

## **THE TOWN OF UNION, Rock County, Wisconsin LARGE WIND ORDINANCE: History and Content**

Step by step documentation of the creation of this ordinance based on public record.  
The ordinance was adopted in November of 2008

Source: Town of Union Website

<http://www.tn.union.wi.gov/county/app/public?COMMAND=gov.wi.county.view.command.LoadCountyHome&countyName=Union>

### **Jurisdiction**

#### **ju·ris·dic·tion**

- 1: the power, right, or authority to interpret and apply the law
- 2 a: the authority of a sovereign power to govern or legislate b: the power or right to exercise authority : control
- 3: the limits or territory within which authority may be exercised

**In spite of what wind developers and lobbyists may tell residents and members of town and county government, the state of Wisconsin allows towns and counties to restrict and regulate wind energy systems—(commonly known as wind farms) for reasons of human health and safety.**

If a township or county chooses to do this, the state also allows towns and counties to declare a moratorium on all aspects of wind energy systems construction in order to give the township or county time to work on creating a wind ordinance.

(per Page 37 of PDF of Wisconsin State Municipal law 66.0401)

Here is a step by step look how the Town of Union created their large wind ordinance.  
(Source: Town of Union Minutes April 2007- November 2008)

#### **April 26 2007**

A wind developer tells the Town of Union Plan and Zoning commissioners his company is looking for a wind turbine site in the town of Union.

A representative of the utility, Wisconsin Public Power Inc. tells the commissioners of the relationship WPPI has already established with the wind developer.

The P&Z Chairman A. F. says the Commission will have to look at an ordinance to handle commercial and personal wind turbines in order to address concerns such as turbine fall zone, height, footings, insurance and other health and safety issues.

Commissioner K.G. moves to postpone further discussion on this until the next meeting to provide time for members to review literature provided this evening.

There is discussion about writing a draft of an ordinance prior to the next meeting.

Commissioner M.E. says he will call the Wisconsin Department of Administration (DOA) regarding single wind turbine ordinance language.

Motion approved by unanimous voice vote.

**May 31, 2007**

Commissioner M.E. states he's been in contact with town residents regarding an ordinance on wind energy.

Commissioner K.G. reads from State Statute Subchapter IV Regulation 66.0401 regarding the state's narrowing the town's discretion over denying wind towers to only health and safety issues.

Chairman A.F. opens the meeting to public comment with 3 minute limit per person.

Chairman A.F. also says he has been approached by the wind developer to have a wind generator installed on his property.

A resident asks if the Plan Commission has read the Town of Lincoln report.

[Note: The Town of Lincoln Report includes the results of a survey meant to assess the impacts of the 22 turbines which went online in June, 1999 in the Town of Lincoln, WI.

In 2001 a survey was sent out to all property owners residing in Lincoln township. Each household received one vote. The results were presented on July 2, 2001, to the town board, two years after the wind factory construction. The survey included questions about

- a. Shadows from the blades
- b. TV reception
- c. Blinking lights from on top of the towers
- d. Noise
- e. Other problems
  - increased lightning strikes
  - hazardous traffic conditions during and after construction
  - being awoken by sound of wind turbines
  - how close would you consider buying or building a home?

Wind developers (WPSC)'s buyout offers

Property values

Stray Voltage

Download the full Town of Lincoln Final Report by clicking [here](#)]

A few of the Union P&Z Commissioners said they had read the survey. The resident urged the others to read it. He noted damage to aquifers and problems with stray voltage as well as concerns about maintenance.

Another resident emphasized the town's ability to make a wind tower ordinance as strict as they want regarding health and safety.

The wind developer told the town the Lincoln Study was ten years old. He recommended visiting a website that promoted wind farms, and said had a study by the Public Service Commission that he was willing to share. [Note: the developer is mistaken here, as the survey was six years old at the time of this meeting]

A resident in a neighboring township who has signed a deal with the wind developer to host a met tower on her land says she's done research and spoken to people living near wind turbines and found favorable response.

The representative for WPPI stated that turbine related trouble in Lincoln Township is an anomaly and much improvement has been made in wind towers since.

P&Z Commissioner M.E. asked what would be the ramifications to the township for not having an ordinance on the books.

The Town's Attorney said he would have to research this issue before giving a final opinion.

The wind developer said with the size project proposed, they do not have to seek PSC approval nor are they legally required to complete an environmental impact study.

Commissioner D.Z. asked if the town could require an environmental impact study.

The wind developer was asked how many wind turbines are being proposed for the town of Union. He stated three to five.

Commissioner M.E. asked if the town could explore enacting a moratorium against building wind towers.

The Town's Attorney said he needed to check on the possibility of doing this.

Commissioner M.J. moved to recommend to the town board to seek legal council to review whether or not the Town can enact a moratorium on large scale wind turbines pending further review and development of regulations. Motion approved by unanimous voice vote.

JUNE 7 2007

At the regular town of Union meeting, it was stated a moratorium on large wind generation can be enacted so that an ordinance can be developed without pressure of applications. Motion by Town Chairman K.S. to have the attorney draft a large wind generation moratorium language.

Motion passed by unanimous voice vote.

**June 28, 2007**

**Resolution adopting Moratorium on Large Wind Energy Systems**

Town's Attorney distributed copies of the proposed ordinance.

A key issue he brought to attention was the short duration of this ordinance. This ordinance would end August 9, 2007 which allows the Town Board to hold public hearings and adopt a more formal ordinance which has a better estimate of a length of time needed to complete a revision to the zoning ordinance regarding the health and safety issues associated with installations of large wind energy systems. There will be Class two notices for meetings of the Plan Commission (July 26, 2007) and the Town Board. (August 2, 2007) Motion by Town Chairman to accept ordinance 2007-01 as

prepared by the Town's attorney to put a temporary stay until a stay can be established with the public hearing process. Motion approved by unanimous roll call vote.

## JUNE 28 2007

Plan and Zoning Chairman A.F. recuses himself. He states a conflict of interest. [Note: This is because he is considering an offer by the developer to place a wind turbine on his land.]

Vice-Chair D.Z. becomes acting chairman.

The Towns attorney asks the Commission to prepare to provide:

1. An estimate of how long it will take to create a wind ordinance.
2. The extent to which the township should have in place a further stay [moratorium] on tower construction.
3. What type of process to follow in creating the ordinance, i.e., informational meetings, research, public input, business input, etc.

He also asks the Commission to educate themselves on what rights they have in governing control over wind construction.

Commissioner M.E. asks about creating a separate committee to collect information. They need to find out: What are the issues, what do we need to consider about the issues, and how long will it take?

Discussion on an Ordinance for Wind Powered Electrical Generation Equipment.  
No additional discussion was had on this issue as the Town Board already passed an ordinance staying construction of large wind towers. A public hearing regarding the process of developing an ordinance will be held at the July 26, 2007 Plan Commission meeting and another public hearing at the Town Board meeting on August 2, 2007.

## JULY 26 2007

Public Hearing for the proposed extended stay on construction of Large Wind Energy Systems to give Town time to develop permanent regulations relating to the construction of Large Wind Energy Systems.

Chairman A.F. removes himself, due to conflict of interest. [Note: He is considering an offer from the wind developer to host a turbine on his land.]

Vice-Chair D.Z. explains the purpose of the hearing and asks all questions and comments be addressed to the vice-chairman.

Public Hearing Opened 7:55 p.m.

Representative of the utility, WPPI, presents an overview of the state requirements regarding renewable energy. Recommends adoption of an existing ordinance developed by another township/municipality, to save time for the board.

Wind Developer also asks town to adopt an existing ordinance, and suggests adding specific conditions as needed to address specific concerns.

Resident #1 feels the Town should write their own ordinance, and review health & safety concerns. The Town should not rush into something that impacts everyone's future.

(Former) Resident #2 says the Town should take all the time it needs to review this issue. Locally impacted residents should be taken into consideration and input sought in this issue.

Resident #3 .: Feels the Town should look at other ordinances, learn from what other towns and municipalities have done, and do research on the issue.

Resident #4: says the Town should take as much time as needed to develop ordinances specific to this area. Other ordinances used by other towns are not specific to this area/land. Subcommittee should be formed to review this issue, as it will have a large impact on health/safety of residents.

Resident #5 wants lengthy stay, says the Town has no full time staff to devote to issue. The issue needs research and other sites should be visited. Wants Town chairman to appoint citizen committee to review issue, propose ordinances. Says, there are long term effects of these decisions.

Resident #6: Agrees with comments of others. Issue is complex; she has been compiling ordinances and likes idea of committee. Feels at least a year is needed for research, etc before any decisions are made.

Resident #7 Just heard about this issue, and is unhappy with the idea that wind turbines could be placed next to her land that she has worked hard to obtain. Feels the whole issue needs further review.

Resident #8 Feels wind turbines will dominate the landscape, and negatively affect property values.

Resident #9: Agrees with her neighbors. Wants to make sure everyone is fully aware of how this will affect our area.

Resident #10: Feels moratorium should be extended at least 18 months. A committee should be formed and participants chosen by Plan Commission.

Resident #11: Supports neighbors' comments, but need to keep in mind the state law which mandates renewable energy and the reason the Wind Developer is looking at these sites. Feels the Town should look at other ordinances to see what else has been done.

Resident #12: Agrees with all comments, feels the Town needs to take time as it has done with all other issues and fully research this issue.

Public Hearing Closed at 8:09 p.m.

Town's Attorney provides draft ordinance and comments; recommended adopting it with changes outlined in memo. Noted that the moratorium must be as legally defensible as possible, and the timeline must be appropriate and defensible.

Recommended making the duration as short as possible considering the work to be done, and making a reasonable effort to get it done in time.

Commissioner M.E. states he likes idea of citizen committee, it allows for public input, and could perhaps include Plan Commission members as well.

Commissioner K.G. recommended the Plan Commission handle development of ordinance, as members have committed a lot of time and energy thus far on this issue, and can accomplish it in a shorter timeframe and are relatively unbiased.

Commissioner M.J. agrees, feels the Plan Commission should write ordinance with public input.

Commissioner M.E. wants clarification on who will actually do the work/writing?

Commissioner K.G. feels the Town attorney should actually write the ordinance.

Commissioner M.E. feels strongly that public should be included, as they are willing to help & participate.

Town's Attorney outlines the stages identified in the ordinance:

- basic investigation;
- identify issues & solutions
- drafting ordinance stage;
- legal review;
- back to Plan Commission for review prior to recommendation to Town Board;
- public hearing.

Commissioner M.E. stresses the importance of listening to the public, getting their opinions, and the need to have public meetings.

Commissioner E.L. requested clarification, would the public would be involved at investigation stage, then scale back in next stages to Plan Commission only?

Town's Attorney states that's a possible approach, was not sure how much public input will be needed or be appropriate.

Commissioner M.E. suggests collecting information in specific areas from individuals and using that info at Plan Commission to craft ordinance.

Acting Chairman D.Z. expresses concern about how many more meetings the Plan Commission can handle, as more may be needed depending upon the process decided upon. He feels the additional resources available outside the Plan Commission are a resource that should be taken advantage of.

The Town's Attorney proposes the following process:

- Publish the scope of the process in the paper/on Town of Union website.
- Town Board develops a citizen committee to research the issue and present a report to the Plan Commission.
- Plan Commission meets to review the report with legal counsel.
- Legal counsel drafts ordinance, presents at Plan Commission meeting for review and finalization prior to presentation to Town Board.

- Public hearing conducted prior to presentation of ordinance to Town Board.
  - Public hearing conducted by Town Board prior to adopting ordinance.
- Timeline for above process:
- Assemble citizen committee: 1 month.
  - Research and development of ordinance by citizen committee: 5 months.
  - Plan Commission review of ordinance/work sessions/legal counsel review/public hearing: 1-3 months.
  - Suggestion by Town's attorney is to allow 12 months total for entire process to be completed.

Motion to recommend process as outlined by Town's attorney  
Motion to approve carried by a 5-1 vote.

Town's attorney says he will forward details of process to Town Clerk prior to August 2 Town Board meeting.

AUGUST 2, 2007

**Public Hearing:** Proposed extended stay on construction of Large Wind Energy Systems in the Town of Union. The purpose of an extended stay would be to give the Town time to develop permanent regulations relating to the construction of large wind energy systems.

The public hearing was opened at 7:12 pm.

Representative of utility WPPI: states that in 2005, WI Act 441 was passed mandating Wisconsin utilities derive 10% of their energy from renewable sources by 2020.

Says WPPI can assist the town in developing an ordinance in a shorter period of time and with less cost to the town by taking advantage of existing ordinances.

Agrees that the town should incorporate public input at the beginning of the ordinance development process, and incorporate the public opinions into ordinance if appropriate.

Suggests the Plan Commission draft the ordinance and have additional public hearing, resulting in a final revision within 6 months.

Stated that a citizen committee, if organized, must be unbiased and consist of individuals with different viewpoints.

Concerned that the proposed ordinance imposing an extended stay will never result in an ordinance, that the town will always be working to perfect the ordinance.

Representative of the Wind Developer, says his company supports local regulation of wind energy.

Says that there are a number of existing ordinances that can be used by the township that address the issues raised by wind energy. This approach reduces the amount of time committees devote to developing language.

Says his company has reviewed smart growth plan for the town, and feels they can assist with issues addressed in the plan such as cell towers.

He says it doesn't take 12 months to write an ordinance, as was decided at Plan Commission, if the town uses existing ordinances. Says ordinances can always be changed in the future. Feels 6 months is a realistic amount of time to develop an ordinance.

Resident #1: Says the community wants a lot of input on this issue, as the decisions made will affect the community for a long time. Communities with ordinances offered by WPPI (Verona, Springdale, Cottage Grove) are not the Town of Union and our Town has unique issues and concerns.

Resident #2: Does not feel the town should be rushed, the town needs do research on health & safety issues. Waiting 12 months will make no difference in the long run. Felt that a citizen committee should do the work in developing an ordinance.

Supervisor D.K. agrees with WPPI representative, there is no reason that other ordinances from other communities shouldn't be utilize. Feels it is a poor use of township time, money, energy to spend 12 months on an issue when its established in other ordinances that could be used here.

Commissioner M.E: says one of the ordinances provided by WPPI is in litigation at this point in time-regarding a setback issue. Citizens within the county are suing because they don't feel that the setback in the ordinance is fair. People must be included in the process, as everyone in the township is affected by it. This is the reason it would take longer than 1 month or 6 months. The intention is not to drag the issue out forever.

Resident #3.: Feels that giving ourselves 12 months to develop an ordinance doesn't mean it needs to take that long, but allows everyone to have a say as needed.

Commissioner K.G: Agrees with Supervisor D.K, feels that public input is needed but it should get done in 6 months. States that projects never get done before the deadline, so a 12 month deadline would end up being 12 months.

Resident #4: Setback will impact his property quite a bit, and he wants a say in it.

Resident #5 : Her property is located next to a proposed wind tower location; the ordinance and its outcome will affect her forever.

Resident #6: There should be no rush in developing the ordinance.

