

Town of Greenwood
Ordinance Review Committee Meeting Minutes
July 20, 2017

(A digital recording exists for this meeting)

Item 1: Call the Meeting to Order/Determine quorum

Chair Merlino called the meeting to order at 5:30pm and after roll call it was determined that a quorum was met. Chair Merlino asked for the Committee to introduce themselves as there were new faces in the audience.

Larry Merlino, Chairman
Paul Marcolini, Vice Chair
Brad Payne, Secretary
Tyler Bennett
Jessie Fredrickson
Jim St. Germain
Dennis Doyon
Becky Secrest\
John Maloney, AVCOG
Kim Sparks, recording secretary

Attendance: 24

Item 2: Citizen/Public comments – 10 Minutes

Chair Merlino explained that there is 10 minutes at the beginning and again at the end of the meeting for comments from citizen and the public. Chair Merlino asked for a show of hands for those who wanted to speak. He explained that the number of hands will be divided equally to the 10 minutes allowed and a show of 4 hands gives everyone two and a half minutes to speak and reminded everyone that there is another 10 minutes at the end of the meeting and asked that everyone keep it to 10 minutes.

Stan Leonard, resident on East Twitchell Pond Road: Stan stated that he was interested in speaking at the end of the meeting. Stan stated that he is 15 years on Twitchell Pond and is from Massachusetts.

Skip Potter, 47 years on East Twitchell Pond: Skip stated that he had supplied everyone a handout with a shadow maps on it. He stated he had some comments that he would like to read. He explained that by way of definition shadow flicker is what it sounds like it is the transient shadow generated with the rotating turbine blades. He explained that they used a program called Sun Calc to help calculate the flicker but the program is limited to one turbine. He explained that they located the turbine just south of Mt. Abrams and that they started calculating the shadow with a 250' turbine, a 400' turbine, and then we also calculated a 600' turbine. He stated that the 600' turbine would cast shadows as far as Rt. 35/Songo Pond area and beyond Rt. 35, beyond Rt. 219 in Greenwood, beyond Indian Pond and Bryant Pond and would be at different times of the year and this was from only one turbine. Skip explained that in regards to the handout, they had not done the 600' tower. Skip asked everyone to review the handout and to notice the red dot on the map...that is the location of the tower. Skip explained that he had a few computers on to show what flicker looks like and stated that he recently went on a tour of the Woodstock Spruce Mt. facility and that shadow flicker was alive and well and made his wife, Sue queasy. Chair Merlino stated that comment time was running out.

Paul Hamlin stated that he was on East Twitchell Pond and is a California native and has been around wind turbine farms for decades. Mr. Hamlin stated that the old designs were really lethal for birds and

bats and the new designs have greatly reduced that. He explained that there were minimal complaints about the towers in California regarding noise and flicker but they were miles from anyone's home – like 20-30 miles to the nearest city and 15 miles to the nearest subdivision. He stated his concerns with these towers being close to homes.

Norman Milliard, Greenwood resident: Personally would like to thank Mr. Potter for the handout but that the proposal for this project is neither 250' or 400' and that we are looking at potentially 600' towers unless anything has changed so the shadow flicker for 600' would be significantly helpful for everyone to look at if we had a proposal or image at 600'.

Skip Potter explained that their thoughts on that were that realistically speaking he thought the board had the option of setting the height limit of the towers so they submitted the 250' and 400' and maybe they were being a bit optimistic. Skip stated he could easily do a handout with a 600' tower and get that distributed to the Board.

Norman Milliard stated that there is a potential for the board to change those numbers but there is no guarantee of that so the 600' flicker information would add to the body of information that is available.

Skip Potter said he would gladly get this information to the Town.

Item 3: Committee Member comments – 10 Minutes

Jessie Fredrickson: Jessie asked Mr. Potter if he could plot 16 windmills across the Long Mountains in this program so that they could see the totality in that space. Skip Potter answered that the software only has the capacity to do only one tower. Jessie asked if they could print out it out on clear, transparent plastic sheeting and then string them all together and offered to help Skip do that. Skip Potter stated that he would gladly take a look at that. Skip asked if there were any specific tower locations other than circles on a map is there any other maps anywhere. Chair Merlino answered that there is no Wind Turbine application no permanent application so we are guessing.

Paul Marcolini: Stated that they need to come up with a plan that makes sense for when someone applies. So we are not in defensive mode as much as we are in the offensive mode let's see what our community and neighbors want and draw up a plan based on that and we will do the best we can to act on that.

Becky Secrest: Stated she was on the tour of the wind power project the other day, and the question of flicker came up and the person giving them the tour didn't have the answer to their question. Becky stated that Rebecca Howard did call her back and stated that their policy is if they get a complaint about flicker that they would shut that tower down. Becky stated that she didn't know if someone comes and puts a proposal together could we ask them if they would do that. Becky stated that Rebecca is from Patriot Renewables and has offered to give the committee a tour of their facilities.

