

SPECIAL/WORKSHOP MEETING, TOWN OF REDFIELD, June 27, 2018

The special/workshop meeting of the Redfield Town Board was held on June 27, 2018 at the Redfield Municipal Building starting at 7:00pm. Roll call was taken and the following board members were present:

Tanya Yerdon	- Supervisor
Carla Bauer	- Councilwoman
Elaine Yerdon	- Councilwoman
Erwin Webb	- Councilman
Matthew Tompkins	- Councilman

In addition, Susan Hough -Town Clerk, Paul Pratt -Highway Superintendent, Rob Brenner - Nixon Peabody, LLP, Terry Harlander, Michael Yerdon- Code Enforcement Officer, Matt Smith – Woodwise/Camp Owner, James Cheney, John Yerdon - Dog Control Officer, Richard Palmer - Mad River Club, Jim Muscato - Young/Sommer, Walt Meisner - Avangrid, Mitch Yerdon, K. Perkins - Mad River Club, and Francis Yerdon

Pledge of the Allegiance was said.

Supervisor Tanya Yerdon called the meeting to order, this is a workshop/special meeting for the proposed Local Law #2 Wind Energy Facilities, this is for the board members to discuss, it is not a public hearing. Matt do you want to start she knows he had concerns.

CM M. Tompkins - one thing he wanted to bring up on page 15 of the draft law it mentions sound: It shall not exceed the pre-operational baseline background sound levels (L90) as defined her-in by more than 6 dBA at any location beyond a 100 meter (328 foot) radius of a wind turbine tower to protect soundscape and wildlife. Matt - Avangrid had supplied a comment on that pointing out that it's in the setback range, which means there wouldn't be a structure there or a residence or anything like that, if we're regulating within that range it kind of goes outside of what we said we wanted to do in terms of protecting neighboring property owners from sound pollution, he proposes we either remove that or change the radius to match the setback one and a half (1 1/2) times the wind turbine height.

Supervisor Tanya Yerdon - discussion on this matter from the board, she suggests we have to be consistent, obviously there's no discussion because no one understands it. CW C. Bauer she is concerned about the wildlife. CM M. Tompkins - basically he doesn't think it makes sense to regulate that within the setback. Supervisor Tanya Yerdon - what are you proposing? CM M. Tompkins either remove it or change the radius to our setback radius to one and a half (1 1/2) times the wind turbine height, there is wildlife there, 6 dBA isn't that much of a background noise increase. CW E. Yerdon and CW C. Bauer don't understand. Matt - essentially we are saying anything outside of one hundred (100) meters from the wind turbine you can't have an increase in noise of more than 6 dBA, which he thinks it's going to be really hard to do, no matter what the turbine is or how high the turbine is or how quiet it is, it's going to be really hard to do, he also thinks there are still wildlife in that area, but there aren't residents, there aren't structures, there aren't property lines, because otherwise that would violate the setback requirements which he thinks what the comment was based on, here's our one and a half (1 1/2) foot turbine height setback, and then in this little circle here we are making more stringent noise requirements between this circle and this circle, it just doesn't make sense to him. Supervisor Tanya Yerdon - read the following

Avangrid comment regarding this: This provision applies to an area inside the setback range, meaning it applies to an area where there will be no residences or other structures. CM M. Tompkins - if we change it to one and a half (1 1/2) foot turbine height, then it would apply to the area between the one and a half (1 1/2) foot turbine height and the property line. The only downside he sees to taking it out is you don't have any noise control between your setback limit and property lines, how far that's going to be he doesn't know, but as Carla pointed out there are wildlife all over the place and they are certainly affected by the sound. CW E. Yerdon - she doesn't know how any development could stay within that sound level it must be louder than that when they are cutting down trees, it's a working forest, plus that's not twenty-four (24) hour a day, but there are a lot of snowmobiles, which the wildlife must be kind of use to. Supervisor T. Yerdon - so let's put in there one and a half (1 1/2) times the height so it matches it. CM M. Tompkins - So we're saying background increase of no more than 6dBA anywhere outside that setback - we would change it instead of being a four hundred (400) meter radius - it would be a radius of one and a half (1 1/2) times the height of the tower. CW E. Yerdon - so basically just remove the one hundred (100) meter. CM M. Tompkins - his proposal would be to redefine that radius as one and a half (1 1/2) times the tower height - rather than a set number.

The board members agree all in favor to **change** the following on page 15:

It shall not exceed the pre-operational baseline background sound levels (L90) as defined here-in by more than 6 dBA at any location beyond 100 meter (328 foot) radius of a wind turbine tower to protect soundscape and wildlife.

Change to:

It shall not exceed the pre-operational baseline background sound levels (L90) as defined here-in by more than 6 dBA at any location beyond a radius of one and a half times the tower height.