Resident #7: Felt that town's attorney laid out a good process outline at the Plan Commission meeting. If people are part of the process, they will buy into the end result.

Resident #8: Feels the process should take as long as it needs to take. Is faced with two possible wind tower sites bordering his property, and wants a say in the issue. Wonders if there a more rural place to locate the towers?

Resident #9: Stressed that the process must be done right, for current and future generations which will be affected by it.

Resident #10: Is totally against the wind towers. Feels 12 months is not an unreasonable amount of time to develop an ordinance.

Resident # 11: Feels 12 months is not too long, as some people are just learning about the issue and want time to research it. His home is in sight of a proposed wind tower site. He



wants to be sure property values don't go down, and health & safety issues are addressed.

Resident #13: Town government must protect citizens, must put personal opinions aside.

Commissioner K.G.: Wind towers have not been proposed on his property. Stated that some citizens have been researching the issue for a long time. Stresses that the state has mandated that wind energy towers be allowed. It's not town government requiring wind energy, it is the state government. Encourages people to research the issue and the laws, understand the issue.

Resident #14: says get the issue right, take the time needed. Doesn't think the town can force the companies to make changes once the towers are in place.

Representative from WPPI says they need full community support to place wind towers, and stand by their statements.

Resident # 15: Money should be spent if needed to keep the towers away from our houses, as they will be there for decades.

Commissioner M.E: says 12 month moratorium is within the law, many townships have them. Points out that the Wind Developer is biased on the issue, as much as the citizens who don't want wind towers there are biased. Thinks a citizen committee can research health and safety issues.

Stressed that the town should not assume that the ordinances provided to us by the energy companies is the best language out there. The formation of a citizens committee promotes citizen buy in.

Representative of WPPI: Clarifies that the state says 10% of energy produced by 2010 must be renewable, but is not required to be wind energy.

Public hearing closed at 7:42.

Town Chairman says he received phone calls from residents who own property on Croft Rd. One indicated that he felt the town should take as much time as needed in development of an ordinance. The other wanted an overview of the issue and where it stands.

Town's attorney states that the 30 day moratorium is due to expire August 7 or 8, and the ordinance provided would extend it for 12 months from today.

Also would add to ordinance process recommended by Plan Commission. if adopted, temporary stay is in effect for 12 months but could be lifted earlier.

Chairman K.S. asked if the intention was for Plan Commission members to be included on citizens committee.

Towns Attorney outlined that interested parties submit their names to Plan Commission, this list is then given to Town Board, who ultimately appoints committee.

Commissioner M.E. states that the Plan Commission would have the names of the recommended committee members at the September Town Board meeting.

## **Adoption of Ordinance 2007-02: An Ordinance to Impose an Extended Stay on Construction of Large Wind Energy Systems in the Town of Union**

Chairman Schneider moved to accept Ordinance 2007-02, Extended Stay on Construction of Large Wind Energy Systems in the Town of Union provided Town's attorney with an expiration date of August 13, 2008. Roll Call Vote: Motion to approve carried by a 2-1 vote.

AUGUST 30, 2007

The Town of Union Plan Commission

### **Review and Approval of July 26, 2007 Plan Commission Minutes**

#### **Public Hearing: To discuss local regulation of Large Wind Energy Systems, review Wind Energy Ordinance Development Process, and recommend citizens to be appointed by Town Board to the Citizens Advisory Committee.**

Chairman A.F. recuses himself due to conflict of interest;

Vice-Chair D.Z. explained the intention of the discussion as a hearing for the public.

Commissioner E.L. asked for a definition of "citizen" in the process outline;

Town's Attorney states that he would consider "citizen" any resident of the Town of Union, but clarified that others outside of town residents could be members of the Citizens Advisory Committee if the Plan Commission and/or Town Board so chose.

Public hearing opened at 7:08 pm.

Resident B.T. indicated interest in being a member of the Citizens Advisory Committee. Interest noted by Commission.

Resident D.L. indicated interest in being a member of the Citizens Advisory Committee. Interest noted by Commission.

Resident R. E. volunteered to participate on the Committee in the capacity of recording secretary, taking notes and recording minutes.

Resident J.B. indicated interest in being a member of the Citizens Advisory Committee. Interest noted by Commission.

Vice Chair D.Z. read the list of residents who had indicated interest in participating in the Committee:

[He reads 12 names]

Resident S.M. felt Commissioner M. E. should be a member of the Citizens Advisory Committee, due to his work thus far on researching the wind energy topic. The decision had not yet been made as to whether Plan Commission members would be a part of the Committee; ultimately the decision is up to the Plan Commission and Town Board.

Discussion regarding size of Citizen Advisory Committee. Commissioner K.G. suggested

7-9 individuals.

Town Chairman K.S. indicated one of the volunteers had recommended 5-7 members.

Wind Developer G.H. questioned whether Committee members would or should be compensated.

Resident J. B. stated those citizens whom he had spoken to felt participation on the Committee should be voluntary, and members need not be compensated for their time.

Resident R.S. recommended that engineers, other experts speak to the Committee.

Public hearing closed at 7:20 p.m.

Town Attorney outlined key issues to be decided:

-number of members on Committee;

-whom will designate committee chair, secretary – Town Board or Committee?

Commissioner M.E. felt it would be difficult for the Committee secretary to participate in the Committee and take accurate minutes, therefore that position should be additional to the base committee of 5-7 members, but should not be an active, voting member.

R.T. stressed the need for the number of members to be uneven, to avoid tie votes.

Consensus is that the Committee should be made up of seven members.

Commissioner M.E. felt the Plan Commission should recommend a chair so the committee can hit the ground running, and not spend time making that decision.

Commissioner K.G. agrees, that process has worked in the past.

Consensus is that Plan Commission will recommend to the Town Board that T.A. be appointed chair.

Consensus is Plan Commission will recommend to the Town Board that R. E. be appointed as secretary, a non-voting member.

Criteria for remaining 6 members?

Commissioner M.E. felt that it must be made clear that all members must be active participants, and Committee should have right to remove members if meetings are missed, or are otherwise not actively participating.

Regarding Plan Commission members on Citizen Advisory Committee:

Town's attorney clarified that the Citizen Advisory Committee meetings will be public meetings, and Plan Commission members can participate as members of the public.

The Committee meetings would be subject to open meeting law, notice of meetings would be given so public can attend and participate. He felt the reason for the Committee is to take the burden off the Plan Commission, but it is common to include a member of the Plan Commission or similar board, to help bridge the gap between the two groups and represent the Plan Commission.

However, it does not have to be done that way. Plan Commission member could be an ex-officio non-voting member, who must attend meetings and participate in discussions, but would have no voting rights.

What would be the mode of communication between Citizens Advisory Committee and Plan Commission?

The Town's Attorney outlined several options: the Citizens Advisory Committee could report to the Plan Commission on a monthly basis, or the Plan Commission could be made available to the Citizens Advisory Committee for questions as needed.

The Town's Attorney also noted that all Citizens Advisory Committee meeting notices should include a statement similar to: "it is possible that a quorum of Plan Commission members would be present but would not be voting on agenda items."

Commissioner M.J. felt it was important that a Plan Commission member should be on the Committee as a voting member. He too would like to see Commissioner M. E. as the Plan Commission member on the Committee, as he has done a great deal of work in this area already.

Commissioner M. E. states he would agree to represent the Plan Commission on the Committee.

Commissioner E.L. asked if commissioner M. E. would then do the reporting to the Plan Commission.

It was decided that the Committee chair would make that decision. Acting Chairman D.Z. stated that he would request that either the chair or designee report to the Plan Commission at their monthly meetings.

Commissioner M.E. suggested contacting those appointed tonight who are not here to be sure that they are interested, and can make time commitment.

It was estimated by the Plan Commission that the time commitment for Citizen Advisory Committee members would be between 15-20 hours per month.

The meeting was then opened up to statements from those citizens in attendance who wished to be a part of the Citizen Advisory Committee, describing why they feel they would be good candidates for the Committee. Following this, each member of the Plan Commission will submit 5 names and those receiving the most votes will be recommended for appointment.

Candidate J. B.: Wind turbines will personally affect him; he realizes we have to do something to create renewable energy, but wants to be sure we are doing the right thing. Has done over 100 hours of research with Candidates C.B & S. M. on this issue, and has supplied this information to the Town Chairman.

Candidate C.B.: Has already committed over 100 hours to researching this issue, wants to get the issue resolved in a timely manner. Has gone to related meetings in Magnolia and Chilton, and visited wind farms. Is committed to doing it right.

Candidate S.M.: Interested because wind turbines may be located close to him. Has visited wind farms, put in a lot of time, talked with people across the state. Knows it's a big project, but the outcome is forever and will affect everyone and therefore must be done properly.

Candidate S.P.: Proposed wind turbine sites will be close to her property and her children. Committed to putting in time required to research the issue and make good decisions.

Resident M.J. spoke for Candidate M. J who was involved in planning and development at County level for 20 years.

Candidate S.M. spoke for Candidate M. L who is an electrical engineer, lives close to a possible wind turbine site.

Candidate J. B. spoke for Candidate D.G: Both he and his wife are interested in being on committee. His wife is a research scientist, he is marine biologist. Have children, are busy and would be willing to be involved even if not as members of the Committee.

Two Candidates remove themselves from the list

Towns Attorney brings up the issue of those people appointed to the Citizens Advisory Committee being considered "local public official" according to definition in State statute.

This is due to the fact that the members are appointed to the Committee. Therefore, Committee members are required to adhere to code of ethics, including conflict of interest.

He cited an example as the Plan Commission Chairman A.F., who recuses himself from participation in meetings when wind energy is an issue, as his property is a proposed site for wind turbines.

Along these same lines, it could be conflict of interest to be on the Citizens Advisory Committee for those individuals living close to possible wind turbine sites.

The State Ethics Board states that if a public official will be affected in a way that is substantially different than other citizens, especially if monetary, there is a potential for conflict of interest. The Plan Commission should consider this when appointing Committee members.

Resident D.L. asks the Town's Attorney if the members are only being recommended at this point, is conflict of interest an issue now.

Town's Attorney explains that in many cases, it is hard for lawyers to determine conflict of interest. He doesn't have enough information about the citizens interested in participation in the Committee to make a determination on conflict of interest, but would say that if someone lives adjacent to a property potentially sited for wind energy, it is a conflict.

Commissioner M.E. clarified that no application has been made to the Town at this point regarding wind energy sites. All locations being referred to by citizens and others are speculation at this time.

Attorney Dregne stated that given that fact, there is no conflict of interest for any citizen at this time.

Recused Commissioner A.F. says that the Wind Developer has held meeting showing maps of locations of possible wind energy sites.

Commissioner M.E. says the Wind Developer has also put forth that there is no negative impact on property values related to wind energy location.

Towns Attorney clarifies that financial harm and financial gain are treated the same by the law when dealing with conflict of interest.

Commissioner E.L. felt that citizens are now educated about the issue of conflict of interest, and can remove themselves from consideration for appointment if they feel there is a conflict.

Commissioner M.E. addressed the issue of precedent: the issue of conflict of interest was not addressed when the Smart Growth Committee was formed, and there were many people involved who had possible financial impacts from the outcome of the Smart Growth Committee decisions. Asked if health and safety concerns constitute a conflict of interest,

Towns Attorney was unable to answer that question without further research.

Interested parties were given the opportunity to remove themselves from consideration. No individuals chose to remove themselves.

Resident R.S. clarified that any citizen could come to the meetings and voice opinions, do work, etc. they could, but would not have a vote.

A ballot vote was taken.

Individuals chosen.

Motion to approve the chosen individuals for recommendation to the Town Board for appointment to the Citizens Advisory Committee. Motion passed by unanimous voice vote.

Acting Chairman D.Z. made motion to create a seven member Citizens Advisory Committee, with one position being held by a Plan Commission member, plus one non voting member to perform secretary duties; recommend to Town Board to appoint T.A. as Committee Chair, R.E. as secretary, M.E. as Plan Commission representative; M.T. as alternate; Chair or designee to report to Plan Commission monthly. Motion passed by unanimous voice vote.

Next step: Town Board will review Plan Commission recommendation at their regular monthly meeting, Thursday, September 6, 2007.

SEPTEMBER 6, 2007

**Public Hearing: To discuss local regulation of Large Wind Energy Systems, review Wind Energy Ordinance Development Process, and appoint citizens to Citizens Advisory Committee.**

Chairman K.S. reviewed the recommendations from the Plan Commission.

Public hearing opened at 7:17 pm.

Resident D.L. states he would like the Board to accept the recommendations of the Plan Commission.

Public hearing closed at 7:19 p.m.

Chairman K.S. reads off names of recommended members:

Motion to approve committee members recommended by the Plan Commission made

Motion approved by unanimous voice

Chairman K.S. states the process details would be left up to the Plan Commission.

Committee Member J.B. states the members would now develop an agenda and division of duties, and have meetings twice monthly. Members of the public may attend, as well as companies such as that of the Wind Developer. Acting Committee secretary will do the postings for the group (newspaper and businesses) and Town Clerk will post to the web.

## **SEPTEMBER 15, 2007**

### **First Meeting of Union Large Wind Energy System Ordinance Study Committee 8:00 a.m. at Village Square Restaurant**

Committee member C.B. summarizes the extensive research on large wind energy systems that she, J.B. and S. M. have compiled so far.

She handed out folders of research materials for the committee to review.

She and committee member S.M. contacted an audiologist to obtain information related to health & safety noise issues connected to wind turbines.

Multiple model ordinances, from around the state and country have also been collected and can be used as examples for our work.

Members J.B., C.B. and S. M. have compiled a significant amount of research on wind turbines and they have sorted through the research to find valid information that is supported with clinical and scientific data.

Members J.B. and C.B. traveled to wind farms in Paw Paw and Mendota IL. They suggest a field trip back to the Mendota and Paw Paw wind farms to conduct further investigation and speak with neighbors and landowners.

Chairman T.A. thanked members S.M. J.B. & C.B. for their efforts.

#### **Committee Charge and Goals:**

The committee reviewed the requirements of Wis. Stat. 66.0401 and the Town Board's charge to the committee.

The Committee discussed its goals and objectives and agreed that its goal is to provide a draft ordinance to the Plan Commission with rationale/supporting documentation for standards.

C.B. has compiled a folder of ordinances drafted/adopted, as well as model ordinances.

The Committee will review them to create a base model ordinance to start from.

**Process for soliciting input:** The Committee then discussed a process for obtaining input from stakeholders such as the wind industry, citizens, landowners and others. Input solicited would be related to health & safety issues and would need to be supported by scientific research documentation.

Discussion occurred as to whether to solicit comments by letter, questionnaire or a subcommittee.

Member M.L. suggested that the committee solicit information from both sides of the issue.

Commissioner M.E. felt it was important not to assume we know who all the stakeholders are and therefore we might also want to public post our solicitation thereby reaching out to interested stakeholders the Committee may not have identified in its mailing.

J.B. and M.T. suggested soliciting comments and position data from Renew WI.