Dennis Doyon: Stated that models are great to look at its on paper. As you know with my job, I do a lot of traveling to Concord Pond, Shagg Pond, and Roxbury Pond. He stated that personally he has never experienced flicker, but he would encourage people to ride up Rt. 17 and Rt. 120 and talk to some people there. He stated that people are very open to talk to people up there and those towers are a lot closer than one mile to the homes.

Becky Secrett: Stated that it is good to have them go drive around and look at the different wind sites. She stated that the issue of flicker is specific, she thinks to particular time of day to where the sun is at a certain time of year. She explained that people might be visiting these sites when there is no flicker based on the time of the year. She stated that for folks to truly evaluate it they would have to go out there and stay for a year to find out when the flicker happens.

Item 4: Review Minutes of July 6, 2017

The Committee read the minutes. Doyon motioned and Bennett seconded to accept the minutes as presented. Vote: 8-0. Motion passes and minutes are approved.

Item 5: Open Items for Information

Noise – Presentation by Committee Member, Paul Marcolini

Paul Marcolini stated that he was tasked with taking a look at health issues related to wind towers but specifically looking at low frequency and at terms of the scope low frequency is what he looked at and flicker factors in there. He stated that he wanted to be clear, that when he looked through all of the literature, low frequency was what he was looking at low frequency items and nothing else. He stated that flicker was one more component that needs to be looked at individually as well. He explained that there are a limited number of sites and what he finds when he goes through the data is that there is a ton of older stuff but not so much that is current. He explained that he started shifting through the data; asking where he was going to begin and what are the end points to it so he can be accurate in what he discovers. He stated that he arbitrarily came up with 2014 as a point based on a study from Canada. He explained that most of the literature that he drew into was medical literature and that most of the data is current. Paul stated that part of the issue is defining: What does health mean? He stated that the information is on a continuum on one end that the pro-wind folks say there are no health issues and on the other end the anti-wind folks advertise they have over 2000 anti-wind organizations that they are linked into and they on their end there is a story of a guy who was in his back yard and collapsed and died because of the wind towers. He stated that someplace between absolutely nothing and to someone dropping dead because of the wind towers is where we need to look and come up with the data that is in the middle and makes sense. He explained that decibel is relative to loudness and hertz is relative to frequency and we are talking about the hertz side of it – the frequency waves that we believe are causing health considerations and understand that the frequency range is variable throughout the studies; some at 10-120 others say 20-200. He stated that he was happy to supply anyone his resources. He stated that he spent some 30 hours researching and reviewing over 60 medical journals on low frequency. He explained that it travels thru the air as a sound wave, it can come inside the buildings, that it's not sound that you necessarily hear, and a lot of people will describe it as a feeling or a sense of pressure or vibration. He stated that there are some key words to focus on as we go forward:

Annoyance – is what leads to the complaints and is an important concept to understand as it relates to the stress associated with the wind towers.

He stated he found no good data of what a 600' tower drives. He stated that sound travels upwards as well as downward as noted in a study from NASA – that it does fluctuate some but it goes in both directions so there is no safe zone per se. He stated that larger wind turbines are quieter but they produce more low frequency. He stated that the relative amount of omitted low frequency is higher on larger turbines and more importantly the spectral difference between large and small turbines is statistically significant...a big difference. Betsey Foster asked Paul to define spectral difference. Paul answered that when looking at medical statistics we look at a number to treat...say a number of people we need to see when we do the evaluation before we can declare that this is helpful or not helpful. He explained that if the statistical difference here suggests it was within a few percentage points you would say they were basically the same thing and that statistically when we take a look at the difference between the amount of noise produced, high and low frequency with the larger towers there isn't enough difference between the amount of high and the amount of low that it is statistically significant – it's a great difference or a large difference. He stated that under certain atmospheric conditions like temperature the noise maybe more annoying and that ground reflection has to be factored in there and the type of terrain factors. He stated that insulation factors in and that relates to how the house was built and how the noise can bounce around. The extremes that he read, one UK study stated that you would need a home with a meter thick wall. He explained that we know that the noise travels outside of the house as well as inside and that it isn't easy to insulate against it and we shouldn't get more out of it than that. He explained that it is difficult to come up with a medical model that shows more than a person with a complaint from a particular wind tower. He referenced a 2010 study from Denmark on low frequency in large turbines stating that noise was more audible at night than during the day and quiet backgrounds are associated with more noise. He explained that the study states that the noise is worse indoors than it is outdoors and that once it gets into the buildings it doesn't dissipate and that it is somewhat confined. He stated that in the study it never stated when the readings were taken...at night or indoors where it would be louder and this is mentioned in several different studies that the noise is louder inside the home. He stated that the other part that factors in that is when people are outside they aren't as focused as they are as when they are inside and during the quieter times of life is when people tend to hear it and we know if it is a quieter night in a rural area the noise will be amplified.