Jim Muscato - he knows it's not a public hearing but would it be worth for the board for efficiency for them to just explain what the consequence of that is or would you rather he wait until the public hearing, you can change it however you want - the way that change would be proposed you'll still end up with a sound standard that's less inside the property boundary than at the property boundary - because the background sound level, if the background sound level is 25 and it's a 6dBA change than you have a 31dBA background sound level at the setback and you've got a 35 at the property line, so 31 is quieter inside the property than what you would permit at the property boundary.

CM M. Tompkins - do we want to remove it all together - do we want to change our overarching sound limitations so they also have a basis on the background noise. CW E. Yerdon - are you talking about the 35dBA or what are you talking about now. CM M. Tompkins - possibly. CW E. Yerdon - you know my feeling on that. CM M. Tompkins-the publication he read last week from NYSERTA - that indicated a 6dBA increase in background noise is decent way to regulate these kinds of things - but as Jim pointed out that wouldn't be very loud here, you have noise at night time of 20 or 21 decibels it's very quiet. Supervisor Tanya Yerdon - to be truthful she doesn't know what to do. CM M. Tompkins - it's a good point though if we're regulating based on the existing background sound and an increase to that inside the property boundary - then either we shouldn't do that or we should have our regulation at the boundary be based on the same thing because otherwise it's inconsistent. Supervisor Tanya Yerdon - so she's going to ask Jim Muscato

- so in this you have pretty much requested that we take it out. Jim Muscato - right - he thinks it's just simpler that way and then whatever you pick as a standard at the property boundary than there is just one standard that you have to apply. Highway Superintendent P. Pratt - would you put it in for the one and a half (1 1/2) the tower height at that point or would you put it in for the property line. Jim Muscato - more typical would be the property boundary because the height of the turbine doesn't really have any potential impacts associated with the sound. Highway Superintendent P. Pratt - but chances are your sound level would be higher at the one and a half (1 1/2) times the height of the tower than possibly at the property line depending on how far it is away. Jim Muscato - yes most likely - that's right. CM M. Tompkins - at the last meeting he believes they were told that the taller turbines may be louder.

Jim Muscato - that's not necessarily the case - turbine models can range in sound power level regardless of the height of the tower or the length of the blade - because remember tip height doesn't affect the machine the turbine mechanism - and that's what's generating the sound - it's the tip heights that's generated by the tower height plus the blade length and so just because you have longer blades and taller towers doesn't necessarily mean they're going to have louder machines. CW E. Yerdon - why don't we just take it out. CM M. Tompkins - he is fine with taking it out. CM E. Webb - agrees to take it out. CW C. Bauer is in agreement.

The Board is now in agreement after discussion to **REMOVE** the following sentence on page 15 under Noise Impacts:

It shall not exceed the pre-operational baseline background sound levels (L90) as defined here-in by more than 6 dBA at any location beyond 100 meter (328 foot) radius of a wind turbine tower to protect soundscape and wildlife.

CW E. Yerdon - should the rest of the paragraph stay. Supervisor Tanya Yerdon and CM M. Tompkins- yes - only remove that sentence.

Supervisor Tanya Yerdon - on page 3 #14 and # 27 are the same:

#14 Construction of industrial wind energy facilities can create traffic problems and damage local roads.

#27 Construction of Wind Energy Facilities can create traffic problems and can cause damage to local roads and infrastructure.

The board members agree all in favor to **REMOVE**

#14 Construction of industrial wind energy facilities can create traffic problems and damage local roads.

Supervisor Tanya Yerdon - heights of the towers - on page 17 - TYPE -WEF 100 Kw or more / SETBACK - 1.5 feet for every foot of tower/ MAXIMUM HEIGHT - 500 feet

She has looked at many laws - ones that were given to her from Mr. Brenner, even ones that have been amended - they have all been at 500 feet - she may be wrong but she has not found one (1) law that has 600 feet towers. It's up for discussion. CW E. Yerdon - asked did you list a height in your PSS statement. Jim Muscato - he thinks it says up to 600 feet - he's not sure he hasn't looked at that in a while. Supervisor Tanya Yerdon - the only thing she saw in there was the preliminary simulation pictures, she didn't see it typed out anywhere - it says at 591 feet. Jim Muscato - so he