**Future Meetings:** The Committee will meet on Saturday mornings at 7:00 a.m. until further notice. The next meeting will be Saturday, September 22, 2007 at 7:00 a.m. at the Village Square Restaurant.

**Agenda for next meeting:**

- 1) Determine process for soliciting comments from stakeholders – subcommittee vs. questionnaire.
- 2) Identify issues that we want to cover in the ordinance.
- 3) Review suggested model ordinances.

**Official Record:** Recording Secretary will contact the Eager Free Public Library to set up a public document repository and official record for the Committee's research. List of research materials compiled by C.B. to be submitted to the library for the official record repository:

1. Industrial Wind Turbines – Accumulated reports concerning public health and safety
2. Wind Energy System Ordinances (Cherry Valley NY, Malone NY, Manitowoc County WI, Otsego County MI, Shawano County WI, White River MI, Trempealeau County WI, Stockbridge Township WI)
3. Catherine M. Lawton Letters regarding Town of Addison proposed wind farm.
4. Vibroacoustic Disease information.
5. Daniel D'Entremont - Noise assessment regarding Nova Scotia wind farm.
6. Wind Turbine Accident Compilation.
7. Report from the Bethany Wind Turbine Study Committee.
8. Dr. Nina Pierpont and Wind Turbine Syndrome.
9. Clinical Literature supporting Wind Turbine Syndrome.
10. Permitting Setbacks for Wind Turbines in California.
11. Testimonials .

**September 22, 2007**  
**Union Large Wind Turbine Study Committee**



Committee Name: The Committee approved that it shall be called the "Large Wind Turbine Study Committee".

**Research Update:** Member C.B. handed out a compilation of newspaper articles about large wind turbines to the Committee.

**Process for soliciting input:** The Committee reviewed the purpose for soliciting comments. Then the Committee discussed a process for obtaining input and scientific data from the wind industry and others.

It was decided that the solicitation of comments would be by direct written communication. In addition, a solicitation for data supported input will be published in the Review and on the Town of Union website.

**Identify Issues and Model Ordinance Guide:** Chairman T.A. suggested picking an ordinance as a guide and then identifying the issues to work on.

The Committee decided to start with the draft Wisconsin Model Ordinance & guide as a baseline to start from.

Recording Secretary will send out copies of the draft Wisconsin Model Ordinance and its corresponding guide to the Committee members.

**Status Report to Plan Commission:** Chairman T.A. will present a brief update to the Plan Commission at its next meeting on September 27, 2007. The committee minutes will be used as a guide for the status report.

**New Business:** Chairman T.A. asked member M.L. to start looking at electrical issues related to large wind turbines.

**Next Meeting:** The next meeting will be Saturday, September 29, 2007 at 7:30 a.m. Public notice will be posted.

Suggested Agenda for next meeting:

1. Determine comment/data solicitation letter recipients
  2. Review model ordinances
  3. Identify and assign tasks to members
- The meeting was adjourned at 9:00 a.m.

## **SEPTEMBER 27 2007**

Town of Union Plan Commission Meeting

### **Wind Turbine Study Committee Status Update**

Committee Chair T.A. presents an update of the progress the Committee has made. Draft minutes were distributed to the Commission. Chairman T.A. noted that all the information the Committee is compiling is being given to the Eager Free Public Library so the public has full access to it.

When the Committee is ready to receive information from energy companies, it will be soliciting the information in writing from said companies. At this time, the Committee is limiting the information being used to make their final recommendation to scientific facts,

statistics, studies, etc. and is not considering personal opinions.

Member M.L. has been assigned the electricity aspect of the issue.

The current plan is for the Committee to meet each week on Saturdays until such time as the frequency can be reduced. Meetings are open to everyone, and the committee would welcome the public.

### **September 29, 2007**

#### **Third meeting of Union Large Wind Turbine Study Committee Meeting called to order at 8:30 a.m. at Village Square Restaurant**

##### **Research Update:**

Member J.B. traveled to Wasco, Oregon to visit the Klondike wind farm. He showed pictures of the wind farm to the committee.

Member C.B. obtained a copy of a letter written by Attorney Glen Stoddard in response to lobbyist Mike Vickerman's recent editorial in the WI State Journal.

C. B also handed out a task list that Town of Stockbridge used for its study committee.

C.B. obtained a copy of Ben Howen's thesis cited by the Wind Developer regarding property values of properties near wind turbines and she will circulate the thesis to the Committee.

S.M. is compiling a summary of setback recommendations from various sources of Information. He found information from Beach Ridge Energy recommending a wind turbine setback of 1 mile from existing houses to eliminate problems. \

Recording Secretary contacted the Eager Free Public Library which agreed to establish the official record repository for the Committee at the Library. The recording secretary will deliver a binder to the library for Committee minutes and agendas, as well as research materials from the Committee's first meeting, for the record repository.

Recording secretary noted that the Nelesen v. Calumet County lawsuit was settled and dismissed. She will provide copies of the pleadings to Tom Alisankus for review.

##### **Process for soliciting input:**

The Committee identified recipients for a comment and data solicitation letter and survey to be sent by the Committee. Recipients identified are as follows:

Wind Developer Eco Energy  
WPPI  
WI Dept. of Administration – Energy Division  
Wisconsin Public Service Commission  
Mike Vickerman, Renew WI  
Pat Walsh, Univ. of WI  
Catherine Lawton  
Evansville Water & Light  
Invenergy  
Navitas

Accionas  
Mick Segrillow, Focus on Energy  
American Wind Energy Association  
Nina Pierpont  
Ecoustics  
Dave Stetzer (electric magnetic fields expert)  
Gordon Whitehead (sound expert)  
David D'Amato (expert electrician)  
Morse Group (electrical engineers) [note: also Parent company of EcoEnergy]  
Expert Engineer used in Door County (regarding decommissioning costs and procedures)  
Evansville Fire Chief

If the Committee thinks of additional recipients, they will email the names to recording secretary who will keep a list of recipients for the data solicitation letter.

#### **Review of Model Ordinances:**

Recording secretary compared the draft 2003 WI Model Ordinance and draft 2/7/2007 WI Model Ordinance and handed out a blacklined copy to the Committee. She reported that there appears to be a significant difference in noise measurements and requirements between the two drafts.

Member S.M. will send both WI draft model ordinances to Gordon Whitehead, a sound expert, for review. It was reported that Attorney Glen Stoddard is working on a model ordinance for towns to use.

#### **Research Assignments:**

The Committee was assigned the following areas of research to focus on:

S.M. – setbacks  
M.L. – electrical, stray voltage, electromagnetic interference  
S.P. – well/groundwater  
J.B. – sound  
C.B. – shadow flicker, ice throw, safety, decommissioning, liability  
Commissioner M.E. – financial assurance  
Recording secretary – ordinances  
R.R. – property value information

#### **New Business:**

C.B. will explore setting up a blackboard website for the Committee to post information and research materials.

Next Meeting: The next meeting will be Saturday, October 13, 2007 at 7:30 a.m. at the Village Square Restaurant. Public Notice for the October 13th meeting will be posted.

**October 13, 2007**

**Union Large Wind Turbine Study Committee meeting**

**Research Update:**

Member J.B. summarized wind data from the Magnolia met tower. [Note: The Wind developer has put up a met tower in the neighboring township of Magnolia where they are also seeking sites to place wind turbines]

**Research Questions for Questionnaire to be sent to Stakeholders:**

The Committee reviewed Town of Bethany NY Questions to Wind Developers, Appendix D.1 – Letter to Town of Stafford Answering Wind Committee Questions.

The Committee discussed research questions for a health and safety related questionnaire to be sent to stakeholders.

**New Business** - Posting of Meeting Notices: JB & CB reported what was discussed at the Town Board meeting on Oct 4th regarding publication and posting of meeting notices. They reported that the Town Attorney said the Committee is acting in compliance with the open meeting law by posting meeting notices at public places 24 hours prior to the meeting and the Committee does not have to publish the notice in the Review.

Town Chairman K.S. confirmed with J.B. that posting the meeting notice in 5 public places met the requirements of the open meetings law and that publication in the Review was not required.

**Next Meeting:** The next meeting will be Saturday, October 20, 2007.

At the next meeting the Committee should review and finalize the questionnaire to be sent to stakeholders.

**October 20, 2007**

**Union Large Wind Turbine Study Committee**

**Research Updates:**

Member S.M. received a reply from the WI Dept. of Administration (“DOA”) in response to his Open Records Request requesting any and all documents that the State used to draft the State Model Ordinance related to health and safety issues.

S.M. will summarize the information received from DOA for the next meeting. The committee discussed whether to start with the state model ordinance as a template in drafting the Town’s ordinance.

It was decided to use the state model ordinance together with other model ordinances.

Member C.B. spoke with Pat Walsh of UW-Extension and requested scientific data regarding health and safety issues. Mr. Walsh referred C.B. to the National Academy of Sciences report dated May 2007. The Town of Stockbridge adopted the report in its ordinance.

J.B. has been studying aerodynamic modulation and temperature inversion with a meteorologist.

C.B. spoke with ATC regarding the distribution lines to inquire about the distribution lines in the area.

## **Research Questions for Questionnaire to be sent to Wind Developer**

(Eco Energy):

The committee discussed a list of questions to send to the Wind Developer related to health and safety issues. The committee narrowed down the list of questions. The committee will review the revised list of questions at its next meeting.

Chairman T.A. agreed to sign the questionnaire cover letter, as chairman, and the completed questionnaire can be returned to him.

**New Business:** Recording secretary reports that M.T. (alternate committee member) and Plan Commissioner M.E. have resigned from the committee.

**Next Meeting:** The next meeting will be Saturday, October 27, 2007

At the next meeting the Committee should review and finalize the list of questions to be sent to Wind Developer EcoEnergy and determine questions to send to other stakeholders.

**October 27, 2007**

### **Union Large Wind Turbine Study Committee**

#### **Research Updates:**

Member S.M. submitted an open records request to the Wisconsin Public Service Commission and requested any documents regarding health and safety that were used to write the draft model ordinance.

S.M. informed the Committee that the PSC acknowledged receipt of his request and said it would take several weeks to receive the requested documents. S.M. will follow up with the PSC in 10 days.

Member C.B. received materials from the WI Towns Association conference on 10/23/07 concerning a presentation about wind energy ordinances and what towns can do.

Member J. B. discussed voltage flicker.

#### **Research Questions for Questionnaire to be sent to Wind Developer, Eco Energy:**

C. B. reorganized the list of questions to be sent to Wind Developer, Eco Energy and drafted a cover letter.

Member M.L. suggested questions to add to the list related to electrical health and safety issues. The committee approved the list of questions to Wind Developer with the additional questions suggested by M.L.

Chairman T.A. will finalize the cover letter and send the questions to Wind Developer Eco Energy.

#### **Research Questions for Questionnaire to be sent to utility WPPI:**

The committee discussed questions to ask WPPI regarding health and safety.

C.B. suggested reviewing the Draft Report Outline and Discussion Questions by the Coordinating Collaborative for questions. She recommended that the Committee ask for an interconnection study.

Chairman T.A. suggested looking for some successful wind turbines and find out what makes the project successful with neighbors and productive.

Member J.B. that the Burrow Valley High School turbine is considered very successful. The school turbine is 2000 feet from the school and the next nearest building is a business at 4000 feet from the turbine.

**New Business:**

Commissioner K.G. provided a copy of the Town of Casco wind energy ordinance to the committee. He also suggested that the Committee contact the Algoma Fire Department concerning equipment and training for wind turbines.

Next Meeting: The next meeting will be Saturday, November 3, 2007

At the next meeting the Committee will continue to draft a list of questions to be sent to WPPI and other stakeholders.

**November 3, 2007**

**Union Large Wind Turbine Study Committee**

**Research Updates:**

Committee member C.B. described the information and research materials that are available on the Danish Wind website. The website has a software program to calculate sound effects and shadow flicker from wind turbines. C.B. will attempt to contact Danish Wind about doing sound calculations for the Union turbine project area.

Committee members S.M and J.B. met with Representative Brett Davis on 11/2/2007. S.M. provided a summary of the meeting at which they discussed the open record request to the PSC and research used by the State to draft the state model ordinance.

Research Questions for Questionnaire to be sent to [wind developer] Eco Energy: Committee Chair will send the final questionnaire to Eco Energy next week.

Research Questions for Questionnaire to be sent to other Stakeholders: C.B provided a draft of questions for a questionnaire to send to other stakeholders such as WPPI, Evansville Water & Light, and PSC.

The Committee reviewed and modified the list of questions. Recording Secretary R.E. will update the list of questions pursuant to the Committee's comments and circulate a final version to the Committee.

T.A. will send out the questionnaire.

New Business: SM suggested that the Committee review his talking points compilation of research related to setbacks for discussion at the next meeting. He also suggested the Committee begin to review the various wind energy ordinances compiled and begin to think about what provisions the Committee would like to put into the draft Town ordinance.

**November 17, 2007**

**Large Wind Turbine Study Committee**

**Research Updates:**

Discussion regarding presentation of research materials. Member C. B. suggests preparing a journal of all of the research reviewed since May.

Member S.M. discussed the response he received from the WI PSC to his document request for research and information the state used to draft the model ordinance.

According to the PCS there are only 3 documents in their files that were utilized

- 1) Wind power wildlife;
- 2) National Wind Coordinating document
- 3) Wind Energy committee, 1997.

The PSC also stated there were 4 emails in their files that are privileged [information]

The committee reported that Member TA mailed out the research questionnaires that the committee developed.

S.M. spoke to Professor Matilsky regarding blade and ice throw. Professor Matilsky has prepared an ice and blade throw report for various areas. Discussion regarding whether to request an ice and blade throw report from Professor Matilsky which would cost approximately \$350.

Model Ordinances: The committee discussed differences among the various WI draft ordinances. Versions of the WI draft model ordinance changed between 2003, Feb. 2007 and October 2007 in noise measurements.

In the Feb. 2007 and Oct. 2007 drafts, noise levels are measured from the property line.

The 2003 draft model ordinance measures noise levels from a residence.

The committee discussed what to include in the wind ordinance.

SM has been reviewing the WI draft model wind ordinance reference guide and various ordinances. The Committee should read the ordinances compiled and be prepared to identify what to include in the town's ordinance so the committee can begin drafting a town ordinance in mid-December.

Recording Secretary R.E. prepared a summary spreadsheet of various wind ordinances that were handed out to the committee to assist with the ordinance review.

## **November 24, 2007 Union Large Wind Turbine Study Committee**

### **Research Updates:**

Member J B reported he contacted a meteorologist at UW about temperature inversion. J.B. described how noise is louder at night from wind turbines because of temperature inversion. Sound travels faster in an inversion.

Information on wind turbine noise at night is presented on the CD that member C.B. handed out at the first meeting. A study on noise from a wind farm in Canada found that the loudest wind turbine noise came from a light wind from the south and high humidity.

The committee discussed siting of met towers.