Paul started to address the health issues as they related to sound. He stated that he could not come up with a standardized definition that he thought was appropriate for health. Paul asked the Committee to work on something that he could hold what he came up with against. He explained that he used the definition from the World Health Organization. He explained that he like this as it also begins to look at wellness and environmental and lifestyle factors. He stated that we aren't talking about a simple things – that you won't get diabetes from a wind towers or have a heart attack because of a wind tower and it makes sense to touch on changing or coping with the environment. He explained that the evidence of low frequency noise can increase significantly the adverse effects on health. He stated that the problem is that this is old data – it was written in 2000 and we know the data was collected before that. He discussed a list of health issues from the data after looking at signs and symptoms of people's complaints: hearing loss, tinnitus,

pressure in the ears, memory dysfunction, and sleep dysfunction. He cautioned us to say that all of these are driven by the wind

of these are driven by the wind towers directly that there is no primary correlation here. He stated that there is no report of hearing loss because of the wind tower but there are reports of hearing loss around the wind tower. He explained that it's true he had a hearing loss and its true there is a wind tower but when you start to pull the data together they are unrelated in the same way that the guy died of a heart attack - it was unrelated. Paul asked everyone to review the list and understand what the hormone does – that is your flight or fight side of stuff –that's your arousal kind of things it is responsible for. He asked us to think about somebody who is living in a stressful state or an arousal state with this list of things and we start to say what is the difference between to the people who aren't affected and living in the same neighborhood to those who are and it is very individual and one is that hormonal response to that stress. He stated that 2017 study says that noise adversely affects general health and wellbeing in the same way as does chronic stress. The 2017 study states explicitly that there are no health related end points – that means that the long list of health issues – look for outcome data – if we can say “if this”, “then this”, “equals those things” – there's no outcome data that points that wind towers are directly responsible for that. He asked us to understand the emphasis to the words directly vs. indirectly. He stated that the correlation between annoyance and stress seems to be more linked to causation of those medical signs and symptoms than those wind towers by themselves. He explained that we have people living in an area that may not like the wind tower or feel adverse to it and they feel those things under stress because of that and that stress exhibits itself in that manner. He explained how people feel about wind towers will drive what their illness or complaints are and the main effect of low levels or unwanted inaudible sound is hostile reaction and negative thoughts leading to stress which then will leads to this adverse health effects. He explained that it's not the wind tower but the situation or the environment that driving these changes and that there is wide variation. He discussed the “annoyance factor” – referring to studies from Canada, Australia, and Denmark – studies saying the same thing – no direct link to health issues from wind towers – but – the environmental aspects of living around a wind tower in some people, those that are more vulnerable than others and because of that stress will elicit health concerns. He explained that there is actually a wind turbine syndrome –because there is no direct linkage to health care issues in the turbines yet we have all of these people having signs and symptoms they needed to come up with a way to describe and it is described in three different medical papers in our National Health Library. He explained that it talks about complaints motivated by the stake of interest of those who have shared a benefit – one study took a look at the psychology of those complaining and those not complaining and that those studies are done subjectively. He explained that if you are going to profit from this happening you are going to be more in favor of it and if you aren't going to profit from it you aren't going to be in favor of it. He stated that one study out of Poland stated that there was an increased in the quality of life the closer you lived to a wind mill in part because everyone in the study got a substantial amount of money donated by the wind company and they got no complaints. He suggested that the Committee be conscious of that as we develop our plans and ask if people are recusing themselves or standing up fighting for this as they could be making money off of this. He stated that he found that the areas that had the least number of complaints had a neighborhood gift given by the companies coming in and

based on the amount of the gift the complaints rose and fell and that this should not surprise anyone. He explained that low frequency noise itself is not harmful – that is a given and a solid statement. He stated that annoyance and stress is harmful and is a secondary result and some people will get sick and some will have flicker problems. He explained that the issue is the heightened sensory response. He stated that some studies state that the low frequency noises causes people to have unusual experiences. He stated that the symptoms are real to those people – the increase of blood pressure for those people around the wind towers – those symptoms are real. He explained that there is primary vs. secondary and wind towers might not be responsible for that but there is contributive causation by virtue of that stress. He stated that what is not factored into a lot of our conversations when we talk about wind towers and health we ask if the person already had high blood pressure before declaring high blood pressure because of the tower. He explained that we know that the wind tower is not primarily causing the heart attack but it might be secondarily that increased stress, increased blood pressure, increase pulse and increased respiratory drive in working your way towards a heart attack.

He explained that both sides – pro and con are blaming the media. He explained that he did not go to the media for this data presented and that he used medical journals. He suggested that we as a group need to focus on change and coping with the environment. He stated that we need to get away from the idea that all of the medical problems are because of the wind towers and understand that people will respond to the wind towers and the stress of being by a wind tower. He stated that the committee needs to decide the distance and the height to obliterate those problems. He stated that we need to come up with a height and distance for setbacks that makes sense for our neighbors and our community. Dennis Doyon asked if the research Paul did was specific to wind turbines. Paul stated that it was even though they had a previous discussion on high frequency power lines this data was all on wind towers.