thinks the assumption was in the PSS that it was up to 600 feet - he would have to double check. Supervisor Tanya Yerdon - her concern is that of everything she has looked at - there are not a whole lot of studies out there on 600 foot towers- granted she understands - that you said you need 600 feet - and she believes the question has been asked just exactly why do you need 600 feet. She's not so sure they ever got an answer on that, that's just her comment - she hasn't found anything out there with 600 foot they are all 500 feet. CW E. Yerdon - is she correct that North Carolina is the only place where there are any of that height. Jim Muscato - no - Maine has them at that height - your statement about the laws is correct he thinks what's in the area there are 600 foot turbines proposed in Pinckney, Martinsburg, and Harrisburg - those three (3) towns they don't regulate height at all and the turbines proposed in those towns are 591 feet - the only state law he's aware of the Town of Dansville has a 600 foot height limitation in their local law that's in Steuben County. Supervisor Tanya Yerdon - even the ones - she knows they're spots in Iowa that they're going to attempt the 600 foot towers - she couldn't find any data or laws or anything that pertain to a 600 foot tower. Walt Meisner - it's a relatively new technology - it's just starting to be introduced. Supervisor Tanya Yerdon - her concern is - we're talking 500 feet and you add another 100 feet that's pretty tall. CM M. Tompkins - 500 feet is already ten (10) times taller than anything in Town other than a tree. CW E. Yerdon - it's already a pretty high elevation in the area where they are going to put them isn't it. Supervisor Tanya Yerdon - yes she believes it's 1680 if you look at the topo maps. It's up for discussion - that's her thoughts - there just isn't enough data out there. CM M. Tompkins - we were told at our last meeting there's a lot of unsurety out there there's not a wealth of information being provided about them because nobody seems to know - give him a lot of pause. Jim Muscato - what data are you looking for on that - if it's wind data - he thinks they could describe that - in other words he thinks what they could show the board is the reasons why at 500 feet the wind speed difference from 500 to 600 and why 600 foot works for this project - the lower wind speeds at the of the lower heights wouldn't work - the other thing in terms of data there are safety reports typically with the issues with tower heights is fall down zone - you guys have already regulated that because it's one and a half (1 1/2) times so regardless the height of the turbine it's already going to take into consideration that height difference- in terms of certifications on the height - safety standards with respect to the height those are the things they can provide for you. Supervisor Tanya Yerdon- her other concern is - the base - she knows what it's going to take you can find the data for a 500 foot tower but for a 600 foot tower how much farther are you going to have to go in the ground - how much more concrete - how much more - that's kind of some of the things she's concerned with. Walt Meisner - that's estimated - we can give you that kind of information if that's what you're looking for, there will be designs accordingly - the depth won't be much more it's going to be ballast so it will be more concrete - it's usually maybe ten or twenty (10 or 20) percent more for that much height - he can't speak to that specifically because he hasn't looked at the designs for it. Supervisor Tanya Yerdon - for a 328 foot tower you're going fifteen to twenty (15-20) foot in the ground so if you're going to 500 to 600 foot tower. Walt Meisner - they're still probably twenty to twenty two (20-22) feet in the ground. Supervisor Tanya Yerdon - so it's going to get wider not deeper. Walt Meisner - yes obviously the footprint gets larger because the tips of blades are larger - but your foundation that area would typically be under construction regardless of what turbine because you are in that foot base of that turbine, so those are the type of questions we would be more than happy to get information for you in specifics - if that's something the board is interested in. Jim Muscato - he know they are already planning on coming to the next meeting to give you a presentation/update on things - they'd be happy to include these types of questions and be able to provide the answers to those as part of the presentation. Supervisor Tanya Yerdon - yes these have been questions that she's brought up before. CM M. Tompkins - we've been asking them since the very first public meeting that was held at the Fire Station last winter. Jim Muscato - the answer is what Walter just explained with respect to the

foundation - he doesn't know what else you would want to know beyond that - beyond the towns that height of 600 feet or the foundation sizes or the clearing widths that's information they have provided before and they would be happy to represent that. Supervisor Tanya Yerdon - so she will ask straight out - why do you need 600-foot towers? Jim Muscato - it goes to the wind speeds at the site. Walt Meisner and the tree coverage all of them factor into how the turbines can kind of convert the energy- a site like this we are finding it's quite turbulent - so the higher you go up the more consistent the wind speed becomes and more consistent your energy output can be - you go a little bit higher with a slower wind speed a bigger wind blade - or rotor diameter - by combining the two (2) of those you get a more viable option - you also generation wise the bigger turbines are generally bigger outputs so they would be able to put less turbines out. Supervisor Tanya Yerdon - right but that doesn't necessarily. Walt Meisner - they're independent - those are independent conversations but the reality is the first is most likely the dictating on the site. Jim Muscato - to the point where it's not just a minor inconvenience - it's to the point that the wind speeds at 500 feet or at 490 or whatever it would be - they wouldn't be enough or may not be enough to sustain the project because it's not affluent resource, that's generally the trend in the technology over the last decade - where Maple Ridge was built with 400 foot turbines because at the time with the wind speeds they were able to build that project but now the turbine technologies allow developers to access lower wind speed sites and this is a good example of that. CW E. Yerdon - so you're saying obviously if you put more at 500 feet it won't help, if you add more turbines at 500 feet it's not going to help because the wind speeds are at 600 feet. Walt Meisner - he can't say definitely but yes the general the concept we have to be at a higher height to make the winds be accurate. Highway Superintendent P. Pratt - have you done any studies at that height here? Walt Meisner - we have nine (9) MET towers out there now - they're 60 and maybe one or two (1 or 2) a hundred - he thinks they're 80 meter towers - so you basically it's all scaled out, so they project that out, and there's a couple lidar that give you the higher estimations. CW C. Bauer - so they're not 600 foot high - they're not giving you that wind speed that you're projecting. Walt Meisner - no you calculate out, based on the different levels they can calculate the sheer and then there's a lidar that basically can capture the wind speeds at the 600 feet. Jim Muscato - that's because it's a laser that goes up and measures the wind speed coming up and across at a higher height. Walt Meisner - he's not sure of the technology works but it's a major projection - then they correlate the two they correlate what they do measure and the laser capture and they can calculate the difference. CM M. Tompkins - so your proposed site is at one of the highest points in this part of the state - but your turbines need to be a hundred (100) foot higher than any of the turbines around here in order to get to the wind, that's what you're telling us.