According to page 15 of the WI Model Wind Ordinance Reference Guide, Wis. stat. 66.0401 does not apply to met towers used to collect data at a potential wind energy site

because met towers do not generate electricity.

It was suggested that any met tower installed in the Town of Union should be monitored by an independent analyst. The Town should include language about monitoring met towers in the wind energy system ordinance. It should also be monitored for 2 years as suggested by Windustry.

The Committee discussed purchasing the publication titled "International Standards of Wind Turbines" for \$180.

Member J.B. handed out an article from National Wind Watch about the Crescent Ridge wind farm not living up to promises.

Discussion of Town of Casco ordinance, which has an 800' setback from property lines.

Member S.B. will contact town of Casco to get their supporting documentation.

Committee Chairman T.A. mailed the data request letters to [wind developer] Eco Energy and [utility] WPPI 2 weeks ago. He will send out Evansville Water & Light and Public Service Commission this week. TA will also send a follow up to Eco Energy and WPPI as they have not responded to the data request.

The Committee wants to send out the follow up letters certified/return receipt:

PSC Open Records Request: S.M. sent an open records request to WI Public Service Commission ("PSC") and WI Dept. of Administration ("DOA") asking them for any documents that they used related to health and safety to draft the WI model ordinance.

DOA said they didn't have anything. PSC said they had some emails with some attachments that they refused to provide.

The PSC also has 60 pages of minutes, which they will provide for a cost of \$15.

Member S.M. sent the \$15 fee to PSC to get the minutes.

The PSC does not have anything in their records regarding the 2007 version of the draft model ordinance.

**New Business:** Recused P&Z Chairman A.F. provided a draft of the contract offered to him by [wind developer] Eco Energy to the Committee for review. Alvin allowed the Committee to review the contract but he requested that it not be copied or republished. T.A. took the contract and will review it for the next meeting.

## **December 1, 2007**

### **Union Large Wind Turbine Study Committee**

Research and Information Updates:

Committee member C.B. informed the Committee about the windpower siting reform being studied by the WI Global Warming Task Force Workgroup. The state is looking into taking control over the siting of wind turbines and taking away local control.

C.B. purchased the ISO 9613 Noise Standards and the International Wind Standards. They are used as a certification for wind turbines for sound levels. ISO 9613 is used in wind modeling.

The Committee would like a report from Chairman T.A. regarding recused P&Z Chairman



A.F.'s draft [wind developer]Eco Energy contract.

Committee member S.M. is drafting an initial draft of a wind energy siting ordinance for discussion and review by the Committee. S.M. is not ready to introduce the draft ordinance to the Committee. It was decided to table discussion of a draft ordinance until the next meeting.

**January 12, 2008 \**

### **Union Large Wind Turbine Study Committee**

Committee Final Report: Committee member CB handed out table of contents from the Committee final report. The report is approximately 300 pages and it includes all the surveys and materials collected, audiologist reports and PSC records in response to records request.

Supporting documentation will be available at the library.

Stakeholder Questionnaire Responses: [wind developer] EcoEnergy, [utility] WPPI, Evansville Water & Light and PSC responded to the Committee's questionnaire. The responses will be in the Committee's final report.

Paul Helgesen of the PSC sent an email in response to the Committee's questionnaire. He stated the draft model ordinance can be used but it is not law. He also stated what is reasonable would be defined by local governments and the courts. They made changes to the sound measurement protocol in the 2007 model ordinance revision.

Committee member M.L. discussed the responses regarding power to the transmission lines.

Members CB and SM did an extensive search and have contacted several people to find evidence to support the Wisconsin model ordinance 1000-foot setback from existing houses and stating that there are no health problems at 1000 feet from houses. No one had any supporting documentation.

C.B. handed out a study "Noise pollution: The Sound Behind Heart Effects" from the 2007 World Health Organization symposium. Also article re: truth about noise pollution. CB found a sound study that was done for Lincoln and Red River townships.

The model draft ordinance reference guide states that setback is for safety and noise is to be mitigated by distance and with the developer.

Discussion of Eco Energy Springfield Wind Project. Discussion occurred regarding sound studies and noise measurement and setbacks from residences in connection with the project.

Presentation to Plan Commission: CB prepared a draft presentation for the PC meeting. Chairman T.A. will do his own presentation. CB and SM working on the presentation.

CB prepared a summary of everything that the committee did. It will be handed out at the next meeting on Jan 26th.

The notice for the Jan 26th meeting should identify the presentation of the committee's report and draft ordinance. P&Z commissioner K.G. suggested notifying [wind developer] Eco Energy of the meeting.

Draft Ordinance: CB will incorporate audiologist comments to draft ordinance and then finalize the draft.

Research Update: SM talked to a physicist from Rutgers about doing an ice throw study and they are willing to do a study for the town. It would cost around \$400. The committee added that an ice throw study would be required in the ordinance. GE has a formula for ice throw = 1.5 times rotor diameter plus the hub height.

**Town of Union  
PLAN COMMISSION MEETING  
January 31, 2008**

**Wind Turbine Study Committee: Presentation of Recommendation of the Committee**

Chairman AF removed himself from the discussion due to a conflict of interest;

Co-chair DZ presided over the discussion. DZ explained that the purpose of the agenda item was for the Plan Commission to receive a presentation from the Wind Turbine Study Committee, and that a public hearing would be held at a future meeting; there will be no public comment tonight.

DZ gave a brief overview and history of the committee.

Wind Turbine Study Committee chair T.A. presented the committee's findings. The Committee has worked hundreds of hours on the project, met almost weekly since the Committee was formed.

Members conducted on-site visits to wind farms of a nature similar to what is being proposed in the Town of Union, some members went to the state of Oregon to tour wind farms.

Regarding his position of Committee Chair, TA wanted it to be clear from the start that facts would be the only factor in the Committee's recommendation, not personal feelings, emotions, etc.

The sourcebook put together by the Committee is made up of extensive research conducted by Committee members. State law only allows the Committee and Plan Commission to regulate health & safety issues related to wind energy.

Items that could not be addressed included necessity of having met towers to properly measure wind speeds in the area of the proposed sites; issue of what construction of turbines would do to farmers land; divisiveness to the community; property values; and decommissioning of turbines.

These issues are not in the Committee's final report, but the Committee felt it was important to let the Plan Commission know these issues are out there.

Regarding the ordinance, the Committee began by looking at the Wisconsin state model draft ordinance for wind turbines. The intention of the state's model ordinance was that it was to be used as a model/starting point by communities when developing their own ordinances.

An open records request was made by a Committee member in an effort to obtain the scientific and medical info that was used to create the state's model ordinance; in the state's response the Committee found that there was no scientific or medical documentation used to create ordinance. Instead, the Committee received minutes from meetings used to create the ordinance. It appears that the ordinance was written predominately by a power company from Florida (Florida Power and Light).

Representative Brett Davis was involved in the Committee and was surprised to learn the history of the state's ordinance; he will be researching the issue further.

Setbacks and sound turned out to be the two major issues that were addressed by the Committee. If setbacks and sound issues are addressed, there should be no health and safety issues with turbines.

Audiologists, physicists, acoustical engineers, doctors and residents provided information regarding sound issues. Also looked to the World Health Organization for information, as their standards regarding sound have been adopted by all civilized countries except the United States. To ensure that sound is not a problem, appropriate studies must be done before hand.

Committee also sent out questionnaire to "stakeholders", asking for scientific information they used to come up with their standpoints on the issues. Any potential problems with sound can be solved with proper siting and proper testing ahead of time.

One significant problem the Committee identified was enforcement; once turbines are erected, what are the methods available to resolve problems?

Copies of sourcebook and recommended ordinance have been provided to the Plan Commission and Town Board. Acting Chairman D.Z. recommended that the Town attorney, Town engineer, and building inspector should have copies as well;

T.A. will provide. T.A.informed the Commission that three additional attorneys reviewed the draft ordinance, all of whom wrote back favorable responses to the Committee.

D.Z. asked for confirmation that the sourcebook and draft ordinance were available at the Eager Free Public Library. Committee members confirmed that the sourcebook is there, and all related materials. TA recommended that interested parties review the final report and sourcebook, and Committee members would be happy to respond to any questions residents may have. Committee member contact information is in sourcebook at the library.

D.Z. asked if the Plan Commission felt it would be ready to recommend approval of the ordinance to the Town Board following the February 28 meeting/public hearing. Town's Attorney MD asked the Commission if they would want additional legal review of the ordinance. If desired, the review should be done prior to the public hearing.

TA clarified that the attorney reviews the Committee had done were not meant to supplant review by the Town attorney, and feels Town attorney review is still appropriate.

Town Attorney MD stated the legal review could be done by mid-February.

Commissioner E.L. asked if the ordinance development process was ahead of schedule. It was confirmed that it was.

Commissioner K.G. will not be at the February meeting, but feels there should be a separate meeting with only the wind energy ordinance on the agenda. Commissioner M.J. would like to see legal review done and distributed to the Commission with enough time for Commission members to thoroughly review prior to the February meeting, holding a public hearing at the March meeting.

At February 28, 2008 regular Plan Commission meeting, the Commission will review comments from Town Attorney at March 27 meeting.

**Town of Union  
PLAN COMMISSION MEETING  
February 28, 2008**

Discussion of Large Wind Turbine Siting Regulating in Union Township:

During the current moratorium the Large Wind Turbine Citizens Committee has developed a recommended ordinance to protect the public health and safety of residents. The recommended ordinance requires a tower setback of 2640' and maximum noise level of 35 dBa at the nearest house, as compared to 1000' setback and 50 dBa noise maximum under the state Model Wind Ordinance currently used for most sitings. The Plan Commission may make a recommendation for adoption to the Town Board at their regularly scheduled March meeting.

Chairman AF removed himself from the discussion due to a conflict of interest; DZ chaired the discussion.

The Commission discussed the letter sent out by Town Attorney MD and confidentiality issues related to such.

At this time, Town Attorney felt it is unclear if it is a breach of confidentiality issues to provide the letter to the Large Wind Turbine Citizens Committee.

DZ stated that with regard to how to handle letter from the attorney, he felt the questions presented in the letter are best answered by Committee members. He suggested that the Plan Commission ask the Citizens Committee to look at the questions presented by Town Attorney and come back with answers, etc at the next Plan Commission meeting.

Commissioner R.T. stated that he has talked to people who are very happy to have wind turbines in their communities. He is unsure if he will be on the Plan Commission when a vote is taken on this issue, and he has not made a decision on the issue at this time.

However, the binder he received from the Citizens Committee about the ordinance did not seem to include any positive statements about the turbines, whereas the binder given to another individual whom he spoke to (from

Magnolia) included information on pros. [NOTE: the individual from Magnolia who provided Commissioner R.T. with information is employed by wind developer EcoEnergy]

D.Z. asked the Citizens Committee for a response to this issue?

Committee member J.B. agrees that the folder referenced by R.T. probably had positive opinions in it; however, the Committee could only address health and safety issues and could not give comment on other issues, i.e. "good" or "bad."

Clarification: Is the Citizens Committee to come back to the Plan Commission with answers to the attorney's questions? Yes.  
What specifically are they to provide?

Commissioner M.J. wants them to review the issues that have been presented in the letter and prepare responses, by category, to the questions posed.

Commissioner E.L. wanted clarification regarding what is expected to be in response, are there to be recommendations to change the draft ordinance?

JB suggested that Citizens Committee members meet with Town Attorney to go through all the issues presented, and then bring the draft ordinance back to the Plan Commission, at which time the Commission can recommend adoption of the ordinance or approve the draft ordinance as an interim ordinance.

Town Attorney reminds the Commission that the moratorium is in place until August and can be extended if needed. He is reluctant to have a meeting without Plan Commission involvement, feels they need to hear Committee responses and needs to be part of discussion. Ultimately the Commission members have to be comfortable with the ordinance and recommending it to the Board. The Commission cannot rely solely on the Citizens Committee or the Town's Attorney for their information; they must read the information themselves and form their own opinions.

The Citizens Committee can contact Town Attorney with authorization from the Town Board. Motion carried by unanimous voice vote.

Town Attorney D briefly discussed draft legislation, which may be introduced yet this session, which would direct the PSC to establish standards that any municipality would have to follow when developing ordinances that regulate wind power facilities. The legislation would also allow an individual to appeal to the PSC if they felt a town had improperly adopted or applied an ordinance.

Would this legislation preempt ordinances already in place? Unsure at this time, but it is likely it would.

The legislation would direct the PSC to develop standards, so the ultimate outcome and its effects would be unknown even after the legislation was passed.

Overall, the town may want to think about how it is going to proceed with the development of its ordinance, given that there is significant time, effort, and expense involved and the outcome ultimately may have to be changed.

Commissioner MJ stated that he spoke with [Representative] Brett Davis, who felt there was not a lot of support for the legislation. Davis was not in favor of it; the timing of introducing the bill is also poor as it is nearing the end of session.

JB stated that the legislation is up for hearing next week, and is not in bill form yet. Only need 24 hour notice prior to hearing. He feels it is an attempt by the state to take control away from municipalities, and that the next thing they (the state) will try to gain control of are subdivisions.

JB stressed the importance of town residents to attend the meeting/hearing. He will notify the Plan Commission and others interested if he hears of a meeting time/date.

Commissioner EL recommended waiting until the next Plan Commission meeting to make a decision on this issue as they will know the outcome of the legislation by then, and to proceed as planned for now.

Agreed.

Town Attorney distributed a sample ordinance that outlines the detail, history, and research (“findings”) that is preferable to include in ordinances, as it makes defending them much easier.

Recused Commissioner AF stated that Commissioner ME would like to remove himself from further wind energy discussions as he feels he may have a conflict of interest.

**Town of Union  
PLAN COMMISSION MEETING  
Minutes of April 24, 2008**

Town of Union  
Plan Commission Meeting  
APRIL 24, 2008

**Discussion of Large Wind Turbine Siting Regulating in Union Township.**

During the current moratorium the Large Wind Turbine Citizens Committee has developed a recommended ordinance to protect the public health and safety of residents. The Plan Commission may make a recommendation for adoption to the Town Board at their regularly scheduled May meeting.

Chairman AF recused himself from the discussion due to a conflict of interest; DZ chaired the discussion.

Committee Chair TA explained that the Citizens Committee drafted responses to Town Attorney, and he felt it was appropriate that Committee members JB and CB review what they've put together, as they spent a considerable amount of time on the response. The Committee needs to know if the responses meet the concerns of the Plan Commission and Town Attorney.

JB reviewed the overall issue of noise as related to turbines.

The Citizens Committee is recommending an absolute minimum setback from residences of 2640 feet. Setbacks are based on distance attenuation calculations.

Town Attorney asked if it is possible to meet the sound requirements at less than a 2640 foot setback.

JB stated that based solely on distance attenuation calculations, it is mathematically impossible to meet the sound requirements at less than 2640'. It is the opinion of the Committee that to be absolutely safe, so the Town will never get any noise complaints regarding turbines, a 1 mile setback would be in order.