Item 6: Items up for Discussion after review of John Maloney's revisions

Decommissioning

John Maloney stated that he was only able to work on decommissioning – see below. The Committee reviewed what John had submitted. Chair Merlino stated that they had added the word abandonment and asked if the heading should read Decommissioning/Abandonment. Becky Secrest asked if on page two (where number 3 was crossed out and became number 5) – that the two years was changed to five years if that was done to allow more time. John answered that he had been reviewing this and thought it best to extend that from having the Town get this done every two year to doing it every five years. Becky asked that during that five years and decommissioning if there wasn't enough funds to cover the costs the applicant would then have to cover those costs. John answered yes, and that there is a difference between decommissioning and abandonment and that they need to still define abandonment. John stated that abandonment would be that they shut the power down and they stop paying property taxes. Dennis stated that the bond would then come in to cover these expenses. Becky asked if any of the extra costs after abandonment would not be recoupable. John stated that the Town could take legal action. Paul Marcolini stated that their concern is that they don't want to low ball the bond and asked for John to get us the framework of what a bond would look like. The Committee continued to review all of the revisions and agreed that the salvage value of the equipment should be left out as John had submitted. The Committee asked Kim to contact the Town Attorney to see what the standard

language would be for abandonment and how long the taxes would have to be delinquent to be considered abandonment. The Committee agreed that they will wait to hear what the Attorney says before they accept any of the revisions in this section.

Revised Standards submitted by John Maloney

July 20, 2017

Decommissioning

[Current Provisions]

- 1-401.3- Submission Requirements
- 1-401.3.D. Decommissioning plan

[Proposed Provisions]

- 1-401.3- Submission Requirements
- 1-401.3.D. A preliminary decommissioning plan that includes the following.

- 1. Methods to remove all parts of the CWF including foundations and how they will be disposed of.**
- 2. Areas and the methods to restore disturbed land areas.**
- 3. Estimated time period (months) to complete decommissioning.**
- 4. Estimated cost for decommissioning in accordance with Section 1-7-701.3.S.4.**

[Current Provisions]

S. Decommissioning

The CWF shall be decommissioned within twelve months after it ceases to generate electricity, or after any permit has been revoked.

Decommissioning shall include removal and disposal off-site of all parts of the CWF (including foundations) in accordance with local, state and federal laws and regulations. Areas of disturbed earth shall be graded, reseeded, or otherwise re-vegetated, unless the landowner of the affected land requests otherwise in writing.

2. A Maine Licensed Professional Engineer shall be retained by the Planning Board and paid for by the Applicant to estimate the total cost of decommissioning and itemization of the estimated major expenses, including the projected costs of measures taken to minimize or prevent adverse effects on the environment during

implementation of the decommissioning plan. The itemization of major costs may include, but is not limited to, the cost of the following activities: turbine removal, turbine foundation removal and permanent stabilization, building removal and permanent stabilization, transmission corridor removal and permanent stabilization and road infrastructure removal and permanent stabilization

3. No permit for a CWF shall be issued until decommissioning funds have been posted by the Applicant with a bonding company or a Federal or State-chartered lending institution (the Escrow Agent) authorized to conduct such business in the State of Maine and approved by the Selectmen. Permit shall be valid for two (2) years subject to renewal as described in item d following.
4. Estimates as described in section 2 above shall be redone every two years on the anniversary of the granting of a CWF Permit and shall be submitted to the Town. Upon acceptance of the revised estimates, the Town will issue a two (2) year permit extension. The owner/operator of the CWF shall be required to maintain decommissioning funds that are at least equal to the most recent estimate
5. Decommissioning funds may be in the form of a performance bond, surety bond or other form of financial assurance acceptable to the Selectmen.
6. If the owner/operator of the CWF does not complete decommissioning within the prescribed time period the Town may take such action as necessary (including court action, with all legal costs to be paid by applicant) to secure the posted decommissioning funds and to ensure completion of the decommissioning.
7. The Escrow Agent shall not release the decommissioning funds except upon written approval of Selectmen.

[Proposed Provisions]

S. Abandonment and Decommissioning

- 1.** The CWF shall be decommissioned within twelve months after it ceases to generate electricity, or after any permit has been revoked.

2. Final Decommissioning Plan

At least six (6) months from the anticipated start date of decommissioning the owner of the CWF shall submit to the planning board a final decommissioning plan for review and approval. The final decommissioning plan shall include but not limited to the following.