Jim Muscato - doesn't know the elevation off the top of his head. Supervisor Tanya Yerdon - if you look at the topo map 1680 that is one of the top site. Jim Muscato - he doesn't know what that compares too, he doesn't know what the topo is up at the Tug Hill, if that's from an elevation stand point. Supervisor Tanya Yerdon - it's one of the highest points that there is. Jim Muscato - ground topography can be very deceiving with respect to wind speeds because topography doesn't always correlate to the windiest locations, sometimes you have a flat plateau that's just a higher elevation. Walt Meisner- it's much more complex than he can even begin to explain - but at some point it's the surrounding areas, how the wind approaches, the edge of a lake might be better wind than if it's all treed - so there are a million factors that goes into this- he thinks is what they have proposed is a 591 because that makes if viable -so the sustained wind speed could also be a factor - it might be slightly lower here than it would be somewhere else, so it's not elevation or topography. Supervisor Tanya Yerdon - so do you want to wait, do you want to wait until you see their presentation. CM M. Tompkins - as we have said before this is one proposed wind project in our town and our law needs to kind of legislate all wind projects in the town so it might be educational but it can't necessarily sway what we want to do because we also need to be prepared to further

development down the road - he thanks them for the information- it's helpful - he understands for you guys it's not necessarily the topography doesn't make that much of a difference, for us it does because you're 600 to 700 feet higher than we are down on this part of the town and then you're 600 feet higher than that with your turbine blades so it's considerable. Jim Muscato and Walt Meisner both stated they have the visuals. CM M. Tompkins- we've seen those. Walt Meisner - the concern that you are stating he understands that. CW E. Yerdon - it's a lot higher than trees, that's what she is thinking, how can you not see them. Walt Meisner - we can run additional visuals if that helps the board - as Jim has already stated any of these questions if at some point more information would help you make your decisions we are more than happy to, in the lines of what you are stating as in regards to the potential other proposed projects in the town, he thinks that could be addressed through like a wind overlay zoning or something like that verses regulating a specific technical aspect - he would maybe suggest that - having said these areas we can have wind development - these area we wouldn't want wind development, as probably being more pragmatic to that concern. Jim Muscato - obviously even aside from the zoning limitations that you've imposed - the technologic limitations that we are talking about are going to be a practical impediment to the issue you are concerned about Matt - in terms of potential future projects in other areas of the town. Supervisor Tanya Yerdon - so what do you want to do? CM M. Tompkins - can we pause on page 17 under the table - b. No WEF wind turbine shall be permitted to be within five (5) miles of any operating or proposed radar facility (NEXRAD, military, commercial, etc.). This sentence should be removed.

Board agreed to **REMOVE**

b. No WEF wind turbine shall be permitted to be within five (5) miles of any operating or proposed radar facility (NEXRAD, military, commercial, etc.).

TC S. Hough - are we tabling the Height restriction for now? Supervisor Tanya Yerdon - yes for now. CW E. Yerdon - we are going to have to make a decision sooner or later - we can't keep making versions and versions because if we change basic stuff we are going to have to have another public hearing, so we've got to start making some decisions - we can't keep going on. CW C. Bauer - would like to get this done tonight. Supervisor Tanya Yerdon - what's your ideas on it - going from 500 to 600. CW E. Yerdon - well she's said before she doesn't want more towers, but from what she's hearing since that time she guesses that isn't really going to matter, they can't say whether it will or it won't make more or less towers. Supervisor Tanya Yerdon - yes there's nothing in writing that states if you go with this, it's all going to depend on the MET towers data. CW E. Yerdon - so from what you've told her and what she's read there are no other laws in this vicinity that have any more than 500 feet - she guesses we should stay at 500 feet - that's hopefully not a band but it's hard to know - it's hard to know what the Public Service Commission will say about this, that's why it's difficult to make this decision. CW C. Bauer is in favor of the 500 feet. CM E. Webb - they are going to be seen that's for sure - another 100 foot will make it uglier. CW C. Bauer - everything she has read has been 500 feet. CM M. Tompkins - it's in general conformance with the other towns around us. Rob Brenner - from a landowner perspective - from their perspective - in a way he totally agrees with what you are saying, we want to limit the number of towers on site while allowing the company to reach the desired megawatt output - he's wondering if there can maybe if your attorneys are given the opportunity - he's wondering if there's a provision that could be crafted that allows turbine of the taller height in exchange for a reduced number of facilities on site and there's a little bit of interplay between those two things, he can envision in his mind a provision that would work, that would say at 500 feet you can construct up to X number of

