

The Deuel County Zoning Board met on Monday December 12, 2016 at 6:30 P.M., at the Clear Lake Community Center, in Clear Lake. Those present were members Dennis Kanengieter, Gary Jaeger, George Holborn, Paul Brandt, and Mike Dahl. Also present were Attorney John Knight and Zoning Officer Jodi Theisen.

Chairman Dennis Kanengieter called the meeting to order. Motion by Paul, seconded by Dahl to approve the corrected November 21, 2016 minutes. All voted in favor and motion carried.

Motion by Dahl, seconded by Brandt, to approve the December 12, 2016 Agenda. All voted in favor and motion carried.

1. Mark & Meredith Junker petition to amend the Ordinance Section 1215 Wind Energy System (WES) requirements and to place temporary suspension on all current and future WES applications until proposed changes to the ordinance. Junker stated that they interviewed some residents from the White and Toronto area regarding the concerns about the noise, shadow flicker, and the set-backs from the nonparticipating residences. Junker stated right now the 24 wind turbines affect 4,000 acres of Deuel County which is 1% of Deuel County. The current towers have 17 rural families within 1 mile and 6 of them have complained about noise problems. Junker stated that if Deuel County gets 220 additional turbines then expecte 90,000 acres which is 22% of Deuel County would be affected. There would be about 213 rural families that could be within 1 mile and 85 would have noise problems if the 40% trend from the current towers continue. Junker stated that if Deuel County gets hundreds and hundreds of wind turbines then expect 326,000 acres which is 80% of Deuel County would be affected. There would be about 800 rural families that could be within 1 mile and 320 have would have noise problems if the 40% trend from the current towers continue. Junker suggested the following:

1. No shadow flicker on a non-participation residence or on any area within one hundred feet of a Non-Participation residence.

3. A setback of 3,280 feet from non-participation residences, and distance from participating residence shall be not less than 1,000 feet. For purpose of this section only, the term "business" does not include agricultural uses.

4. Noise level shall not exceed 35 dBA, average a –Weighted Sound pressure within 100' of Non-Participation residences.

Brandt asked Junker why the 35 dBA. Junkers stated that is the minimal distance chosen for the 3280' set back requested to achieve the full 35 dBA. You would get the fewest complaints from people suffering from noise disturbance. Brandt stated that an air conditioner on a house is 60 dBA. Junker stated that the wind towers are more of an annoying sound it is just not the loudness.

Bill Jordt, a resident of Iowa, stated that he spoke with Blaine Andera who works with the Spirit Lake Chamber of Commerce and David Kohlaase who is on the Dickinson County Zoning and Environmental Health Board, stated that no negative property values and no health problems have been reported. The school district in Plymouth County has a wind tower on the campus. Jordt stated that there is a lot of turbines across the state of Iowa and there are two big projects coming in Dickson and Emmett counties. Allan Klaprodt stated that his son has 80 acres in Brookings County and receives a \$4,500 payment for turbines however they lose more than that in production because of erosion. So it very interesting to him that Iowa farms like the turbines and he stated that there are signs in Iowa that have a turbine with a circle and a line through them. Jordt stated that farmers and land owners are still asking how they can have a turbine on their property and he hasn't noticed any signs.

A.J. Swanson, an attorney from Canton, SD for the Lake Cochrane Association, stated that he is dealing with wind farms south of Sioux Falls. Lincoln County is in the process of changing their wind ordinance. Swanson stated that Lincoln County has changed their setbacks to  $\frac{3}{4}$  mile, 40 dBA in daylight and 35 dBA in the night. Swanson stated that the Lake Cochrane Association has the same concerns, that the districts other than Ag should have larger setbacks. The board asked why the different setbacks for districts-for instance-towns and Lake Park. Swanson stated for towns for growth. For the Lake Park for the view, because of the height of the towers, and how the sound would bounce off the lake. Two mile setbacks lowers the dBA by 10, so distance is an important factor.