- a. **Anticipated start date of decommissioning.**
- b. **Anticipated completion date of decommissioning.**

- c. **Methods to remove all parts of the CWF including foundations and how they will be disposed of.**
- d. **Areas and the methods to restore disturbed land areas.**
- e. **Time period (months) to complete decommissioning.**
- f. **Cost for decommissioning based on Section 1-701.3.S.4.**
- g. **Copies of all permits from local, state, and/or federal agencies needed for decommissioning.**

3. Decommissioning shall include removal and disposal off-site of all parts of the CWF (including foundations) in accordance with local, state and federal laws and regulations. Areas of disturbed earth shall be graded, reseeded, or otherwise re-vegetated, unless the landowner of the affected land requests otherwise in writing.

24. A Maine Licensed Professional Engineer shall be retained by the Planning Board and paid for by the Applicant to estimate the total cost of decommissioning ~~less salvage value of the equipment~~ and itemization of the estimated major expenses, including the projected costs of measures taken to minimize or prevent adverse effects on the environment during implementation of the decommissioning plan. The itemization of major costs may include, but is not limited to, the cost of the following activities: turbine removal, turbine foundation removal and permanent stabilization, building removal and permanent stabilization, transmission corridor removal and permanent stabilization and road infrastructure removal and permanent stabilization

- 35.** No permit for a CWF shall be issued until decommissioning funds have been posted by the Applicant with a bonding company or a Federal or State-chartered lending institution (the Escrow Agent) authorized to conduct such business in the State of Maine and approved by the Selectmen. Permit shall be valid for ~~two (2)~~ **five (5)** years subject to renewal as described in item ~~4-5~~ **following below**.
- 45.** Estimates as described in section ~~2-4~~ above shall be redone every ~~two~~ **five** years on the anniversary of the granting of a CWF Permit and shall be submitted to the Town. Upon acceptance of the revised estimates, the ~~Town Planning Board~~ will issue a ~~two (2)~~ **five (5)** year permit extension. The owner/operator of the CWF shall be required to maintain decommissioning funds that are at least equal to the most recent estimate
- 56.** Decommissioning funds may be in the form of a performance bond, surety bond or other form of financial assurance acceptable to the Selectmen.
- 67.** If the owner/operator of the CWF does not complete decommissioning within the prescribed time period the Town may take such action as necessary (including court action, with all legal costs to be paid by applicant) to secure the posted decommissioning funds and to ensure completion of the decommissioning.
- 78.** The Escrow Agent shall not release the decommissioning funds except upon written approval of Selectmen.
- 9.** **In the case of abandonment the Town shall utilize the decommissioning funds to decommission the CWF and take such action as necessary, including court action, to secure funds and to ensure completion of the decommissioning should the posted decommissioning fund not be sufficient to complete decommissioning.**

Need to define abandonment

07.18.17-JAM

Complaints:

Becky Secrest asked if we needed to add verbiage when someone comes to the Town with an application, that part of the application they would explain how they will handle the complaint. John explained that the Committee decided to set up the complaint process electronically and transparent. Becky asked if the Applicant/Wind Company could submit something in writing explaining what their responses would be to different complaints...a list of what the wind company's procedures would be when they got a complaint. Chair Merlino explained that the complaint process would go thru the town and would be transparent that the system would be online and/or via US Postal Service. Chair Merlino stated that the Committee recognizes that there are many folks in Town that do not have internet access. Jessie Fredrickson stated that she had called around to other communities that had wind towers in their Towns and found that most use a hot line for people to report their complaints. Jessie explained that the calls would either go to Maine Dept. of Environmental Protection or directly to the wind company and that the Town Halls did not have access to the complaints and there was no way to get copies of the records so the Town could see what was happening or not happening. Jessie stated that the Committee agreed that the records should be at Town Hall available for anyone to see them. Paul stated that they had discussed that the identifiers be pulled off. Dennis stated that someone might file a complaint – that they need to understand that the Town employees aren't equipped or trained to go investigate some of these complaints – Town employees aren't trained to go test for decibel levels and these complaints might be brought to the Town Officials and the Wind Company to find end results. Stan Leonard asked what happens if they don't solve the problems. Chair Merlino explained that the Town has other actions it could take – they could pull the permit which would cease operation. Paul stated that the Town could use court action.

Jessie asked if the Committee was going to stick with the current DBA as it is in the ordinance. Chair Merlino stated that they have not started to work on noise –just discussing how to handle complaints or health issues from noise. Jessie stated that there is a slightly more specific process in the Bethel Ordinance on the complaint process and how the Town can deal with it. Jessie asked if the Committee wanted a more specific plan. Jessie asked the Committee to review the Bethel Ordinance/Complaints and Penalty section and asked if anyone wants penalties. Dennis asked if Kim could pull that section and email it to everyone and it could be discuss at the next meeting. John explained that our current Site Plan Ordinance does have a penalty section as per State law.