Town Attorney questioned the value of the ½ mile setback requirement, if turbine siting will be based on what sound modeling shows and that in turn may require more than ½ mile setback, and it is impossible meet the sound requirements in under ½ mile.

Acting Chairman DZ brought up the idea of rewording the ordinance to simply require the turbine location to meet a noise standard, and state that it is unlikely (or impossible) to meet this standard in less than ½ mile. Basically, to have the setback requirement be based on sound, not distance? JB indicated that the ordinance could be reworded this way.

Clarification was requested from Town Attorney: Facilities over 100 megawatts are permitted by the Public Service Commission, and they would preempt any ordinance adopted by the Town. JB stated that is correct.

Regarding the rest of the ordinance adoption process:

Commissioner KG believes road condition and blasting are two issues that need to be covered, and it should be up to the Town Board how they want the issues handled, either within the Large Wind Energy Ordinance or in separate ordinances.

Town Board Chairman KS believes they should be included in the Wind ordinance. Decommissioning should also be included.

A concern was the timeline of the moratorium, and the possibility of delaying finalizing the ordinance to address these issues. Town Attorney felt that the Town had grounds to extend the moratorium if needed, as the Town has been diligently working on the process. Final decision: keep blasting and road issues in ordinance.

Commissioner KG then asked if there should be a public hearing at the next Plan Commission meeting. Town Chairman KS would like to see one, and reminded the Plan Commission that they do not have to act or make any decisions in conjunction with the public hearing. JB asked if Town Attorney will need to review the most current version of the ordinance.

Chairman KS would like the issue added to the Town Board meeting agenda for May 1, 2008, and at that time the Board will decide on whether or not more attorney work would be authorized for this issue.

The Plan Commission members agreed the draft ordinance was a public [document], and directed the Clerk to post it at the Town's usual posting locations and publish on the Town's website. Members agreed that a public hearing on the draft Large Wind Energy Ordinance should be held at the next Plan Commission meeting.

**TOWN BOARD MEETING  
MAY 1 2008**

**Wind Turbine Study Committee Status Update;  
Board Review of Draft Ordinance;  
Board Determination of Future Direction for Plan Commission Regarding Adoption of Ordinance**

Committee member JB reported that the Committee's responses to Attorney Dregne's questions were presented at the Plan Commission meeting last week. The draft ordinance was sent to Town Clerk who forwarded to all involved for review. Town Chairman KS stated that the town attorney was waiting for direction from the Town Board before proceeding with further review and comment on the ordinance.

JB stated that the Committee is also looking for further direction from the Board regarding the amount of additional time and money that should be spent on the ordinance at this point .

[Recused Chairman of the Plan Commission], AF, stated it was his understanding that a public hearing on the issue will be held at May Plan Commission meeting.

Commissioner KG feels it is premature to send the draft ordinance to the attorney again, believes it should be reviewed by counsel again in June/July in conjunction with the final recommendations from the Plan Commission to the Board. The draft ordinance hasn't been to public hearing yet and this is important, prior to further legal review.

Town Chairman KS agrees; the Board unanimously agreed that no action will be taken at this point regarding authorizing additional money or time spent by legal counsel on the ordinance.

**Citizen comment: 3 minutes max/issue**  
No comments.

**Town of Union Plan Commission Meeting  
May 26, 2008**

**Public Hearing: Review and possible recommendation to the Town Board for adoption of the Draft Large Wind Turbine Siting Ordinance.**

During the current moratorium the Large Wind Turbine Citizens Committee has developed a recommended ordinance to protect the public health and safety of residents.

*Please note: Those individuals wishing to speak during this public hearing are asked to submit their name and address on a list which will be available before the meeting. This action is being taken to ensure all who wish to comment on this issue are given the opportunity to do so. A three minute limit per individual comment will also be adhered to.*

Chairman AF removed himself from the discussion due to a conflict of interest; Commissioner DZ chaired the discussion.



DZ presented an overview of the history of the issue and the 12 month moratorium adopted in August 2007. The Citizens Wind Energy Committee was formed to address the issue of citizen health and safety related to wind turbines through an ordinance, which has been drafted and redrafted, the most recent draft version is what will be reviewed and discussed tonight. Zweizig has been asked to point out that the Plan Commission members do not have a financial interest in wind turbines and have spent a considerable amount of time reviewing relevant wind energy information and preparing for the discussion of the ordinance.

The public hearing is with regard to the ordinance; comments should be directed toward that document and those issues, not others. Individuals speaking during the public hearing were asked to state whether they supported or did not support the draft ordinance, and address any issues they think are important for the Plan Commission to consider with relation to the ordinance. Supporting documentation was asked to be given to the Town Clerk for distribution to Commission and Committee members.

Public hearing opened at 8:33 p.m.

**Jake Oelke, Asst. Vice President of Energy Services-[utility] WPPI:** not in support of ordinance as drafted. The most recent Department of Administration report of Wisconsin energy statistics state the total annual energy expenditures in Wisconsin are \$23 billion, 2/3 of which leaves the state economy. Wind power is a safe, responsible and local energy source, and proposed 3 turbine project in the area would generate enough power for 1,200 homes. Future energy prices tied to coal and natural gas are not predictable; wind energy is a known commodity going into the future. Recognizes that the Citizens Committee has done a great deal of work putting the draft ordinance together.

Regarding ordinance, as it stands with proposed setbacks and acoustical limits would prohibit the siting of wind turbines in the area. There are tens of thousands of these turbines sited throughout the world in a safe manner. Request that the Plan Commission recommend to the Town Board some compromises within the ordinance to allow placement of turbines in the Town while preserving health and safety concerns of the citizens.

**Ryan Schryver, Clean Wisconsin:** distributed information to Plan Commission members. Believes State has a choice before them on how they are going to produce their energy, decision often boils down to the town level. Nuclear power has concerns, nuclear waste storage is an issue. Clean Wisconsin fights against construction of coal fired power plants. Extensive pollutants released from these power plants, including mercury and acid rain causing waste. Urges local communities to think about their opportunity to move forward with clean power.

**Renee Exum, County Road C, Town of Union:** is in favor of ordinance as drafted for two reasons: 1) the 1/2 mile setback requirements and sound requirements protect Town residents' health and safety. Noise and its effects on health are well documented. The study cited by [wind developer] EcoEnergy in its March 2008 Large Wind Turbine Health and Safety Report confirms that noise from large wind turbines is an adverse health effect. Several articles published by PubMed Journal demonstrate that the effect of noise on health is substantiated and documented. The World Health Organization acknowledged the adverse effects of wind turbines by recommending night noise not exceed 30db. The National Research Council concluded that wind turbine noise is not a health issue if the turbines are sited over 1/2 mile from homes. The proposed ordinance does not prevent wind turbine siting in the area, nor does it prevent landowners from selling the rights to their land for such uses. It further allows developers to profit from the turbines, and provides for non-participating landowners to enter into an agreement with wind developers for lesser setbacks to their homes. The ordinance most importantly establishes rules and guidelines to be sure the wind turbine development is done responsibly, and in a manner that protects the health and safety of residents.

**Alex DePillis, Engineer, [wind developer] EcoEnergy:** In charge of monitoring wind speeds for EcoEnergy. Presented information on current levels of sounds at locations in this

area. Distributed map related to sound levels in the area. The readings were taken on April 30, 2008 from 5:00-6:30 pm and May 28, 2008 from 10:00-11:00 pm. All readings are in decibels, and are preliminary values, feels more extensive analysis would support these results. The readings on May 28 are much lower, as they were taken much later at night. Can see that it is hard to get below 25 dBA, even when the atmosphere is very quiet. In reality wind turbines are quite quiet when ambient noise is low; when ambient noise increases, mostly due to wind noise, turbines would increase in sound production.

**Kevin Kawula, Dorner Road, Town of Spring Valley:** supports ordinance as written. Believes Town must put safety first, with turbine siting being the first thing to consider in this situation. At least 1/2 mile setback is required. Is important to have enough space to dissipate the sound from the turbines, in order to make the area livable, especially at night. Alternatives exist for those who want individual wind turbines for their houses or on their farms. Farmland preservation does not include industrial fragmentation. Wisconsin Energy Center report 231-1 recommends suburban setbacks be at least 1/2 mile to limit complaints. (pages 42-50) The economic benefits of wind turbines vastly benefit the developer, not the Town or its residents. Turbines essentially require 40-80 acres of land per turbine, which amounts to sharecropping for the farmers involved. WPPI headquarters in Sun Prairie is powered by solar panels, and that should be good enough for Evansville and the Town of Union as well. We can do much better, without wind energy in the area.

**Lynda Kawula, Dorner Road, Town of Spring Valley:** is very supportive of renewable energy, lives in Spring Valley Township on the Magnolia Township line. There is currently a proposal to put 67 wind turbines in her area. Has attended the Citizens Wind Energy Committee meetings, and has set up a website to distribute information - [betterplan.squarespace.com](http://betterplan.squarespace.com). Distributed a DVD to Commission members, shows shadow flicker. Has heard from people all over Wisconsin who have had problems with wind turbines, especially in Fond du Lac County. Noise log kept by Gerry Myer is on the website as well. Read in a statement from Johnsbury resident: poor crop land condition following erection of turbines and concerns regarding noise. Supports ordinance, any renewable energy plan must first protect people, land and community. Feels there is a place for wind turbines but they must be sited an appropriate distance from homes.

**Eric KostECKI, [utility] WPPI:** does not support the ordinance as written. Regarding noise issue, generally problems occur when turbines are downwind (rotor is placed downwind from tower); noise problems do not occur if turbines are placed upwind (wind passes through rotor first, then tower) and these are the types of turbines WPPI would be using in this project. Clarified statements made by Renee Exum regarding WHO recommendations. The Guidelines for Community Noise document from WHO has an indoor guideline for bedrooms states a level of 30 dB LAeq for continuous noise, 45 dB LAeq for single sound events. Nighttime, the WHO recommends outside sound levels about 1 meter from the facade of living quarters or open windows should not exceed 45 dB LAeq. The same report determined that the distance needed to achieve the 45dB sound level was 840'. This is less than the 1000' the state ordinance requires. WPPI proposes a 1,200' setback and a 45 dBA sound requirement. The 1200' setback should result in a sound level of about 40 dBA. Feels this is an acceptable compromise between the Citizens Wind Energy Committee recommendation and the state recommendation.

**Jim Bembinster, County Road C, Town of Union:** feels the issue of noise is subjective. Town government and local residents should decide how much noise residents should be subjected to during nighttime hours. The WHO has found that sound levels during nighttime and late evening hours should be less than 30 dBA during sleeping periods to protect children's health. Atmospheric conditions can affect sound propagation models and can lead to distant sound impacts. Noise levels can be 15dB louder than predicted. Low-frequency noise can become an issue with turbines, as it travels greater distances with less loss of intensity than high-frequency noise. Noise standards can fail to protect residents from disruptive levels of noise, and the task of enforcement will outdistance the abilities of local government. Believes siting and permitting decisions can proceed in a manner that

protects both local residents and the long-term potential for wind energy generation. If current generation turbines are sited too closely to homes, it could jeopardize the future of wind energy, which is overall a good source of renewable energy. The Plan Commission and Town Board must trust that the Citizens Committee has done extensive research on this issue and is making good recommendations within the draft ordinance. Supports the draft ordinance as written.

**Cathy Bembinster, County Road C, Town of Union:** supports draft ordinance. Cited a statement made by Tom Gray, commonly used on the American Wind Energy Association website, which reads "Today, an operating wind farm at a distance of 750 to 1,000' is no noisier than a kitchen refrigerator or a moderately quiet room." Found this statement many times on the internet, with many different distances cited, ranging from 658' to 2467', all credited to author Tom Gray, AWEA. The AWEA recommends a setback of 1645' – 2467' for noise. The NWCC Permitting and Siting Guide 1998 states that an appropriate distance may be 1000' to 1/2 mile or more for noise. The Wind Energy Handbook recommends a minimum spacing from a dwelling for shadow flicker of 1/2 mile, or 10 rotor diameters. Windustry, Best practices and Policy Recommendations states that "turbines should be sited no less than 5 times their rotor diameter (1320') from property lines..."

**Gerry Myer, Brownsville:** submitted emails to Town Clerk. Lives within Forward Energy wind farm project that includes 86 turbines. Has delivered mail for 30 years, delivery area encompasses 64 of the turbines. Three turbines are located near his home, one 1560' away, one 3/4 mile away, one 2489'; can hear all three at times at the same volume throughout his well insulated home. Started operating on March 3, 2008; sounds like a jet plane. Is keeping a noise log of sound heard at his home from wind turbines (referenced by Linda Kawula). Thirteen year old son is sensitive to noise; complains at school and at home of headaches, etc. Wife has dizziness, ringing in her ears, can't sleep, and wakes up in the middle of the night. Noticeable difference in amount of noise when at cabin 100 miles north, wife sleeps comfortably through the night while staying there. The customers on his mail route live within the wind project, has spoken to them, none of them are happy with the turbines but feel powerless. Recommend adopting ordinance, or make setback distance further.

**Larry Wunsch, Brownsville:** also lives within Forward Energy wind farm project. Has wind turbines located 1100', 1800', and 2200' from his house, and can see all 86 turbines from his house. Has lived there for 20 years, built a new home on 60 acres, cash crop farmer. States that the turbines sound like jet planes; the sound is not a problem when the wind speed is slow but is bad when it is windy, he cannot sleep with his windows open. Turbines have created anxiety for himself and wife and they feel their town has not taken into consideration residents' health and safety. Has complained to their town board but no resolution has come. Be sure they make an educated decision, once the turbines are in place they will not be removed. Supports the ordinance as written, feels the setback should be even further than the suggested 1/2 mile. Suggests viewing shadow flicker video and tape of car vs. turbine noise.

**Curt Bjurlin, Wisconsin Project Developer, [Wind Developer] EcoEnergy:** are the proponents of the wind project in the Town of Union. Not in favor of ordinance as written, believes it contains statements that are not true. Statements that reference EcoEnergy within the draft ordinance are incorrect. Communities always have to wrestle with the question of if they want to have a renewable energy project within their community, and what they can do to protect the health and safety of their residents but still allow the projects to go forward. The ordinance as drafted will not allow the currently proposed wind projects to go forward, nor will it allow any other wind energy projects in the Town of Union. Ordinance is prohibitive, no different than a moratorium on wind energy. Many facts within the ordinance are incorrect. Has not had the opportunity to present that to the Plan Commission or the Town Board previously. Distributed documents related to sound levels, setbacks used in other areas that have turbines installed, WHO complete recommendations on sound levels. WHO recommendations are important to review in their entirety. Town

needs to look at big picture and decide if they would like wind turbines in their community. If so, put in an ordinance that is effective in protecting health and safety but also allows wind energy systems to be erected. Would be happy to make a presentation to the Plan Commission or the Town Board on some of the more technical issues. Acting Chair DZ brought up the comment made by Bjurlin regarding incorrect statements within the ordinance. Bjurlin stated it would be difficult and time consuming to address all the inaccuracies within the ordinance; he believes the ordinance was crafted to try to determine how to prevent a project to come into Union. DZ would like to know what the would like to know what the top 5 inaccuracies are; Bjurlin will provide.