Tyler Wilhelm and Clay Carmeron from NextEra, a Wind Company, have been active in Deuel County, Grant, and Codington the last couple of years to sign up property owners for leases for their project. Their project is Crowned Ridge Wind LLC. They own & operate their projects. They are involved in wind, gas, nuclear, oil, and solar. They have projects in Hyde County that was built in 2003, Jerauld County that was built in 2009, and Day County that was built in 2010. The Crowned Ridge Wind LLC project would be 400 mw which would include approx. 170 GE turbines that would be 2.3 to 2.4 mw each. Wilhelm stated that 26,356 acres in Deuel County are under active agreement and they anticipate building in 2018 & 2019. Their internal setbacks are 1,400 feet from an occupied residence. They also stated that they do not exceed 50 dBA and internally their standard is 45 dBA. They don't exceed more than 30 hours of shadow flicker. NextEra had paid \$772,339 to Deuel County landowners already. Their recommendation is to have 1,400 foot setback and do not exceed 30 hours of shadow flicker and to leave the 50 dBA. Klaprodt brought up when the turbines by Toronto were being developed that the road took a beating during construction and they couldn't get a hold of anyone. Cameron stated that they have haul road agreements with the township & county and they have a person on site to help deal with these issues. Val Lundquist asked the question if they live around a wind farm and both gentleman stated no.

Mike Taylor a resident of Deuel County stated he went around Toronto area and measured the dBA. At the Hawley residence, Taylor stated that he measured 39 to 41 dBA and Carrie Hawley rated the noise a 3 on a scale from 1 to 10. At the Janes residence, Taylor stated that he measured 45 to 46 dBA and David Janes rated the noise a 5 to 6 on a scale from 1 to 10. Taylor drove 1 mile south and the dBA was at 35. Taylor asked the board to go down to these residence and hear the noise for themselves. Jaeger stated that Gary Dejong a fellow commissioner and himself went to the area on a Friday and noticed a thumping sound, a more mechanical noise. Taylor measured at his house and they were below 30 dBA and down by the beach at Lake Cochrane on a nice evening they measured below 30 dBA. Dahl questioned the dBA measurements, if that measurement picked up all the noise in the environment.

Michael Blazer, senior management of Invenergy, stated that their company has brought some professional experts to talk to the board and the public about certain issues. Micheal Hankard, an independent Acoustic Consultant, stated at a lot of the neighboring states are at 45 to 50 dBA. The trend for larger turbines and getting quieter because of the efficiency of the gear boxes and the different styles of blades. The noise comes from the blades so the company can slow them down or they could pitch the blade for day or night. He stated that if a common person measures the dBA they are picking up sound ambience which is all of the back ground sound. They can't test the dBA if the wind is more 11 mph and they have filters to help with determining the turbine from the ambience. Hankard stated if there is a complaint it might take months of research to determine the result of the dBA. Hankard also stated that he does a computer generated analysis to provide the wind company to help them place the turbines to achieve the turbines to be lower than 50 dBA.

There was a question what happens if the turbines is over the 50 dBA. Then the company would have to address that issues. They could feather the blades or slow the turbine down. The zoning board could have the turbine shut down until the project is fixed. The companies have to have a decommission abandonment agreement with the county. The company is liable to remove the turbines if they go bankrupt or the farm is decommissioned.

Angela Landeen from the South Dakota Wind Energy Association talked about the pros and cons of wind farms in South Dakota.

Dr. Mark Roberts talked to the board and public about the health issues concerning the turbines. He stated that the turbines cause more of an annoyance that health problems. They could cause stress and that could lead into other problems. However a lot of things cause stress; the human body just has to learn how to deal with stress. The term Wind Turbine Syndrome is not a true disease. It is not found in any medical books. Holborn

stated that maybe sleep deprivation might be caused by the noise and that would lead into health issues.

Angel Oeltjenbruns stated that populations don't grow around wind farms. Why is that? She stated that county should be concerned about the assets of our county so don't let them build around the county's assets.

Dennis Evenson, property owner and a Deuel County resident, stated that he is for the wind towers and leaving the setback the same. Also it is a supplementary income for the Ag producers. The farmers are farming the wind just like they farm the ground. The Ag District is for ag development just like the Lake Park District is for lake area and development and the Municipality are more urban development. That is why we have different districts and ordinances for different developments.

Jeff Collins stated that they don't want to kill the wind development. They would like to work with them to come up to an agreement of setbacks and noise control. He quoted that the regulations are intended to preserve and protect existing property uses and values against adverse or unharmonious adjacent uses by zoning all unincorporated land except those area when joint zoning jurisdictions have been granted to municipality.

2. Kanengieter called the meeting and stated that the next meeting will be on January 9, 2017 and the board plans on making a decision then.

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Jodi Theisen  
Zoning Officer

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Dennis Kanengieter  
Chairman, Zoning Board