Noise

Tabled for a future meeting. Becky asked what the next steps would be on noise. Chair Merlino stated that they would need to revisit the low frequency and the audible noise. Becky asked if there was any information on the audible that they need to be reviewing. Paul asked if flicker could stand on its own as a topic of discussion. Tyler stated that he thought that audible would also be part of the setback discussion. Paul stated that based on his research that the noise issue on high frequency noise is not as much of an issue, so he suggests low frequency, then flicker and whatever we choose for those will drive the audible. Tyler asked if they would be discussing noise levels, height of towers, and setbacks at the next meeting. Chair Merlino explained that the height and setbacks are totally determined by the noise levels. Dennis stated that he didn't think they could start working on these things until after they have completed some site visits of wind farms. Jessie asked if the Committee would be discussing low frequency sound at the next meeting. Chair Merlino stated it is on the list and when they can complete it would be another

issue. Jessie stated that she needed to know what was on the agenda so she could begin doing research on these items.

Height of Towers and Setback requirements – Tabled for a future meeting.

Item 7: Items up for decisions based on Item 6.

Chair Merlino stated they would be working on the final decommissioning section from John Maloney and were in hopes to have a legal opinion on the abandonment section. Dennis suggested that the Committee work on the complaint section after that so they can get some of this completed and off of the list and to seriously consider scheduling some site visits so we will have a visual to go along with all that we have read. Dennis asked that the Committee consider looking at several different sites. John asked what our current decibel level was. Dennis stated it was 45. Jessie stated that some of what she has found in her research is that 45 is too high. She said she would continue researching in preparation of the future discussion. Becky asked that the Committee keep in mind that sounds can be louder than 45 decibels on occasion but the critical thing is when we talk about wind tower turbines the noise from them is continuous where as you know if someone is mowing their lawn you know there is an end to it –so the continual 24/7/365 days a year is where this noise issue starts to become critical. Anna Leonard, property owner on East Twitchell Pond stated that she resided in Boston and there is a large tower only a mile from their house and she hears it – not during the day when the city is awake with other noise, but at night and her neighbors hear it also. Paul stated that there would be 10 minutes at the end of the meeting for public comment. Paul agreed that the site visits should be on the next agenda so everyone could get it on their calendar. Paul stated that he would also encourage our neighbors to go for a ride and take Rt. 2 heading toward Farmington and look at those towers – they are on a ridgeline. Jessie reminded everyone that if they don't hear anything during the site visits it doesn't mean that these towers don't make sound. Paul stated that another thing the Committee hasn't touched on is how the sound impacts the environment – we haven't talked about how it affect the deer population and the others who live with us in the woods.

Item 8: Citizen/Public comments – 10 Minutes

Chair Merlino asked how many folks wanted to speak and he would divide that by the 10 minutes. Chair Merlino said they would stick to the 10 minute rule.

(The initial show of hands was at five. The audience started to comment loudly all at the same time. It is difficult to note who is saying what as they are all talking over each other)

Betsey Foster asked if the non-residents could speak as many of them are only here for a few weeks. Chair Merlino asked if the others in the audience would be willing to give up their comments to allow the others to speak. Anna Leonard asked if they would please consider extending the time allowed...seriously. Mr. Glass asked what was the big deal that this is the biggest thing to happen in Greenwood for years and 10 minutes doesn't make any sense. Anna

Leonard asked why you wouldn't want to hear from them. Mr. Glass asked why they wouldn't want to hear from them. Chair Merlino stated that it is not a question that they don't want to hear from them – which they want to hear from everyone. Rosemary McLean suggested that someone amend the 10 minutes. Anna Leonard yelled over all of the voices for the Committee to take a vote right now. Chair Merlino asked if the Committee wanted to add more time to the public comment. Paul motioned and Dennis seconded to extend the meeting an additional 15 minutes for public comments giving a total of 25 minutes for public comment. Vote 8-0. Motion passes.

Chair Merlino asked for a show of hands – 7 hands went up – each get three minutes.

Mr. Glass – East Twitchell Pond, stated that he has no professional expertise on wind turbines but since the last meeting he has done some research. Mr. Glass stated that Paul Marcolini did a great job on the presentation. Mr. Glass reminded the Committee that the absence of evidence doesn't mean there isn't any evidence. Mr. Glass explained that doing a true controlled trial is a very difficult thing to do to determine whether this is actually harmful to your health. Mr. Glass stated that he also found all kinds of literature on either side that this could be harmful or not and he thinks that is actually beside the point. Mr. Glass stated that in medicine there are real questions here, - there are cases that there is no evidence, and that things haven't been tested. Mr. Glass reminded the Committee that several years ago everyone thought it was safe to smoke cigarettes and today we all know differently. Mr. Glass stated that he thinks there are health issues but they can't define them. Mr. Glass stated that the issue is lifestyle that his family has had a camp on Twitchell Pond since 1967 and have been here a long time and they are stakeholders. Mr. Glass stated that he doesn't know if the towers will make him die sooner or make his kids crazy, but there are enough unanswered questions and we have a beautiful environment and these people want to buy it from us. How valuable is it. Mr. Glass stated that he thinks it is valuable to many people and that is why they are all here. Mr. Glass stated he realizes he is a summer resident, that he isn't here all year and he can't vote but this place is very important to him since he was 10 years old. Mr. Glass stated that unless the questions are answered and we understand that there a people all around the world with health issues related to wind...that these people are spending millions and millions of dollars to put up the towers and they won't be turning them off if we ask them. Mr. Glass stated that in two years he will be in court and they still wouldn't have turned them off. Mr. Glass stated that before the Committee makes any decision here they need to really, really, really realize what we have here is so valuable and you're going to sell it and he doesn't think there is a price you could put on it.

