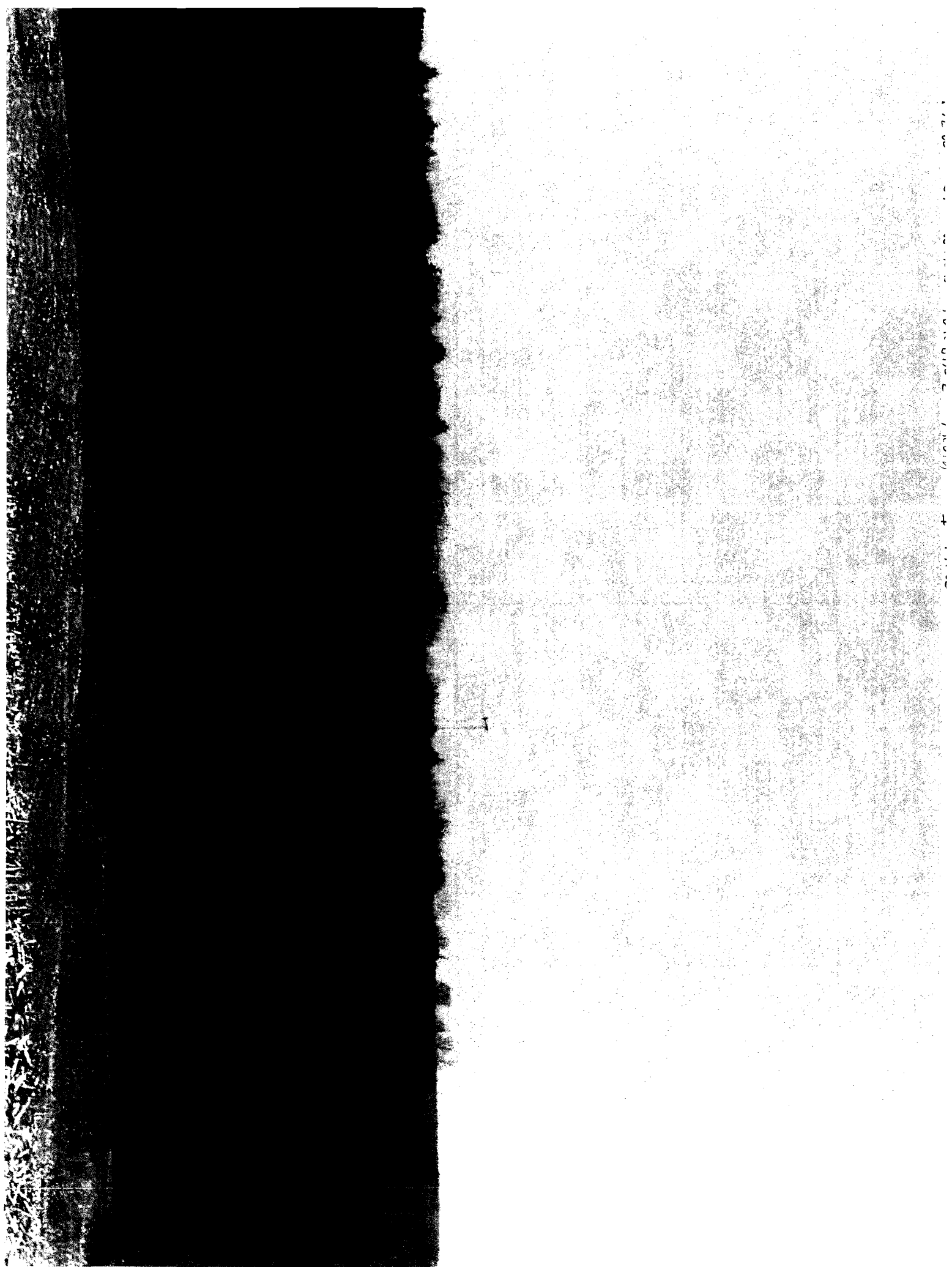


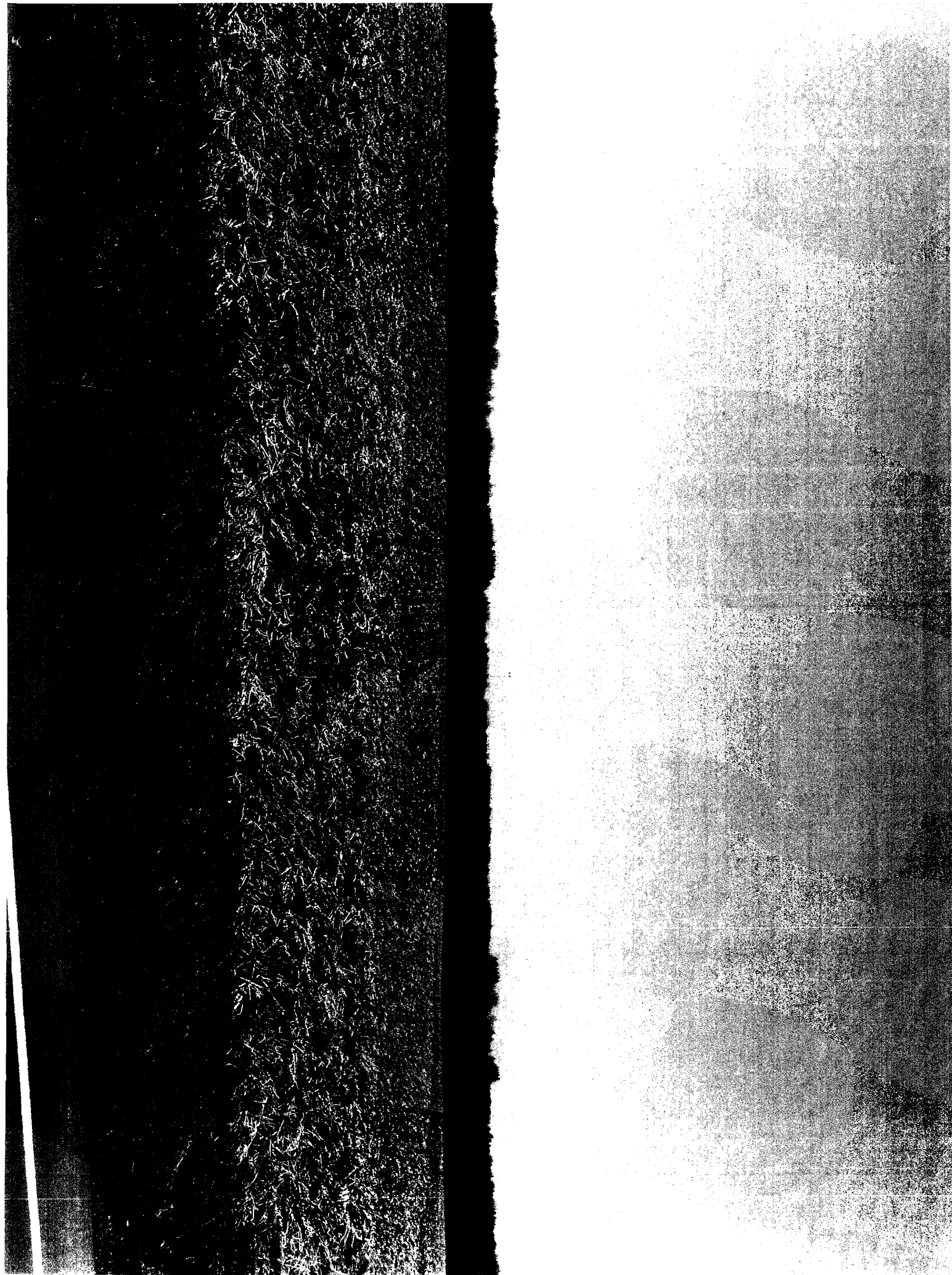




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ON-SITE POWER

Company Name
CROSS ISLAND FARMS

Location
WELLESLEY ISLAND, NY

Contact
DANI BAKER

NYSERDA Funding
\$44,000 (wind and solar)

Website
CROSSISLANDFARMS.COM

.....

"As a sustainable farm we look to purchase our supplies locally and if we can generate all of our own electricity on-site, you can't get any more local than that. Everyone works on our farm including the cows, goats, pigs, and chickens; now we put the sun and the wind to work, too.