**Scott McElroy, Town of Union, Citizens Committee member** : supports draft ordinance. National Research Council study that says noise from wind turbines is generally not a concern for humans, beyond 1/2 a mile or so. Study does not say noise produced by wind turbines is not a major concern for humans beyond 1100', it says 1/2 mile. National Research Council is a well recognized and respected group, their work led to DNA being recognized and used in court cases. Cited the Wind Energy Handbook, which recommends wind turbine location be a minimum of 10 rotortop diameters from any dwelling to reduce any nuisance related to shadow flicker, however a spacing of this magnitude is likely to be required in any event by noise constraints. Committee felt 1/2 mile setback was minimum; many communities have more than 1/2 mile setback requirements. Feels a greater setback would be even better, if the Commission and/or Board decided to adopt one; feels draft ordinance recommendations are an absolute minimum. The Committee members were unbiased in their work, not anti-wind, just want it done responsibly. Strong supporter of the ordinance, hopes it is adopted.

**Sue Pector, Town of Union, Citizens Committee member**: supports draft ordinance. Please put health and safety of residents ahead of money, etc. Not against wind turbines, need to be sited responsibly.

**Robin Ringhand, Town of Union**: one proposed turbine is located less than 1000' from her house. She has 3 kids under the age of 8, concerned for their health and safety. The ordinance supports 1/2 mile setback, would like to see more than 1/2 mile setback requirement. Supports ordinance.

**Harold Abey, Town of Union**: against ordinance. Green County currently has 1000' setback requirement in their ordinance. On July 22, 1993 a wind turbine was located at the Spirit Lake elementary school, 800' from the school building. In July 2000 the turbine had generated an average of 312,000 KW of electricity annually, which is the equivalent of 549 barrels of oil or 156 tons of coal; it would take 285 trees to absorb the carbon monoxide emitted by coal and oil; turbines release no carbon monoxide. Once it was determined the turbines were an asset to the school district, a second turbine was erected on October 29, 2001 and was located 800' from the middle school . There have been no ill effects demonstrated in the students since the towers were erected with a setback of 800', sees no reason towers in Town of Union would need a setback of more than 1000'.

**Gary Haltaufderheide, [wind developer] EcoEnergy**: was in the area 1 1/2 years ago talking to residents. The world's appetite for energy is increasing; currently 320 billion KW are used every day through out the world, equivalent to having 22 light bulbs on constantly each day for each person in the world; two-thirds of the world is still developing. Has talked to a number of people, appears there is disagreement. However the young generation appreciates the need for renewable energy and is ready to make the change, as was evidenced at the recent area energy fair.

Doug Lee asked if anyone representing the power companies had lived near a turbine, or spent an extended period of time near one, so they can honestly tell us that there is no ill effect whatsoever? [note: the answer was no]

Haltaufderheide stated he had been

in the business 2 years, and when he first started he spent time in western Iowa and western Minnesota talking to people and didn't hear about any health issues, unable to sleep, jet sounds.

Lee stated he recently spent 4 days in the same area and heard complaints from residents, stated individuals don't use their yards, don't spend any time outside anymore, becomes a quality of life issue and is that a health issue?.

[Wind Developer] Bjurlin stated he does not live near wind turbines, but grew up near a coal plant, knows there are consequences. Due to time constraints, no further answers were taken at the time.

**Donald Maas, Town of Union:** stated he was asked to sign a wind turbine contract 15 months ago and didn't sign right away, instead he visited areas where the turbines had been erected including Dodgeville. He found that kids don't have anything bad to say about wind energy, nor do others he spoke to. Was in the Horicon marsh area, where 86 turbines are located, recently and talked to two farmers, who stated they could hear the turbines but the sound did not bother them or disrupt their sleeping at night. Carried on their lives exactly as they had before with no ill effects. One farmer has a turbine located 400' from his house (signed a waiver to place it closer than the town ordinance required) , and they could hear the turbine in the yard while they were talking if they concentrated on it, but the sound didn't interrupt their conversation or distract them in any way. He signed a contract and felt he did the right thing by talking to others first. If Evansville wants to be known as a green community an ordinance with 1000' setback should be adopted; 1/2 mile setback will make siting basically impossible.

**Matt Gaboda, City of Evansville resident:** supports draft ordinance. Regarding the power companies disagreeing with facts and statements in the draft ordinance, they've had time to address the issues and have not – he feels this is a stall tactic on their part. Ordinance has been available since January or February. If anything is taken away from this meeting, listen to what Mr. Wunsch and Mr. Myer have to say about their experiences. It should weigh heavily against statements and studies. Regarding 1/2 mile setback, if they are unable to site in Union then that's not the Town of Union's problem. Sound readings from one day are not reliable or indicative of what an entire year of sound would be like; the information presented by the sound engineer should not be given weight. Pass the ordinance with no changes and no tweaks. EcoEnergy and WPPI have had ample opportunities to address inaccuracies.

**Dane Albright, Town of Center:** has been involved in the renewable energy initiative in Evansville, supports community wind project . Blade technology on wind turbines is improving every year. Some statistics referenced within the ordinance are dated, much of the research is good information but some is dated and does not reference specific wind turbines. If a decision is going to be made they should look at the turbine that will be placed by EcoEnergy, not other older models. Newer blades are quieter. If they could get info from an AW1500 they would have better information for comparison. Seventy of this model turbine are going up west of Lena later this summer, presents a good opportunity for citizens to see them in action and gauge sound levels. Agrees a setback is needed, but how far is appropriate?

[Commissioner] Doug Lee: the ordinance must cover all models of wind turbines, those in use now and in the future, and cannot be tied to a specific model turbine.

**Tonto Abey, County Road C, Town of Union:** wife works for John Deere Credit, who just built a factory in Minnesota which is completely powered by wind power. If John Deere used wind power, they must feel comfortable with wind power and feel that it is safe for their employees and their families. They are about 1000' apart. Does not support ordinance, feels 1000' is adequate setback.

**John Meyers, [Wind developer] EcoEnergy:** knows farmers involved with the Montfort wind project, one is on county board with him, and they cannot be happier with the project. No health concerns or documented hospitalizations or medications. 1500 KW units were used in the Montfort project. Does not support ordinance as written.

**Mindy Larsen, E. Union Road, Town of Union:** remember wind is a clean source of energy. Big concern is noise level. In her area, surrounded by fields on 3 sides, there is noise from tractors and other farm equipment; this is noise she has accepted as part of living in the country, feels that noise from turbines would also become acceptable. Is good for the Township.

**Heidi Carvin, Evansville School Superintendent:** opposed with ordinance as written, hopes a compromise can be reached. What are the consequences of the alternative energy sources? Is concerned with the health and safety of the children in the area. Notes it is also important for children to understand their energy choices have impacts, where power comes from and the concept of renewable energy. The Evansville school system has put in a geothermal system; payback has been realized already due to rising energy costs. The school system has a test wind turbine, have considered putting up a turbine or investing in part of another offsite turbine. Supports wind energy, would like to see a compromise ordinance that makes the project viable while supporting the concerns of the town residents.

**Michael Vickerman, [pro wind lobbyist] Renew Wisconsin:** supports the EcoEnergy community wind initiative. Wind turbines are a zero emission local energy source that lasts 20 years. Supports a reasonable ordinance that allows this project to proceed. An ordinance that requires 1/2 mile setback would not allow wind energy projects to proceed in many locations throughout Wisconsin. Lives in Madison about 800' from Kipp Corporation, which is a metal casting company that runs 3 shifts. He lives with the noise generated by the factory, sleeps with his windows open, noise is part of the trade off of living in a great neighborhood. Raised children in the neighborhood, as many others do with no health concerns. Property values continue to rise in area. Currently, it costs \$8 to drive 50 miles in a gasoline powered vehicle, while it would cost \$1.50 to drive 50 miles in an electric vehicle. As a source of electricity for electric vehicles, wind power is much more affordable. The transition to plug-in vehicles is a matter of when, not if.

[Commissioner] Doug Lee: Kipp has had issues with city of Madison with problems with fumes, city tried to close them down.

**Sandra Hauri, W. Croft Road, Town of Union:** is a newer resident of Union Township. Is not opposed to renewable energy; supports the ordinance as written because health and safety must come first. Not against a wind project as long as it is placed appropriately. Has worked hard to be able to live in the country, does not want to wake up to jet sounds.

**Dave Giebtbrock, Porter Road, Town of Union:** one proposed site is less than 1/2 mile from his home. Has a 5 year old, 3 year old, and 10 month old; supports ordinance as written, is concerned with the health and safety of his children.

**Heather Peterson, Milbrandt Road, Town of Union:** supports ordinance as written. Feels it is important to have dialogue about this issue. Believes that if the people on the Citizens Committee were willing to give up their time to determine that 1/2 mile is an appropriate setback then it is important to recognize that.

**Amanda McElroy, Croft Road, Town of Union:** attends UW Whitewater, supports ordinance. Did a project at UW on wind speeds. Feels wind speed averages do not support locating turbines in the area. Highest average wind speed she got was 6.91 mph, not the 14 mph they have been told was the average. Locations used were Monroe Airport, Janesville Airport, and Newark Township. Distributed information to Town Clerk. Overall average was 4.5 mph annually. Why are we here if the wind speeds don't support siting turbines here?

Supports the ordinance.

Commissioner Gruebling feels another meeting is needed, with Citizens Committee members and [wind developer] EcoEnergy representatives present, due to conflicts between information.

Commissioner Pestor sees no major problems with the draft ordinance, believes the Plan Commission needs to work out the issues noted in boxes on ordinance and should deal with it in a working meeting.

Commissioner Larsen would like as many resources available as possible to answer questions during a working meeting, i.e. EcoEnergy, Citizens Committee members.

Commissioner Pestor feels that the power companies haven't had information available to respond to questions from the Citizens Committee in the past, should not expect them to have the information available during a working meeting. To clarify, "working" meetings are open meetings, cannot exclude anyone from attending but can restrict participation.

Town Attorney Dregne has reviewed the ordinance, thinks that the Plan Commission needs to go through the ordinance as a group and figure out what questions they have, and then decide how best to answer the questions.

Plan Commission members were in agreement that Attorney Dregne should attend the meeting. Clerk Ylvisaker will canvass the Commission for available dates, check with the library for meeting room availability, and check Attorney Dregne's availability.

A meeting date will be set ASAP, during the first two weeks of June.

**Tom Alisankus, chair of the Citizens Committee, spoke:** he objects to EcoEnergy coming in at the last minute and stating there are issues with the ordinance. Suggests that perhaps the Plan Commission not accept information they want to provide to correct alleged inaccuracies within the ordinance, as they have had ample time to bring up issues they have with the accuracy of information within the ordinance and provide the information to correct it.

If the Plan Commission decides to accept the new information provided by EcoEnergy, Alisankus feels it should come through the Citizens Committee first. The Plan Commission and Town Board appointed people to the Citizens Committee that hold responsible positions in this community, and the Commission and Board members should trust them.

George Franklin felt it was important for the Citizens Committee and Plan Commission to be sure they are comparing apples to apples when discussing and comparing wind turbine noise and other issues.

Gruebling distributed information to the Commission from the Wisconsin Towns Association regarding ordinances and Plan Commission responsibilities.

**Town of Union  
PLAN COMMISSION MEETING  
June 9, 2008**

Committee chairman TA sat in to represent the Citizens Committee.

Acting P&Z Chair DZ confirmed that all Plan Commission members had reviewed both the original and current versions of the draft Large Wind Energy Ordinance (LWEO), as well as the correspondence from Attorney Matt Dregne regarding legal issues raised with the ordinance.

DZ stated the intent of the Plan Commission was to hold a second public hearing on the ordinance at their regularly scheduled June 26, 2008 meeting. DZ then suggested drafting an agenda of items to address during tonight's meeting, and took suggestions from Commission members:

Commissioner EL: definition of what exactly is meant by "health & safety" with regard to the ordinance.

Commissioner KG: would like to go through draft ordinance page by page, checking for questions and issues on each page.

Commissioner KG: does quality of life come under health and safety?

Town Attorney: felt there were several "big picture questions" to be addressed:

1. Regarding State regulatory framework on wind energy, State law may preempt Town authority to regulate turbines with a capacity of 100 megawatts or larger. Does the Town want to exempt those facilities (100mw and higher) from the ordinance, or include in ordinance?
2. Adoption of the Small Wind Energy Ordinance (SWEO) was tabled pending completion of the Large Wind Energy Ordinance; are small wind energy facilities going to be governed by a different ordinance, and large facilities regulated by the current draft ordinance?
3. Does the Town want to address blasting, road maintenance, and other similar issues within the LWEO? Are they addressed somewhere else already, i.e. zoning code?

Beyond "big picture" questions, when it comes to an ordinance that regulates large wind energy, ultimately the key issues are

- 1) how to deal with setback issues;
- 2) how to address concerns raised about noise; and
- 3) how those two things work together or don't work together.

How will the Plan Commission go about answering those two questions? What is appropriate for setback or noise? Once a policy decision is made, the Commission can look at how an ordinance can be used for enforcement. At this time the LWEO is essentially a licensing ordinance.

#### **Which types of turbines to include in LWEO?**

Town Attorney stated that if small wind turbines generate the same noise as large wind turbines, they should be governed by the same regulations. If they do not generate the same noise, it needs to be articulated why they are different and why they are regulated differently.

Renee Exum believes small and large wind turbines are completely different in terms of noise, setbacks, etc. and comparing the two is like comparing apples to oranges.

Commissioner KG believes regulation of small and large wind turbines is two separate issues as well. Felt combining the two in one ordinance would create a cumbersome ordinance.

Acting Chair DZ feels that, with regard to State regulation of 100mw+ turbines, if the State's authority overrides the Town, the Town should not attempt to regulate said turbines in its ordinance. Although Town Attorney had developed an argument for the Town regulating such turbines, he felt it would be a tough argument to make and difficult to win in court.

Commissioner DK stated that he was in attendance at a recent Wisconsin Towns Association meeting during which these issues were discussed. It was the feeling of the WTA that although Towns cannot regulate 100mw+ turbines, having an ordinance in place



may provide for a negotiating point on getting local issues covered if such a turbine was proposed for the area.

Commissioner DP believes regulations for 100mw+ turbines should be included in the LWEO.

Town Attorney presented arguments against including in the LWEO:

1) are we gaining anything by including it; probably not. Utilities will go to the Public Service Commission and the ordinance regulations will be overridden.

2) A political consideration: at the end of the last session of the State Legislature, adoption of a State statute that would preempt Towns' authority to adopt any ordinances governing wind turbines was considered.

Why is this an issue? Town Attorney has seen situations where industry has taken examples of the ordinances they consider to be "problems" and present those to the Legislature as a reason why they (the Legislature) needs to do something. Basically, legislation is adopted as a response to things that are done/decisions made at a local level.