Mr. Stanley Leonard – East Twitchell Pond, stated that he had been researching this for the last 36 hours. Mr. Leonard stated that he disagreed with Paul that noise was just a small portion that it not just a small portion. Mr. Leonard stated that he had reviewed the Woodstock Ordinance and had copies of the complaints filed with the Town. Mr. Leonard said he was saddened to read about the family who had summered there for over 40 years on Shagg Pond and is selling out and the reason why they are selling out is because of headaches, lack of sleep, sleep deprivation, etc. Mr. Leonard stated that places are kicking wind towers out – Germany, Sweden, Finland, Japan, Denmark, and Australia. Mr. Leonard stated that he found recent current studies and he will bring it back to their noise meeting. Jessie asked that he email these to Kim so she can get them out to the Committee that these concerns are valid. Mr. Leonard read aloud the opening

statement from the Site Plan Review Ordinance the purpose of this ordinance is to protect the health and safety of its residents and taxpayers of the Town of Greenwood. Mr. Leonard stated that he felt that the Town had done a great job so far – no jet skis allowed on the ponds and you have fireworks under control but this wind tower stuff is scary. He stated that the concerns are worldwide not just in Greenwood. Mr. Leonard said he had known sooner he would have been at the first meeting. Mr. Leonard said he is scared as he had planned on staying here in Greenwood and we are ready to renovate our house but if wind towers come we will be selling. Mr. Leonard says he knows many people on this Committee that he fully trusts so you are all doing the right thing and asking questions and educating yourselves. Chair Merlino explained that at their very first meeting we were determined to be transparent and thorough and if 180 days isn't enough the Selectboard has the option to issue an extension.

Anna Leonard asked why are as taxpayers are they just finding out about it last week. Chair Merlino stated if they got the local newspaper you would have known.

Mrs. Perham asked if the company purchased this land. Chair Merlino said there is no application for wind towers before the Planning Board and that Calpine has leased land from Weyerhaeuser. Becky explained that Calpine has a met test tower installed. Mrs. Perham asked why would the Town want wind towers..what was it going to do for the Town financially. Tyler suggested that Mrs. Perham contact the Woodstock Town Office to see how they were impacted financially from the wind project in their town. Dennis stated that he had spoken to the Woodstock Town Manager the other day and Vern told him that without Patriot Energy and if they had maintained their level of spending they would not have been able to get a lot of infrastructure projects done and if they had completed the projects without the increased tax base from Patriot Energy the tax bills would have increased 25%. Dennis stated that the monies that Woodstock received from Patriot Energy has allowed them to spend funds on infrastructure and were able to maintain the tax rates. Jessie asked what Calpine was offering the Town of Greenwood per tower. Chair Merlino stated that the Selectmen had deferred that discussion to allow the Ordinance Review Committee time to deliberate.

Bob Marrano, camp owner on South Pond. Mr. Marrano stated that he had read about this in the Bethel Citizen but had no idea where the towers were going to be located so he went to the Town Office and looked at the maps. He stated that he agreed with Stan Leonard's comments and he understands that they have a job to do and an ordinance needs updating. Mr. Marrano stated that he felt that the Ordinance was in place to protect the Town and the residents and is a buffer between them and the developers. Mr. Marrano asked the committee to keep in mind that they are no voting residents who are the largest group of taxpayers for the Town and asked that Committee keep in mind that the ordinance needs to be written to protect the taxpayers and residents of the Town and if the business doesn't like it they will go somewhere else. Jim St. Germain stated that is the whole idea of having this committee. Mr. Marrano asked about the noise part, this is talking about an area that is surrounded by water and is the committee going to be studying reflection and audible and low frequency sound. Paul stated that the terrain here leaves for some variance of what you would find in other places. Jessie stated that residents on Shagg Pond and Concord Pond are impacted by the Towers so there is evidence.

Dennis stated that the wind regulations is just one small part of the Site Plan Review Ordinance and there are components that aren't reflected in this section of the ordinance but are in other sections of the SPR Ordinance.

Paul (?) Twitchell Pond resident commended the committee for their work on decommissioning and abandonment as he frequently drives past old towers that haven't been operational for years and the current salvage value isn't enough to cover the costs to take them down. Chair Merlino stated that this is why they need to do the bond.