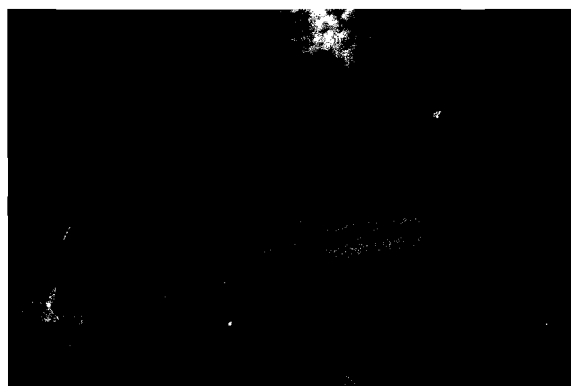
We want to serve our community not only by providing healthy and nutritious, organic meats, eggs, fruits, and vegetables, but by being a potential sanctuary in the event of a natural disaster."

—Dani Baker,
Cross Island Farms

Cross Island Farms

Background

Cross Island Farms, which encompasses 102 acres of land, is a certified organic vegetable and livestock farm located on Wellesley Island, in the Thousand Islands region. The farm grows organic vegetables and produces organic eggs, beef, goat, chicken, and pork. The animals are raised on pasture, without the use of hormones, and sold to the community. Primitive camping, as well as educational farm tours and farm and garden workshops are services that are provided on the farm. Given the farm's philosophical approach to doing business in an ecologically and economically sustainable way, renewable energy could be a natural fit.



Challenge

Installing a wind turbine and a solar electric (photovoltaic) system would provide the farm with a non-polluting source of electricity that would reduce their dependence on fossil fuels and help reduce the emission of greenhouse gases, but the costs would be in excess of \$100,000.

Cross Island Farms received a grant through the USDA-Rural Energy for America Program that would fund 25% of the originally planned wind project. They installed a meteorological tower to determine the wind speed, and discovered that the 80' tall tower they were planning to install would not produce the results they were hoping to achieve. The project stalled until NYSERDA staff read about their plight in a news article and proactively reached out to Cross Island Farms.

**NYSERDA
CASE STUDY:
Small Wind Energy**

ON-SITE POWER

Owner Name
PHIL COOMBE

Location
SULLIVAN COUNTY, NY

NYSERDA Funding
\$44,000

Wind Turbine Owner Reaches New Heights

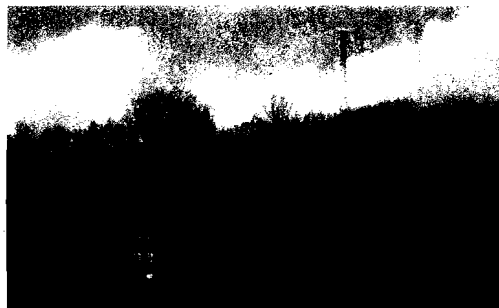
Background

Phil Coombe owns 140 acres of farm land in Sullivan County, NY where the non-stop wind was a major irritant. While thinking about what he could do to solve this problem, Phil recalled another farmer in a nearby county who had installed a Gaia Wind Turbine. Suddenly he had a great idea – he could turn this wind liability into a powerful asset. With the amount of land he owned, he would have more than enough space to site a wind turbine.

"A Welcome Sight on Our Road"

*As published in Ye Olde
TriValleyTownsmen –
November 17, 2011*

"I want to welcome two new residents on our road. One appears permanent and the other may just be passing through. The first is sleek and slender topping out at 142 feet. Its arms are busy waving away as the hillside winds power it. I can see this tribute to wind power from my kitchen window. You might wonder, how can I be so welcoming? . . . if we think beyond the moment of today; we know that our world needs to power up on more than foreign oil. Hence, this wind turbine may be a symbol of hope for our future. Here's to many more of them."



Challenge

A wind turbine built for moderate wind speeds was what Phil needed to achieve the goal of generating the majority of his own electricity. The Gaia was an ideal choice due to the very large swept area, perfect for the average 10.5 MPH wind speed on Phil's property.

A 120-foot tower would be needed to allow the bottom of the turbine blades' arc to be 30-feet above everything within 500-feet of the tower. This would ensure that the turbine would produce as much energy as possible and minimize the turbulent wind the turbine would experience, helping to reduce maintenance costs.