facilities to reach a certain megawatt capacity but with an increased height you can only have this many tower, there could be a provision that can be prepared to address that concern because from their prospective we want them to be able to build their project but have the least number of facilities on site as possible. Supervisor Tanya Yerdon - she hasn't seen anything like that in any of the laws - something that to say to have those specifics in it, not that we would copy another law, but she means that's the only way. Rob Brenner - he can prepare something and send it to your attorneys to look at or to you Supervisor to look at and share with the town board, he can craft something for you to at least consider or discuss at a public hearing. Supervisor Tanya Yerdon - thank you Rob, Walter so at the 600 foot height - she knows there's - you guys keep telling her you haven't made a decision - what is the megawatts obviously the old ones were 2.65- they go up to 4.8 now or whatever - what are you looking at? Walt Meisner - they would be looking at 591 is a Vestas 150 he thinks the output is 4 or 4.2, that would be a general base case, that's probably what's in the visuals, the visuals would be an indication for what they would consider. Supervisor Tanya Yerdon - right - the visuals are all fine and dandy - but. Note from the Town Clerk: FIRE ALARM went off at 7:46pm - a structure fire the following Firemen exited the meeting CM M. Tompkins, Mitch Yerdon, John Yerdon and Terry Harlander. Supervisor Tanya Yerdon - you put in your PSS - you're going with the 350 total for the whole project - right. Walt Meisner - yes that's maximum as well, they will be under that, he's pretty confident. CW E. Yerdon - its eighty eight (88) total right. Supervisor Tanya Yerdon -yes that's what was in the PSS, do you actually think you are going to do the full eighty eight (88) to meet that - she's just asking general questions here. Walt Meisner - it's really hard to know this early on - he would never want to back them into a corner, he would say its general practice is we design something very roughly in the beginning and it usually gets scaled back, that's his experience in the business and so that you generally don't end up building what you initially proposed, that's just his experience. Jim Muscato - and that's also in part a function of the Article 10 process, you have three (3) years from now when the projects going into the final design phase things are going to be somewhat different in terms of the configuration then what they are proposed at this early stage. Walt Meisner - we can't go over that. Jim Muscato - so it would, so it's only going to come down in terms of the megawatts and the number of turbines. Supervisor Tanya Yerdon - she understands your concern with the public hearing and everything - but a part of her wants to stick at the 500 foot but there's a part of her that wants to see your presentation and she wants to see the base and she wants to see the data on it, she just wants to see it. CW E. Yerdon - is worried about Supervisor Tanya Yerdon not being here. Supervisor Tanya Yerdon - stated she will be here, she will be here on the 10th, she will be here no matter what. CW E. Yerdon - you are our information girl, she doesn't want to rush into anything but she doesn't want to continue, continue, continue making little changes, like with the zoning little change and then we had to redo it. Walt Meisner - Supervisor if at some point there's a scheduling conflict just let us know they can make other arrangements. There was discussion regarding scheduling another meeting. Supervisor Tanya Yerdon - she will be here the 10th no matter what. CW E. Yerdon - she certainly wants to be totally informed before she passes something, she would rather pass something that's a benefit not a restraint because that's not their intent. Supervisor Tanya Yerdon excused herself for a brief time. The rest of the board discussed an earlier meeting that would allow Supervisor to attend and would allow Avangrid to have time to put their presentation together. Rob Brenner - you can have a special meeting for their presentation and you only have to publish it or notice it - the law says as early as reasonably practical. CW C. Bauer - so she can leave - that is what she is worried about. Jim Muscato - do you mean earlier in the day on the 10th. CW E. Yerdon stated no we mean like days earlier, a week earlier. Jim Muscato - yes then what Rob said is yes you could do it early. CW E. Yerdon - but could you be ready like next week- would your presentation be ready. Jim Muscato - yes we will. Walter Meisner - yes

we can we will. TC S. Hough - thinks we have to do that - because she thinks the 10th is too late, it's too long. CW E. Yerdon - we have the website - where we can post on.