Kathy Lane, Albany resident thanked Paul for his presentation. Ms. Lane stated that the audible and noise issues are very individual dependent of what their auditory system can pick up and the fact that annoyance is the primary cause of all of these complaints is because annoyance isn't like someone is just poking you a few times this is like mosquito in your ear that never goes away. She stated that the ordinance should protect residents because we don't know who is going to be impacted until they are exposed to it and that's not fair to anyone. She explained that if someone says they have a health issue we should pay attention to that ...some refer to cigarettes – but remember that some thought that lymes disease was nonexistent and some doctors still don't believe in it and won't even test you for it. She stated that if the Towers are put too close that you are really gambling with the residents and it is not fair to them and this consistent noise is going to be in pulses and pulsating noise is what causes people to have this annoyance factor. She stated that she would like to start throwing out some number because no one else is. She stated that she would like to see Twitchell Pond protected with a setback of two miles and if not that then from every resident.

Dave Folwer, Next Phase Energy & Calpine Rep. stated that he thought that Paul did an excellent job at the presentation and he agrees with his conclusions and with almost everything you had to say. He said he isn't saying there aren't issues – there definitely can be issues especially without proper siting. He stated that whether or not this committee comes to a conclusion on setbacks that help avoid this issue – I don't think we will avoid it 100% - if in fact we end up with a project in this Town. He explained that we are not going to avoid all of the potential issues and he guarantees that some of these people will be back in the room complaining regardless of what we come up with setbacks. Jessie asked the two mile setbacks. Mr. Fowler answered yes and if we have a two mile setback it kills the project. Mr. Fowler stated that he was still here to work with the Town and he hopes that we can come up with a compromise that works for both parties. Mr. Fowler stated that he would like to remind everyone on the committee that they did sign a Professional Fee Reimbursement Agreement with the Town and that the Committee has the ability up to \$ 10,000 to hire their own third party specialists or experts to help you solve some of these difficult and technical issues. Mr. Fowler stated that he noticed they hadn't been using that and didn't know if they had planned to but wanted to remind that was still available. He explained that the third party experts would be picked by this Committee not Calpine and they want to make sure the Town has the ability to hire these experts and to get reimbursed. Mr. Fowler stated that he wanted to speak to the decommissioning – that while removing the salvage value has a significant financial impact to the business model – it is something that they have to be prepared for the project as the State hasn't gone there yet and thinks they will in the next two to four years but they are struggling

with how do you come up with an accurate number on salvage value it is a difficult job as it fluctuates tremendously. He stated if you looked at the decommissioning plans that have been filed with the State, the ones with salvage value which to date is all of them it covers almost 80% of the decommissioning costs and by the Town removing that you know regardless of what circumstance comes up you should be covered with the bond.

Stan Leonard asked if in the future we have our 10 or 15 minutes of our public time – he doesn't consider a representative from Calpine to take up our time as residents. Dennis explained that it is a public meeting ...and he is a member of the public is will be allowed to speak. Stan said that he understood that ...so if the Calpine rep speaks for 10 minutes then we have lost 10 minutes. Dennis stated that they are already over the amended time limit. Paul stated that the time is divided by the show of hands and it is a public meeting and everyone has the right to speak.

Jessie stated if anyone has any information, any research, any comment or questions for our next meeting, please email them to Kim and she can relay it to the Committee. Jessie explained that there is a considerable amount of dialogue between all of us on our research in between meetings because there is not enough time to cover everything and your input is totally appreciated.

Mr. Glass stated that technology is getting better and better so the flicker will get better, noise level should decrease and asked if there was any place in the ordinance that if this technology did occur that the company would have to upgrade the project to includes this new technology. Chairman Merlino stated that would be extremely difficult. Mr. Glass stated that he didn't care if it was difficult. Paul explained that this was their fourth meeting and the Committee was trying to check off things as they go. Paul stated that as an example – the sound stuff presented tonight was not the end of the sound – and that he thought that was an important question so if we aren't able to give you an answer tonight it is because we haven't got that far in the process. Mr. Glass asked the Committee to consider that. Paul stated that they would. Becky stated that they would make a note of that. Jessie stated that it might not be getting better – could be just trading sound for low frequency sound.

Item 9: Set next meeting date - August 3, 2017 - 5:30pm at the Greenwood Town Office

Patriot Renewables is willing to give us a tour of their Spruce Mt. facility in Woodstock and Saddleback Ridge facility in Carthage. Their rep lives locally and can meet with us any day of the week or even early evening.

Item 10: Adjourn –

Dennis Doyon motioned and Paul Marcolini seconded to adjourn the meeting at 7:38pm.

Vote 8-0. Motion passes. Meeting adjourned.

Submissions: Town of Denmark, Wind Energy Facility Ordinance

Letter and Map from Skip & Sue Potter