Although Phil now had the answer, what he needed was a way to address the expense. The project's cost would not be economically feasible without some help.



Energy. Innovation. Solutions.

ON-SITE POWER

Company Name
LEDGE FARMS

Location
GENESEE COUNTY, NY

NYSERDA Funding
\$154,000

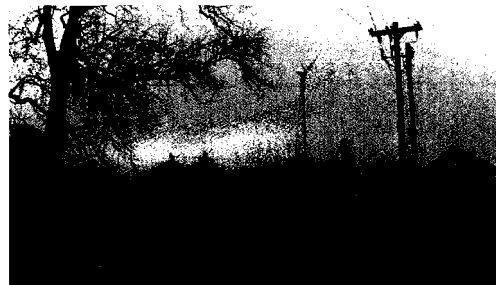
"I always hated the wind storms that we would have because they would always make life harder in some way. It could be damaged crops, wrecked buildings, or just miserable weather for being outside, particularly in the winter. Now I can take advantage of what used to be a negative and turn it into a positive cash flow. It makes life more enjoyable when you can turn a negative into a positive."

– Sam Scarborough,
the owner of
Ledge Farms

Ledge Farms Harnesses the Wind

Background

Ledge Farms is a third-generation family-owned farm in Basom, NY (Genesee County) just a few miles north of the New York State Thruway. Located on 98 acres of land, the farm is home to 25,000 egg-laying hens and also produces grain for feed as well as for sale. Since a typical hen will eat about one-quarter pound of feed per day, the whole brood will consume over three tons daily. The grain must be thoroughly dried before it can be sold or consumed.



Challenge

Farmers survive on tight profit margins. Since there is little opportunity to increase the sale price of the commodities sold, Ledge Farms looked for ways to reduce operating expenses. Sam Scarborough, the owner of Ledge Farms, knew it was always windy at the farm and wanted to put that wind to work. He contacted one of the wind turbine installers enrolled in NYSERDA's incentive program, Thom Fleckenstein, President of Niagara Wind and Solar. Thom, who is also from a farm family, explained to him that a 10 kW system would be too small to meet his needs, and a 50 kW system would produce too much electricity. Ledge Farms was using a propane-fired grain drier and with this type of equipment, great care must be taken not to over-dry the grain. Over-drying grain leads to a poor quality product that loses market value, is less palatable to its consumer and also increases its cost. The farm could install an electric dryer, eliminate propane bills, and use all the electricity the 50 kW turbine would generate. As Sam states, "We produce all the feed for our hens and quality feed leads to better eggs."