Supervisor Tanya Yerdon returned to the meeting. There was discussion regarding the date and time for a special meeting for the wind law and Avangrid presentation. Jim Muscato - we definitely want to accommodate your schedule on this, so we appreciate being able to do that, the only thing he's thinking is in terms of the information we provide, we can provide everything it just won't be the simulations that we were going to do, he doesn't think they will have the time to generate those, but everything else that we've talked about tonight we will have there.

Resolution 18-68

Motion was made by Carla Bauer and seconded by Erwin Webb to authorize Town Clerk to advertise a Special Meeting/Workshop on Monday, July 2, 2018 at 7:00pm at the Redfield Municipal Building located at 4380 County Route 17, Redfield, NY. 13437. The purpose of this meeting, Avangrid will do a presentation regarding the Wind Project, to review proposed Local Law #2 Wind Energy Facilities and any other business that might come before the board.

ADOPTED Ayes 4 T. Yerdon, E. Yerdon, E. Webb, C. Bauer
Nays 0

Supervisor Tanya Yerdon - the other big thing is the 35dBAs, so that's up for discussion, she did notice the ones that Mr. Brenner provided to them, a lot of them amended and it went up, most of those went up to 50dBA, the surrounding towns it's gone from 45 at certain times of the day. So Walter in your presentation do you want to touch on that. Walter Meisner - he surely can.

Supervisor Tanya Yerdon - in the area - Parishville from 7am to 7pm they shall not exceed 45dBA, from 7pm to 7am shall not exceed 35dBA, she's just giving some examples. Jim Muscato - that's a location where the wind project is not going forward. Supervisor Tanya Yerdon - it's not on the chart so she didn't know that, most of them are at the 35dBA to 45dBA - this information is null and void. CW E. Yerdon - what about Lowville, Pinckney? Jim Muscato - they are all at 50dBA at the residence also which is a big distinction between your law which is at the property boundary. We propose 45dBA at the property boundary which would be more stringent than what Cassadaga proposed and was certified issuing the permit which was 45dBA at the residence not the property boundary, that's the most stringent standard in the State - is Cassadaga and this would be.

Supervisor Tanya Yerdon - she didn't think they had a law in place. Jim Muscato - the law was 50dBA but the Siting Board issued 45dBA. Supervisor Tanya Yerdon - she didn't think they had a law in place. Jim Muscato - yes it's the Town of Cherry Creek and the Town of Charlotte.

Supervisor Tanya Yerdon - she thought the PSC made a statement because they didn't have a law. Jim Muscato - no they have a law. Supervisor Tanya Yerdon - so the PSC lowered it to 45dBA at the residence. Jim Muscato - yes they did - that's a 45dBA LEQ, the metric that you apply to the 45dBA makes a huge difference because if it's a LA90 than that's comparing apples to oranges.

Supervisor Tanya Yerdon - there's copies of proceedings from meetings on acoustics, explains a little bit of how the dBA, LA, LEQ's. She knows this pertains to all the projects but it's hard to determine on this project because it's in an area where there really are no residence and a 600 foot tower. CW C. Bauer -but there are a lot of other things we need to take into consideration, what happens if someone else comes along and puts something else in. Supervisor Tanya Yerdon -

1. WEF Noise Impacts.

Necessary studies and a report shall be prepared by a **Qualified Independent Acoustical Consultant** showing the operational sound levels for the WEF boundaries and at property lines of proximate residences. The operating WEF sound shall not exceed 35 dBA (Leq) or 50 dBC (Leq) for more than five (5) consecutive minutes during a representative range

of operating and atmospheric conditions which includes full power operation during periods when surface winds are under 2 m/s (6/6 ft/s). Further, at no time shall the sound pressure level (measured with averaging of 0.12 seconds or less e.g. fast meter response) exceed these limits by more than 5 dB. It shall not exceed the pre-operational baseline background sound levels (L90) as defined here-in by more than 6 dBA at any location beyond a 100-meter (328 foot) radius of a wind turbine tower to protect soundscape and wildlife. Instrumentation to verify this shall meet ANSI or IEC Type 1 standards, and measurement procedures shall comply with relevant portions of ANSI S12.9, Part 3 for evaluating compliance with these regulations. The report shall include the SCADA/Power output data, hub rpm, blade angle, wind direction, nacelle yaw, and theoretical full power at the time of the testing, in spreadsheet form, with details at ten (10) minute periods or less. If post-construction noise measurements demonstrate an exceedance of any of the limits in this section, the project shall be considered to not comply. Noise mitigation shall include removing wind turbines or operating them in noise reduced operating modes sufficient to result in operating noise measurements that do not exceed the limits.