Commissioner DP asked who would handle regulating and enforcing public health and safety issues for 100mw+ turbines if the Town did nothing?

Town Attorney stated that the PSC would be responsible.

Is there anywhere within the town that 100mw+ turbines could be sited?

Chairman TA stated that the Citizens Committee did not look into this. Could 100mw+ turbines cross townships with regard to siting? Unknown, but probably.

TA stated that one issue that came up at the end of the last Legislative session was the possibility of a compromise that would grandfather in local wind energy ordinances that were already on the books.

Town Attorney stated that a severability clause will need to be added to the LWEO.

Motion to include 100mw+ wind turbines in the draft Large Wind Energy Ordinance made by Doug Lee. Second by Dave Pector. All in favor: Dave Pector, Kim Gruebling, Doug Lee. All opposed: Renee Exum, Eric Larsen, Doug Zweizig. Motion does not carry.

The Plan Commission unanimously agreed to retain a separate ordinance to regulate small wind energy.

### **Health & Safety – Definition?**

Zweizig stated that he had received a letter from Brett Davis' office stating that the definition of health and safety is left purposely ambiguous.

Commissioner Larsen feels that it needs to be further defined and specified.

Committee Chair TA was of the opinion that if the Commission would like to adopt a definition for health and safety, it may be better to wait until they have fully read and understand underlying issues, such as sound.

What would be parts of a working definition of "health"? Commissioner Pector felt that issues affecting the normalcy of life, everyday activities should be included.

Commissioner Lee asked if a person's lifestyle changes drastically, i.e. not spending time outside, windows closed, etc. is it a health issue?

Chairman TA clarified that one thing the Citizens Committee was concerned with was the fact that something that is a pest or annoyance for one person may be unlivable for others. However, he stated that the definition of "health" is one thing that no one has been willing to nail down, including the Legislature.

Chairman TAcited a recent legal decision, in which a circuit court said that the Legislature specifically left this area (definition of “health”) open and that is how the judge was going to look at it, openly not narrowly.

Town Attorney cited the World Health Organization Guidelines for Community Noise, which stated that its recommendations were “derived from affects on normal, average population.”

Commissioner Lee believes that quality of life is important in this state, which is why they put up concrete walls along the interstate by Madison – to buffer the traffic sounds.

Town Attorney states that the point is there is literature available if the Commission is looking for definitions helpful in defining health & safety issues with regard to sound.

Commissioner Larsen was of the opinion that there were a lot of issues brought up and statements made at the recent public hearing that did not have anything to do with health and safety, such as the survey conducted by EcoEnergy regarding public opinion of siting turbines in the area. Feels the Plan Commission needs to be sure it is addressing health and safety issues; a definition is not necessarily required.

### **Blasting and Road Maintenance Issues; Include in LWEO?**

Commissioner Lee thinks the issue of blasting needs should be covered in the zoning ordinance. Commissioner Pestor felt it would be easier if the issues were included in the LWEO; future members of the Plan Commission will be better able to find and understand the regulations and their intent.

Town Attorney Dregne stated that the Town will soon have a code of ordinances, which will have all of the Town’s ordinances and regulations in one place; this should address the issue of simplifying and locating such restrictions. Commissioner Gruebling felt the blasting portion of the ordinance is small and it seems it could stay in.

Bob Fahey clarified that a permit must be obtained from the county for blasting, and the county regulates it. Town Attorney Dregne listed all related issues, the location of which need to be determined (LWEO or zoning ordinance): blasting, ground water, stray current/voltage, road maintenance.

### **PAGE BY PAGE REVIEW OF ORDINANCE:**

#### **PAGE 1:**

Town Attorney Dregne noted that the State statute cited in Section I, (A) (1) is a *restriction* on authority, is not *granting* authority. Felt that statutes which grant authority should be added.

Commissioner Exum asked if the description of Wis. Stat. 66.0401 should be removed; Attorney Dregne stated it should be. Attorney Dregne also recommended changing the statement within Sec. 1 (A) (1) from “...unless the restriction satisfies **one** of the following conditions” to “...unless the restriction satisfies **any** of the following conditions.”

Commissioner Gruebling asked if the statement in Sec. 1 (A) “Emerging energies versus Manitowoc County...” needs to be included, as it is a law now. The case would be referenced if the LWEO was brought to court.

Attorney Dregne clarified that the ordinance should include factual matters that support why you are adopting the ordinance as you are. The point in question is not a fact that is needed.

Committee Chairman Alisankus noted that there are more points of reference within the LWEO that may not need to remain in ordinance, considering Attorney Dregne's opinion.

Commissioner Zweizig asked if there was any objection to removing Sec. 1 (A) "Emerging energies versus Manitowoc County y....?" No objections; statement will be removed.

Attorney Dregne suggested developing a term to use throughout the ordinance for wind turbines and a definition of their meaning, which would need to be included in Sec. III Definitions.

Page 1 Sec. I (B): remove "industrial" from statement "...community from industrial wind turbine(s)...". Within statement "...noise by accessing the impact..." the word "accessing" should be replaced with "assessing".

Within statement "Noise setbacks from residences will be based..." change "will" to "should".

Regarding the German standard referenced, Commissioner Gruebling would like clarification with regard to the level of government at which the standard was set (i.e. local, county, state, federal), and if it is with regard to indoor or outdoor noise levels?

Committee Chairman Alisankus will research the statement and let Plan Commission know.

Commissioner Gruebling believes that if this standard applies to just one county or just one state in Germany, it is a lot to hang our hat on as far as referencing in the ordinance. He would think twice about basing our standard on a standard if it was applied by just one state within US, much less another country.

Town Attorney Dregne asked with regard to the reference to the 2007 NRC report, page 159, how does that compare to the Guidelines for Community Noise publication from WHO from 1999? Is it consistent with other WHO publications and tables? Attorney Dregne asked these questions in an attempt to determine what the best way was for the Plan Commission to determine their standards for noise.

Chairman Alisankus did not believe that a one page answer on noise standards was possible. Further source information would be provided regarding statements in Sec. I (B).

Commissioner Exum suggested removing Sec. I (B) altogether; following discussion it was agreed to remove the paragraph in its entirety. Dregne will change Sec. I (A) and (B) to one introductory statement.

### **PAGES 2 -3**

Subsection (a): Gruebling recommends removing "...for example, in Germany..." from paragraph entirely. Following discussion, decision: source the statement, if unable to do so, remove statement. Specifically, want to know where the statement came from, what it means, indoors or outdoors? What does rural residential mean to them (Germany) versus what it means to us (U.S.)?

Subsection (c): Gruebling stated that he has no problem with the definition, but feels it should be moved to the definitions section of the ordinance.

Zweizig asked if the statement should be in quotation marks, as it appears to be a quote.

Committee member Jim Bembinster clarified yes, it should be within quotation marks.

Regarding location of the definition, Attorney Dregne suggested keeping it in findings section, as it references other studies.

Subsection (d): Zweizig asked if this section should also be within quotation marks. Bembinster clarified yes. The use of the acronym "SPL" needs to be clarified and defined (sound pressure level).

Subsection (e): Quote needs to be clarified. Exum stated that the ordinance references an NRC report regarding 1/2 mile setbacks within the ordinance, should that be referenced in the findings section?

Dregne stated that it is crucial to include something in the findings section regarding setback and why the distance chosen was selected.

Dregne posed a larger question to the Plan Commission and Citizens Committee: why were both a setback requirement (noise related) and minimum noise requirement included in the ordinance? If someone could demonstrate that the noise would be lower than the noise requirement at a distance less than 1/2 mile, why would a setback of 1/2 mile be needed? He believes the findings should address this issue and answer this question.

Chairman Alisankus clarified that the recommended setbacks address more than just noise, they include other health & safety issues. Dregne stated all issues should be included in the explanation; the factors that specifically led to the setback recommendation. To simplify, include the facts that led to the conclusions, not just the conclusions. Another issue to consider, according to Dregne, is whether the continued monitoring of sound levels going to be required, or if initial sound modeling will be acceptable.

Paragraph (D): uses both meters and feet as units of measure; convert to feet only.

#### **PAGE 4:**

Top of page 4, continuation of paragraph (D): cite studies referenced in the statement "...as outlined in several studies..." Additionally, the "shadow map study" referenced should not be in findings section, per Exum. No objections to removing the sentence "Placement and setbacks sufficient to eliminate these problems will be established by a shadow map study."

Paragraph (G): Gruebling suggested removing the statement "...have no legal basis under Wisconsin law." There were no objections to removing the statement.

Paragraphs (E) & (F): per Dregne, these paragraphs will remain relevant to the ordinance if groundwater issues are addressed within the ordinance; should be removed if groundwater issues are handled elsewhere.

Paragraph (I): Dregne suggested removing the paragraph in its entirety. There were not objections to removing the paragraph.

#### **Setback Requirements:**

Gruebling brought up the issue of setbacks and waiving the setback requirements for neighboring properties using an agreement between landowners. He feels this issue needs to be clarified.

A larger issue, according to Dregne, is the question of whether or not the Town wants to allow landowners to enter into such agreements, which would circumvent the ordinance and its setback requirements.

Gruebling thinks this is an individual decision, if people want to waive the required setback they can do so, it is not the town government's place to regulate this. Feels the option should be available for participating and nonparticipating landowners to have turbines sited closer to their homes and properties than the required setback.

Chairman Alisankus stated that it was the intent of the Citizens Committee to allow landowners to do this; however governments do have a place in regulating health & safety issues for residents, i.e. seatbelt law.

Exum believes the ordinance includes a fair compromise; landowners can decide if they want to change setback restrictions, but the Town recognizes health & safety issues. Dregne felt the Town must decide if noise levels are also subject to such agreements, or only setbacks. In any event, the Town will need to require that something be put on deeds regarding these agreements to notify future landowners in the event land is sold.

Regarding the terms of such agreements, Dregne doesn't think the Town Board should be involved in approving every agreement. A sample agreement could be attached to the ordinance.

To clarify, the Town has no liability with regard to these agreements between landowners, per Dregne.

Gruebling feels the ordinance could allow for reducing the setback requirement to 600' with an agreement to waive the ordinance requirement being made between landowners.

Regarding the property line setback of 1000' and 5 times the rotor diameter: the intent of the Citizens Committee was to have whichever is greater be the governing distance.

Larsen questioned the need for the 1000' setback if 5 times the rotor diameter is less than 1000'? Decision: Page 18, Section J (1) (a): "...and at least 5 times the rotor diameter of the turbine..." statement removed.

Exum felt references to EcoEnergy, page 19 second paragraph, should be removed. There were no objections. The remaining paragraph will state: "(Note: The above 1000 foot setback is consistent with the 1000 feet from the nearest property line setback in the Town of Stockbridge, WI. Manitowoc County, WI supports 1000 feet from the nearest property line), and" Page 19, subsection (b): Gruebling believes that the "total height of turbine" needs to be clarified in definitions, as well as defining where measurements are taken from – base of tower, middle of the actual height of tower i.e. 100' in the air, etc. – when measuring for the 1000' setback. All agreed the issues need to be defined.

Chairman Alisankus stated that the turbine height is generally the top of the rotor at its highest point.

Gruebling believes that railroads or power companies should be allowed to consent to a lesser setback. How small of a setback? Minimum of 500' or 1.1 times the height of the tower?

Lee asked if the railroad would be liable for their employees who work on the line?

Dregne clarified that yes, it would be the liability of the railroad company, not the Town.

Zweizig suggested that as turbines get larger in height, a distance in feet may not be the best solution. A multiplier, i.e. 1.1 times height, may be a better long term solution. It was agreed that 1.1 times the total height of the turbine would be the minimum setback allowed when an agreement to waive the setback requirement in the ordinance was signed between landowners.

TOWN PLAN COMMISSION MEETING  
JUNE 17, 2008

The Commission identified the following issues that needed to be discussed and resolved:

- A. Definition of health and safety.
- B. Issues relating to multiple affected properties.
- C. The setback standard of 1,000 ft. or five times the rotor diameter from a property line.
- D. The need for a better understanding of the “German standard” referred to in the ordinance.

The Commission approved the following definition of “health”: “A state of complete physical and mental well being, not merely the absence of disease or infirmity.”

This definition was adapted from the World Health Organization definition of health in “Guidelines for Community Noise,” pages 19 and 20.

4. The Commission adopted the following definition of “mental health”: “Mental health covers a variety of symptoms, ranging from anxiety, emotional stress, nervous complaints, nausea, headaches, instability, argumentativeness, sexual impotency, changes in general mood and anxiety, and social conflicts, to more general psychiatric categories like neurosis, psychosis, and hysteria.” This definition is based on the definition of mental health set forth in the World Health Organization publication “Guidelines for Community Noise,” at page 146.

5. The Commission adopted the following definition of “safety”: “Unharmful; free from danger or injury.”

6. The Commission discussed a number of questions relating to the “German standard of 35 dB(A) for rural nighttime environments” used in the draft ordinance.

Chairman Tom Alisankus reported that the German standard is based upon the German Federal Clean Air Act adopted in 1974.

Committee member Cathy Bembinster said that the standard of 35 dB(A) means 35 dB(A) outside, measured at the recipient’s property line.

Committee member Jim Bembinster explained that the World Health Organization standard for noise measured inside a dwelling is 30 dB(A), unless the noise is low frequency, or continuous, in which case a different noise level applies.

7. Chairman Tom Alisankus distributed a copy of a document entitled, “Noise-Con 2008 – Sample Guidelines for Siting Wind Turbines to Prevent Health Risks,” and another document entitled, “Noise-Con 2007 - Communicating the Noise Effects of Wind Farms to Stakeholders,” and another document entitled “Basics of Sound”.

8. The Commission agreed that the ordinance should be revised to include a more detailed explanation of the “German standard.”

9. The Commission discussed whether agreements entered into by landowners to allow shorter setbacks should apply to tenants. Following the discussion, the Commission arrived at a consensus view that landowners can enter agreements to shorten setback requirements, and that tenants are not required to approve such agreements.

10. The Commission agreed to delete the note at the bottom of page 19 and the top of page 20 of the draft ordinance.

11. Kim Gruebling moved, and Eric Larsen seconded, the following motion: “The minimum setback a property owner may agree to shall be not less than 50 feet

from an adjoining property line, measured from any part of a wind turbine.” This motion failed, with Doug Zweizig, Doug Lee, Dave Pestor and Renee Exum voting no, and Eric Larsen and Kim Gruebling voting yes.

12. Renee Exum moved, and Dave Pestor seconded, the following motion: “The minimum setback a landowner may agree to shall be not less than 1.1 times the height of a wind turbine (with height being measured from the top of the rotor diameter) from the nearest adjacent property line, as measured from the center of the wind turbine tower.” This motion was adopted, with Doug Zweizig, Dave Pestor, Doug Lee, Eric Larsen and Renee Exum voting yes, and Kim Gruebling voting no.

13. Eric Larsen moved, and Dave Pestor seconded, the following motion: The setback described in section J.1.a., at page 18 of the draft ordinance, shall be as follows: At least 1,000 feet from the nearest property line and at least five times the rotor diameter of the turbine from the property lines of all adjoining property owners who have not granted an easement for a lesser setback.