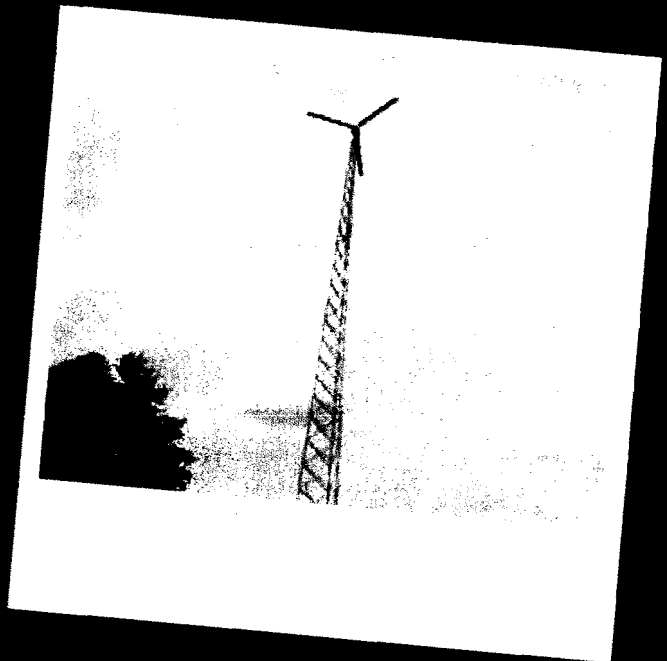




SUCCESS STORY

Wind Turbine Program Saves Monthly Electric Costs

Frank Kunnumpurath's electric bill used to run between \$400 and \$500 a month. The 46 year old LaFayette resident, who lives on a hilltop home with his wife, two children and a variety of wild fowl, uses electricity for hot water, cooking, power needs, and to run his geothermal system. Located about a half hour from Syracuse, his homestead routinely sees winds faster than forecast for the region. Kunnumpurath applied for, and received, funding under NYSEDA's popular Customer Sited Wind Turbine Incentive Program. Since 2008, NYSEDA's wind incentives have provided 61 consumers with funding totaling \$1.8 million. Kunnumpurath was awarded a \$27,000 incentive, enough to fund more than a third of the turbine cost. In July 2010, he hired a contractor to install a 10 kilowatt, 100 foot high unit. "NYSEDA's incentive made it possible to do this," he said. "And it pays off." In October, NYSEDA launched yet another round of funding, which so far has attracted nearly 25 applications.



NYSERDA Can Buy-Down the Cost of a Wind Turbine



There is nothing more natural or nostalgic than a wind turbine on a farm. Generating one's own electricity fits perfectly with the independent thinking of farmers. Last year, NYSERDA helped 32 farms in New York State make that dream a reality. For eligible participants, NYSERDA can provide an incentive (i.e. a grant or rebate) for up to 50% of the cost of the system. NYSERDA has provided funding for turbines from 2.1 kW to 850 kW in size.

Farms bring three critical elements to a successful wind project: land, wind, and an appreciation of the value in a long-term investment. The project's return on investment will depend on many factors including: their available wind resource, their cost of electricity, and their ability to take advantage of the federal Investment Tax Credit and accelerated depreciation. What always occurs is an immediate and sizeable reduction in the electric bills and a proud feeling of owning a wind turbine and generating one's own electricity.

Wind is very site specific and a wind site assessment should be conducted to determine the available wind resource. This resource is described as the annual average wind speed. Speeds of at least 10 mph are usually considered necessary for a reasonable investment. Wind speeds increase with the height above the ground and an increase from 8 to 10 mph will double the amount of electricity generated.