In this study they did show noise limits throughout all over the world and none of those, all of them there basis is above 35dBA, some might be 36 or 37 but nobodies at 35. CW E. Yerdon - as you know she thinks 35 is low even for that area. Supervisor Tanya Yerdon - in your comments it says the limitation as currently drafted would in essence exclude more than fifty (50) percent of the Woodwise parcel from being committed for development for the wind farm. Do you want to explain why you say fifty (50) percent of it? Jim Muscato - he thinks the fifty (50) percent was calculated - it was a look at where you could site turbines if you were applying a 35dBA standard at the property boundary, so you would have a number of interior turbines you could site, but fifty (50) percent of that boundary would be excluded because if you more the turbine close to the property boundary you would exceed the 35dBA. Jim illustrated it on a piece of paper. Supervisor Tanya Yerdon - we received a letter from Robert Rand - so in Maine there is a project in a forested area, what are there dBA's. Jim Muscato - when the projects were built he doesn't know - but there current standard is at 42 at the residence, when those projects were built the standards were higher, he doesn't think any of those projects have a 42 standard applied to them, it's projects going forward have the standard at 42. Supervisor Tanya Yerdon - she knows this is probably going to be outside your informational box, but in Oregon she knows there's one that's placed in a high elevation, of course they aren't has high, she thinks they are the 387 towers, but they've been consistent with 35, do you know anything about that one. Jim Muscato - do you know the name of the project. Supervisor Tanya Yerdon - no, but she'll know when we meet on that day, they've been operating for fifteen (15) years at the 35, so she was curious about that. Jim Muscato -the one thing he can think of - if it's a turbine that's been operating for more than fifteen (15) years, they may have residence that are two thousand (2,000) or more feet away so they may be able to comply with the 35 but maybe it just incidental to the way the project was developed, he's not aware of any operating project in the Northeast that's at 35 at the residences, definitely not in New York. Supervisor Tanya Yerdon - for example these are the laws that Mr. Brenner provided, a lot of these like she said have been amended their laws, the Town of Howard, Town of Ellensburg, Town of Clinton are all at 50dBA, there's an amended one where they went from 420 feet to 500 feet turbines. CW C. Bauer - what is the wildlife population like where some of these other towers are at 50dBA. Jim Muscato - same - the kind of mammal population in this area is going to be very consistent with the Tug Hill Plateau with Clinton County, Steuben County, across New York. CW C. Bauer - the Tug Hill Plateau this is the biggest migration territory in the area, Upstate New York, so many animals migrate to this territory. Jim Muscato - there are two (2) things you have to remember with sound

- there's the health impacts and there's standards associated with that, which any kind of report you look at the EPA has a standard of 55, OSHA has a higher standard of 60, Health Canada talks about there's a 50, 45, a 48 - the other issue with noise is annoyance and that's generally where you see the 35 or 40 or even 42 recommendations, is because of the annoyance - and the studies that are looked at impacts on wildlife are focused on health and haven't found an issue with the standards that are consistent with human health, whereas he doesn't know if they've studied the annoyance factor with deer or other wildlife, it's usually with humans, it's sleep disturbance is usually what you see. CW E. Yerdon - would think the wildlife would be more disturbed by the vibration more than the noise - is she incorrect. Jim Muscato - well that maybe but he doesn't know but with respect to vibration generally turbines don't emanate vibrations, ground borne vibrations because of the foundations so that's generally not an issue. Supervisor Tanya Yerdon - there's only two (2) places left in the East that the deer migrate and this is one of them, they go up to the top of the hill and come back down, she understands that we're not near homes - she just wants to make sure it's not detrimental to the hunting or the wildlife or anything like that. CW C. Bauer - they say the fish would react differently than a human underwater because of the decibels under water, so are the deer going to react differently because of the wind, that's a big concern of hers. Jim Muscato - all of the potential environmental impacts associated with the project, so if it is an impact - he knows you are going to say you well it's our job we want to protect it now - these environmental impacts are things that are going to have to be studied or addressed in the Article 10 proceeding too, so it is if wildlife issues are a concern from the sound standpoint or from any standpoint it's going to be something that has to be addressed in Article 10 - so some of the specific environmental impacts of the project it's just a little premature to address them in the local law, he thinks the idea would be that the law sets a standard by which even if something more stringent is required or appropriate that can come out of the Article 10 process - that's when we are going to have all of our studies and there will be more for you to see what wildlife impacts are, what other potential impacts are and to see how they're addressed. Supervisor Tanya Yerdon - so she's guessing that on the noise that Robert Rand isn't going to be one of the studies you look at - from the look on both of your faces when she said his name. Jim Muscato - well it's funny - consistent with your chart he can go through the projects with opposition that have hired experts - experts to represent them in those proceedings - and Robert Rand is involved in at least two (2) proceedings opposed to wind projects that he's aware of, that's just in New York - they typically see another guy Rick James but he's been disqualified a few times so maybe perhaps Robert Rand is a. Supervisor Tanya Yerdon - yes she spoke with Rick James - so what's thoughts on the dBA - CW E. Yerdon is in favor of 45dBA, especially at the property line, 45 is reasonable in her opinion. CM E. Webb doesn't have an opinion - Suz said he needs to get one soon. CM E. Webb - does lightening ever hit them. Jim Muscato - there are lightening protection systems - yes - the way they're grounded their electric systems are designed - obviously with such a high structure there's something that you would rather have the lightening go to that - the grounding systems, the lightening protection systems that are in themselves are able to take that. CW E. Yerdon - how do you make sure planes and helicopters and what not don't run into them. Jim Muscato - the heights of the turbines have to be submitted to FAA - and FAA reviews the locations based on coordinates and heights and flight patterns - they will make a determination as to whether or not the project possess a risk to aviation and the FAA determinations for this project wouldn't be done yet - they don't have turbine locations to submit to them. That decision is made by the FAA. CW E. Yerdon - but once they're up the actually have lights flashing? Walt Meisner - yes the FAA determines the lighting pattern - a project like this it would likely be on the outside. Supervisor Tanya Yerdon - she would consider 45dBA but wouldn't go any higher. CW E. Yerdon stated no her either she thinks 45 is her outside number. Supervisor Tanya Yerdon - how much data do you look at from other countries? Jim Muscato - a lot in terms of sound standards, in terms of the study work if its peer reviewed and the journals and it's