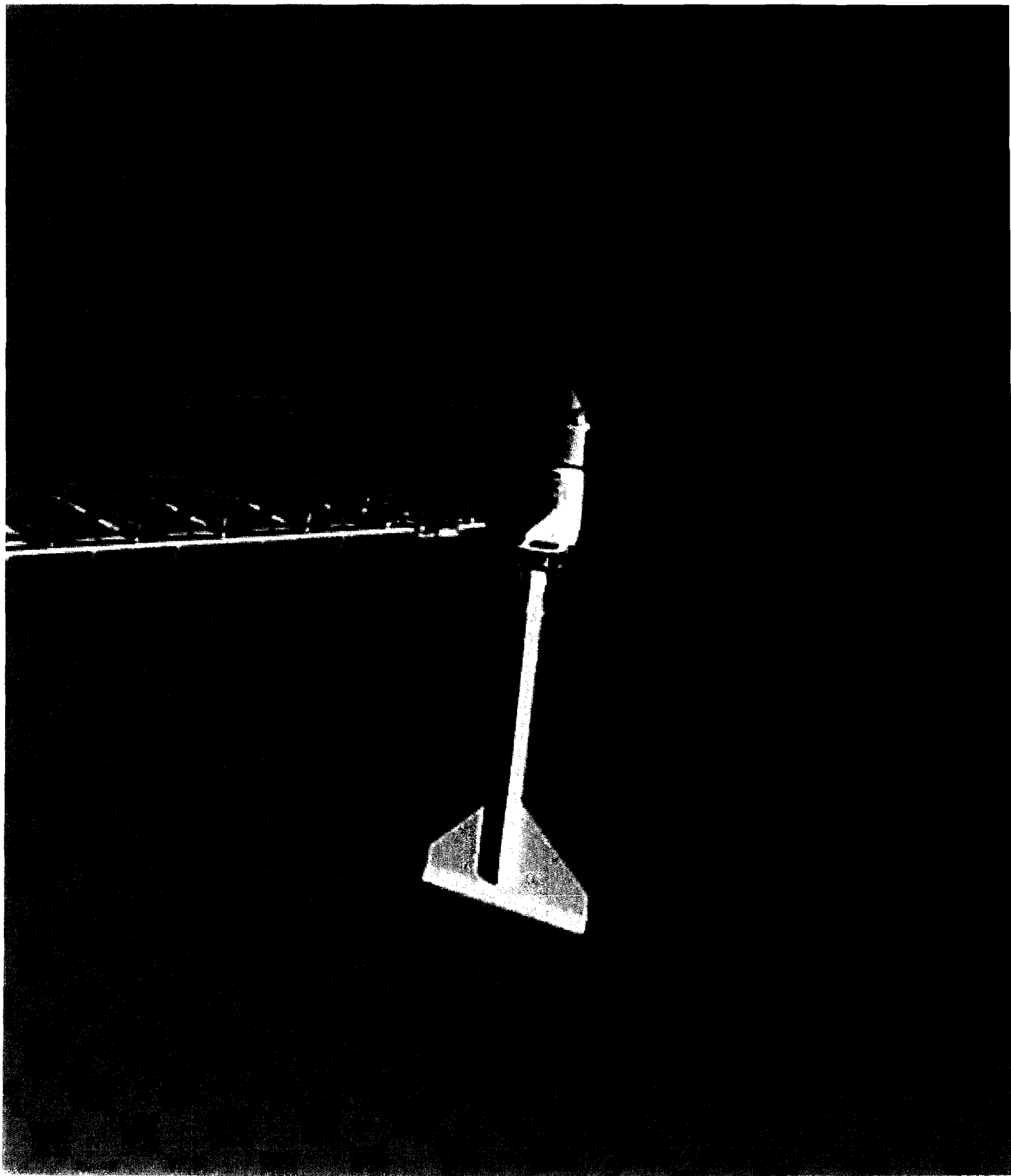
There are three concepts that should be considered to size a wind turbine to meet one's needs. 1) All farms are eligible for net metering. If the wind turbine generates more electricity than the site is using, the electric utility meter will spin backwards. (Some have been known to watch for this event and cheer when it happens.) At the end of the month if the meter spun backwards more than it spun forwards, the electric company will issue a credit for the excess electricity. This credit can be carried forward and applied to the electric bill on a non-windy month. 2) Some farms are also eligible for remote net metering, where this credit can be applied to other electric accounts. This may be useful when a farm has multiple electric meters on site. 3) The wind turbine should not be too big. A properly-sized turbine should only generate the electricity that is needed on an annual basis. It is not cost-effective to over-size a turbine.

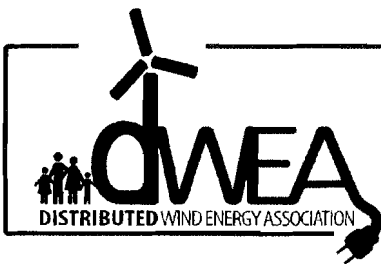


Wind turbines are farm equipment. The New York State Department of Agricultural and Markets has defined a wind turbine as farm equipment. Under the Right-to-Farm Laws, a farm in a Certified Ag District cannot be prohibited from installing a wind turbine by the local jurisdiction. In addition, there can be no restrictions on the height of the tower; however, set-back limits may be imposed.



A wind turbine is an investment that can be enjoyed. When asked why he bought a wind turbine, a farmer in Chemung County just replies, "I always wanted one." For more information on the program contact the NYSERDA Project Manager, Mark Mayhew, at 866-NYSERDA or 518-862-1090, extension 3119 or by e-mail at msm@nyserdera.ny.gov or visit www.nyserdera.ny.gov.





our Wind our Power our Future

DWEA Briefing Paper: **Property Values**

Opinion, not Fact

A common complaint made by NIMBY's (Not In My Back Yard) is that the installation of a small wind system will be such a blight that it will lower the value of neighboring properties. Though often asserted as a fact, it is in fact, a biased opinion that has not been substantiated. Loss of property values is a desperate assertion and a tried and true scare tactic with no basis in reality. A great injustice is done if this assertion is accepted as fact.

Windmills and Wind Turbines are Positive Symbols

We acknowledge the NIMBY's opinion that wind turbines may be unsightly to some, but beauty is in the eye of the beholder and history points to a different overall societal consensus. The Dutch, for example, take their windmills as an integral and cherished symbol of their cultural heritage. The American farm water-pumping windmill is an iconic symbol of our western heritage and it commonly appears in art, postcards, and governmental logos. Modern wind turbines appear in commercials, movies, and print ads when an environmental or progressive theme is desired. Wind energy systems are positive symbols and icons of environmental stewardship.