published and there's an ability for a critical review of it than its absolutely part of the science that's considered here. CW E. Yerdon - there are really tall ones in Germany isn't there. Supervisor Tanya Yerdon - yes it's pretty much where they started isn't it. Walter Meisner - yes. Supervisor Tanya Yerdon - in this Acoustic's '17 Boston - in the other countries they range from the low of 36dB to only three (3) of the nineteen (19) jurisdictions are above 40dB - Spain, Portugal and the Netherlands and the average is 36 at residences - this figure shows national and regional wind farm limits in two different kinds of areas - residential and other noise sensitive areas and - all other areas. Walter Meisner - the only thing he would cavy at without knowing the study or the findings this is based off from is that he knows a lot of European standards use different metrics and so it's not always apples to apples to a dBA you know standard at limit, calculation- there's a lot more in the science that typically comes in and you can't always compare apples to apples. Jim Muscato - he thinks as far as the chart goes - they can have someone look at it - for example some of these could be long term standards - so a 40dBA long term standard is not equivalent to the 45 dBA short term standard that you are talking about for your law - we can look at this and be happy to present on this on Monday. Rob Brenner - the average is gets pulled down by the France metric that's measured inside. Jim Muscato - usually with the inside standard - for whatever it's worth, the World Health Organization applies a 15dBA obviously because of the walls and windows and the sound dissipation that occurs and so if France looks like its 28 so it would be more equivalent to 43 so that's something else to keep in mind. Supervisor Tanya Yerdon - those seem to be the three big areas, the most problematic she's guessing is the height and the dBA. She did question this - in our law on page 21 WEF Construction Related Damage - it keeps saying Oswego County - she hasn't gotten an answer back on that to find out if we can say Oswego County - you've stated the Town doesn't have authority to require other entities get reimburse - but we also have a contract with Oswego County. Highway Superintendent Paul Pratt - as far as damage to their property or their roads or whatever it doesn't have anything to do with that - they own all the bridges in town and our contract is only for snow and ice removal. Supervisor Tanya Yerdon - she will need to look at that because it says Oswego County and/or Town- she tried all day to get an answer on that. Highway Superintendent Paul Pratt - you would have to have a separate road agreement with the County. Walter Meisner - yes - he apologizes he thinks after the last meeting that he was going to send a copy of the road agreement. Highway Superintendent Paul Pratt - he has a road spec that he was going to trade for. CW E. Yerdon - is the wind overlay in the zoning or just in the law, as you said we could have a wind overlay district. Jim Muscato - in the beginning of the law it mentions a wind overlay - you don't have an overlay established - you have zoning districts where wind is permitted - obviously it's permitted on this parcel - but one way to address Matt's concern would be to create an overlay - a lot of the towns Tanya was referencing with operating projects they have established an overlay. Rob Brenner - that's what we talked about at the last meeting you could do the overlay in the Zoning Law or this Law so you've got those two (2) options. Supervisor Tanya Yerdon - Lowville has an overlay - she will copy so everyone can see a sample overlay - T. Clerk made copies for board. Rob Brenner - it doesn't necessarily have to follow the zoning district lines exactly - you could draw where ever you want on the map and call it the wind overlay district. Supervisor Tanya Yerdon - that might take care of a few obstacles we have. The board thanked Walter and Jim for moving the presentation date and time to Monday.

Motion was made by Erwin Webb seconded by Carla Bauer to adjourn the meeting at 8:40pm.
ADOPTED Ayes 5 T. Yerdon, E. Yerdon, E. Webb, C. Bauer, M. Tompkins
Nays 0

The next Town of Redfield Town Board meeting will be held Tuesday, July 10, 2018 at 7:30pm.