The Evidence is to the Contrary

The opinions of NIMBY's and local real estate professionals concerning property value impacts should not be taken as credible without supporting evidence. That will be a challenge since all of the available case studies and independent studies point to no adverse impact on neighboring home prices. For example, a studyⁱ by US-DOE in 2003 examined over 24,000 residential sales transactions that were within five miles of ten windfarms spread around the country and compared them to nearby sales that were out of the viewscape of those windfarms. They found that, contrary to the NIMBY assertion, sales prices rose at higher rates close to the windfarms and where prices went down in the region; the prices near the windfarms declined less. A second study in 2009ⁱⁱ of 7,500 sales transactions, also funded by US-DOE, found no evidence of lower valuations near windfarms. If windfarms, with multiple 350+ ft tall wind turbines, do not diminish property values, what is the justification that a single wind turbine that is 1/3 the height and 1/200th the size will lower property values?

The small wind industry can point to dozens of specific examples where neighboring properties have been sold or leased with no reports of complaints of difficulties in selling or lower prices being offered.

"We're being Libeled"

The small wind industry feels it is being libeled when a NIMBY makes unsubstantiated accusations about diminished property values. Their statements are damaging to not only to manufacturers and installers, but also to property owners wishing to install a small wind turbine. This nation has laws that protect people from false accusations, but this "trade libel" too often goes unchallenged. **DWEA recommends that zoning officials and other administrators considering an application to install a small wind turbine place the burden of proof on anyone who asserts the risk of diminished property values.**

ⁱ "The Effect of Wind Development on Local Property Values", REPP, 2003, available at www.repp.org

ⁱⁱ "The Impact of Wind Power Projects on Residential Property Values in the United States", Lawrence Berkeley National Laboratory, 2009. See <http://newscenter.lbl.gov/press-releases/2009/12/02/wind-power-property-values/>

Bergey Excel Wind Turbine Installations "Close to" the Town of Phillipstown

4/12/2013

Customer	Address	City	County	Zip	Phone	Email	Distance Away	Tower Height	Tower Type	Installed
Sky Acres Angus Farm (Raymond Wendover)	481 Route 7	Gallatin	Columbia	12567	518-398-6015	wendoverslawnservice@yahoo.com	44	100	Guyed lattice	8/22/2011
Charles & Dawn Westcott	121 Sawchuck Road; PO Box 123	Millerton	Columbia	12546	518-789-6615	cwestcott@wafinancialgrp.com	44	140	Guyed lattice	9/17/2012
Copper Star Alpaca Farm (Joseph Crocco)	132 Carson Road	Millerton	Columbia	12546	914-879-8062	jrcrocco@optonline.net	44	140	Guyed lattice	2/25/2011
Michael Gershon	143 Carson Road	Millerton	Columbia	12546	917-882-1112	migershon@gershoncompany.com	44	120	Guyed lattice	7/23/2011
Dan Gibson/ Granzin Angus Acres	176 Bartel Road	Ghent	Columbia	12075	(914) 760-7938	Dan.Gibson@grazinangusacres.com	63	120	Guyed lattice	8/11/2006
Pleasant View Farm (Jeff Pulver)	130 Pulver Road	Millerton	Dutchess	12546	518-789-3922	beatfarmerjeff@gmail.com	43	120	Guyed lattice	11/11/2009
Jessica Bard & Callum Benepe	430 Field Road	Red Hook	Dutchess	12571	845-518-7288	jessicabard@gmail.com ; benepe@gmail.com	37	140	Guyed lattice	4/11/2012
Leslie Armstrong	963 Hervey Sunside Road	Cornwallville	Greene	12418	518-662-8452	elkfarmerd@aol.com	65	140	Guyed lattice	3/2/2012
Robert Stafanko	7591 Route 23	East Windham	Greene	12349	518-734-4601	skyland@nyair.net	64	120	Guyed lattice	1/10/2012
James Greier	358 County Road 95	Obernburg	Sullivan	12767	845-482-5759	jimgreier@hotmail.com	62	120	Guyed lattice	10/15/2010