(Windustry-turbines should be sited no less than five times the rotor diameter from property lines, unless written permission is given by the neighbor.

*Explanation:* This recommendation is designed to protect wind rights of all landowners and minimize the impact of wind turbines on neighbors. Wind turbines produce wake effects eight to 11 rotor diameters downwind. Requiring a setback of five rotor diameters from property lines provides a buffer that will protect the wind rights of all landowners in the vicinity of a wind project. We believe clear standards for property line setbacks are critical to preventing disputes over wind rights now and in the future. Without standards, conflicts among neighbors and among wind developers can arise. (Source: Wind Energy Easements and Leases: Best Practices and Policy Recommendations.)

(Note: the above 1,000 ft. setback is consistent with the 1,000 feet from the nearest property line setback in the Town of Stockbridge, Wisconsin, and Manitowoc County.)

This motion was approved, with six members voting yes and zero members voting no.

14. Eric Larsen moved, and Kim Gruebling seconded, the following motion: The setback in section J.1.b. on page 19 of the draft ordinance shall be as follows: At least 1,000 feet or (3) times the total height of the wind turbine, whichever is greater, from any public road. This motion was approved, with six members voting yes and zero members voting no.

15. Eric Larsen moved, and Renee Exum seconded, the following motion: The setback in section J.1.c on page 19 of the draft ordinance shall be as follows: At least 1,000 feet or (3) times the total height of the wind turbine, whichever is greater, from the nearest above-ground public electric power line, telephone line, or railroad right-of-way.

This motion was approved with Doug Zweizig, Dave Pestor, Doug Lee, Eric Larsen and Renee Exum voting yes, zero members voting no, and Kim Gruebling abstaining.

16. Doug Lee moved, and Renee Exum seconded, the following motion: The following language should be added to the end of section J.1.c. on page 19 of the draft ordinance: Except that a utility or a railroad may agree in writing to a lesser setback of not less than 1.1 times the total height of the wind turbine. This motion was approved, with six members voting yes, and zero members voting no.

17. The Commission decided by consensus that section J.1.d on page 19 of the draft ordinance should be changed to provide as follows: At least 2,640 feet from the nearest residence, business, school, day care facility, church, hospital and other structures in which humans live, work or frequent. This setback may increase per sound study results, compliance to the technical requirements sound limits and a shadow flicker study. The setback in this section shall not apply to any structure on a participating parcel. This motion was not intended to approve the setback distance of 2,640 feet, but rather to better define "inhabited structure."

18. Kim Gruebling moved, and Eric Larsen seconded, the following motion: "Discussion of the 2,640 ft. setback shall be tabled until the next meeting." This motion was approved, with six members voting yes, and no members voting no.

19. The Commission decided by consensus to add the following definition to the ordinance: "Participating parcels" means a parcel of land on which a wind energy system is sited in accordance with this ordinance.

20. The Commission had a general discussion of the amount of time needed to finish work on the ordinance. The Commission agreed to amend the notice of the next Plan Commission meeting to allow for a discussion of extending the current moratorium to allow more time to complete work on the ordinance.

The meeting was adjourned.

**TOWN OF UNION  
Plan Commission Meeting  
June 26 2008**

**Public Hearing: Review and possible recommendation to the Town Board for adoption of the Draft Large Wind Turbine Siting Ordinance.**

During the current moratorium the Large Wind Turbine Citizens Committee has developed a recommended ordinance to protect the public health and safety of residents.

Acting Chairman Zweizig reviewed time limits (3 minutes per person); asked individuals to stick to facts in their comments, not opinions; reminded speakers to state their names and whom they represent; and asked any printed materials be given to Clerk Ylvisaker.

**Kevin Kawula:** supports the ordinance with 1/2 mile setback. Has submitted a petition to the Magnolia Town Clerk supporting 1/2 mile setback. Believes the machines will make noise, and destroy the quality of life in the area. Visited Montfort wind farm, heard noise generated by the turbines; compared it to living under a flight path. The draft ordinance does not prevent individuals or businesses from purchasing small turbines for personal use. Encourages individuals presented with contracts from energy companies to have them reviewed by legal counsel prior to signing.

**Carol Prudhon,** lives in Evansville but owns land in Union in the area turbines are proposed. Talked to Paul Helgesen who works for the Public Service Commission. Helgesen stated the State's model ordinance was a compromise between stakeholders, landowners, etc and was written 10 years ago. Helgesen also told her that the State knows of no stray voltage, health issues, etc. related to turbines. Prudhon then called the Spirit Lake, Iowa school district where she spoke to the building and maintenance supervisor for the district. There are two turbines located on the school property, 800' from the elementary school. Two turbines are used to generate 100% of the school's power; the supervisor stated that with new building projects they plan to tear down their smaller turbine and build a larger one to supply all the power for the additional buildings.



The supervisor stated they have had no instances of illnesses related to the turbines, nor health concerns of any kind. He has given many talks about their projects. Prudhon would like the Plan Commission to modify what she believes are strict requirements in the draft ordinance.

**Joan Mitchell, Magnolia:** has no financial interest in the turbine projects. She is concerned with health and safety. These are industrial turbines, and are not the same as what the Spirit Lake School District is using. Believes that zoning serves a purpose, to separate commercial and residential uses of land. People moved into this area for the quiet; believes people don't thrive in an environment with this amount of noise. Concerned with nighttime quiet, children need quiet and restful sleep to grow. It was previously stated that the noise created by the turbines would be equivalent to the level of conversation; she would find it difficult to sleep with a conversation going on in her bedroom. Now is the time to make the decision if they want an industrial township or a rural township. These are health and safety issues for many people; bear in mind that the turbines will last for 20 years.

**Dave Olson, on Magnolia Town Board:** believes health and safety is very important to everyone. Thanks the Citizens Committee for all the work they've done on the draft ordinance – the Town of Magnolia has used most of the wording from the Town of Union's draft ordinance to use as their own, and made only a few changes. Magnolia will be having one more public hearing to address any remaining issues with their ordinance. Believes that if local government doesn't make a decision someone else will make it for them. Local government can be contacted to address issues within your township; it is difficult to reach government officials at higher levels, and get action from them on local level issues.

**Jim Bembinster, Town of Union:** discussed noise as it relates to wind turbines. To simplify: if the head of your bed faces an outside wall of your home, your ears are 3 feet from the outside of your home and the noise created by turbines. Your ears never turn off. If [utility] WPPI was truly concerned about health & safety they would not recommend a setback of less than 1 mile. Believes that more turbines will be sited by WPPI if the 1000' setback is allowed. Feels it is better to be conservative now with setbacks rather than have problems later.

**Cathy Bembinster, Town of Union:** Cited papers from the Wind Sound Conference.

**Matt Gaboda, Evansville:** supports original ordinance given to the Plan Commission by the Citizens Committee. Everything within the ordinance was researched by the committee members. Believes that a 1/2 mile setback should be the minimum, 1 mile is optimal. The 1/2 mile setback should be viewed as a compromise between the optimal 1 mile setback and what the developers would like for setbacks. Feels accusations made by power companies about validity of statements in ordinance need to be founded, otherwise all statements made by them should be questioned.

**Sue Pestor, Citizens Committee:** did a lot of work on the ordinance; feels the Plan Commission should recommend a 1 mile setback. She and her husband went to Brownsville and spent time with a camera and noise meter. Spoke with one farmer who said it was noisy but he "put up with it." Ice coming off turbine blades in the winter is dangerous. The biggest complaint they heard in the Brownsville area was that the roads were not repaired after turbines were put up. Others had complaints about noise, shadow flicker. Hopes the Plan Commission and Town Board take their responsibility for resident health and safety seriously.

**Elaine Strassburg, W. Cty. Rd. C:** supports draft ordinance, 1/2 mile setback. Supports wind energy, however as a neighbor of people on whose land the turbines may be placed, wants to be sure that her health and safety is taken into consideration. Resents the fact that landowners are certain that there will be no effect on neighbors, they are effectively making this decision for her. Concerned with the equity in her home, effect on groundwater, etc. as a result of turbines being sited near her home. Would like an ordinance that provides legal assurances. Believes quality of life should be considered a part of the definition of health and safety.

**Tonto Abey:** the State has a wind ordinance, is simple - short and sweet - and should be used. Thinks too much time and money has already been spent on the ordinance.

**Eric Kostecki, [utility] WPPI:** is against ordinance as written, setbacks and noise level restrictions will restrict the ability to site large scale turbines in the area. Dodge County ordinance should be considered; it is in effect and is working for them. Requests that the Plan Commission remove the wind measurement towers from the moratorium, which would allow them to install a MET tower and better understand if Union is a good site for turbines.

**Mike Leeder, Citizens Committee member:** the Town only has one shot at getting the ordinance right, if the turbines are not sited correctly the Town's residents will suffer. Supports the draft ordinance but feels a setback closer to 1 mile is needed. Residents' health and safety is important when considering the ordinance. Spirit Lake turbines are small scale, not industrial scale as will be put up here. If you are considering signing a contract with an energy company, please be sure you know what you're signing.

**John Meyers, [wind developer] EcoEnergy:** is an Iowa County Board member and on the County Health Committee. Has a vested interest, as he works for EcoEnergy. Lives in the county where the Montfort wind farm is located, drove up there and talked to residents. Talked to a farmer whose home is 1/4 mile from the turbines, he has no complaints. Tim Lykes, a farmer with 2 turbines on his property, had no problems with installation. Evelyn Miller, hosted Farm Progress Days in Iowa County in 1979, believes the turbines are soothing at night, leaves bedroom windows open at night. Miller states that the turbines do not sound like jet engines; she has 3 turbines in her backyard 1/4 mile from her bedroom windows. Miller does not lease any land to turbines or have any on her land. Meyers read in a statement from the Iowa County public health nurse who stated that they are unaware of any health concerns related to turbines.

**Don Maas, Town of Union:** costs of electricity will continue to increase, cost of wind energy will remain the same. Legal decisions have been made regarding health effects of energy sources such as fossil fuels and uranium, however no legal decisions have been made about wind turbine syndrome. Doctors and nurses in the areas turbines are located don't know anything about it. They will be located in Minnesota or Saskatchewan if they're not built here, and as a result electricity will be more expensive as it will be brought in from there instead of produced in our backyard. Does not know of any health problems that would affect his neighbors.

**Joanne Van Norman:** wonders if people [wind developer] John Meyers spoke to have a vested interest in the turbines?

Meyers stated he spoke to a variety of people, some did and some did not.

Don Krajeck: would like the Plan Commission to consider a change to the decommissioning portion of the ordinance to require the purchasing utility to be a partner,

to help ensure that there is money available for decommissioning at the end of the life cycle of the turbines.

Public hearing closed at 8:46 p.m.

Gruebling wished to make it clear to the public that nobody on the Plan Commission takes their responsibility in this matter lightly, most have taken personal time to visit wind farms first hand.

**Discussion and possible recommendation to Town Board to extend Ordinance 2007-02, An Ordinance to Impose a Temporary Stay on Construction of Large Wind Energy Systems in the Town of Union, which will expire on August 13, 2008.**

Following the June 17 working meeting, the Plan Commission agreed that there may be a need to extend the current Large Wind Energy moratorium. Lee feels there is no reason that the Plan Commission can't get their review and recommendation of the ordinance done in a timely manner; he would make a motion to recommend to the Town Board extending the Large Wind Energy Ordinance moratorium 3 months, to November 15, 2008. Second by Doug Zweizig.

The Town Board will need time to review the ordinance once it is handed over to them. Gruebling believes the Plan Commission will need a couple more working meetings prior to their regular July meeting, but the ordinance review should be done by then, and he does not believe an extension of the moratorium is needed.

Motion carried by a 5-1 verbal vote. Kim Gruebling voted "nay"; Alvin Francis abstained due to a conflict of interest.

Clerk Ylvisaker will work with the Town Attorney and Plan Commission members to schedule two working meetings prior to the July 31, 2008 regular Plan Commission meeting.

Meeting adjourned at 8:59 p.m.

**Town of Union  
PLAN COMMISSION MEETING  
Minutes of July 9, 2008**

The Plan Commission agreed that there were two specific issues to address at the meeting: whether to recommend to the Town Board the removal of MET towers from the Large Wind Energy moratorium, and addressing the tabled motion from the June 17, 2008 meeting regarding setbacks.

Kim Gruebling felt the setback issue should be tabled until the next meeting, as the information provided by Committee Chairman Tom Alisankus on this issue was just received by Zweizig tonight and hasn't been reviewed by the Plan Commission, or the Town's attorney. Gruebling would like specific information referenced in the ordinance, and he hasn't received the actual information yet, only references to it. Clarification is vital on this issue, as the setback limits are being based on German standards.

Gruebling, committee member Bembinster and Doug Lee believe that the German standard should be removed as a reference/base point in the ordinance. Zweizig agrees, but feels the issue will have to wait until the July 28 meeting as the information from Alisankus will need attorney review and distribution to the Plan Commission prior to the decision being made.

Motion to table the setbacks and foundation for setbacks issue until the next meeting made by Kim Gruebling. Second by Eric Larsen. Motion carried by unanimous voice vote.

**PAGE BY PAGE REVIEW OF ORDINANCE:**

**PAGE 4, II. Purpose and Intent**

No changes.

**PAGE 5, "Definitions"**

No changes.

**PAGE 6**

Page 6, item 9. "Non-Participating Residence or Business." The 1/2 mile setback within this definition may be changed, dependent upon the Plan Commission decision on the issue.

The Commission agreed unanimously to add a "Participating Residence or Business" definition . This would be a resident who has entered into a contract with a wind energy developer.

Gruebling feels a definition of "measurements" needs to be included at this point. Motion by Kim Gruebling that horizontal measurements be taken from exterior of the base of the tower, and vertical measurements be taken from the ground to the top of the blade with the blade at its highest point. Second by Doug Lee. Motion carried by unanimous voice vote.

Larsen questioned the reason for including distance in the "Non-Participating Residence or Business" definition? Feels it is unnecessary. Following discussion, it was agreed to remove the statement "...located within 1/2 of a mile measured from the foundation of the residence or business to the center of the nearest WESF turbine that..." from the definition.

"Landowners" vs. "parcels" in this definition and throughout needs to be readdressed/reexamined. "Non-Participating Property Line" definition will need to be reviewed as well.

Page 6, item 15. To avoid duplication of statements and information, and due to the fact that they will be covered in the Small Scale Wind Energy ordinance, the statement "Small scale wind systems of less than 170 feet in height and less than 100 kilowatts are exempt from this ordinance" will be removed from the "Wind Energy Systems" definition.

**PAGE 7**

An applicability clause will be added at page 7.

Attorney Dregne clarified that the ordinance has been set up as a licensing ordinance vs. a zoning ordinance, and feels it is the correct approach to take in this instance.

**PAGE 8**

Page 8, Sec. VI (B) Application form. Chairman Kendall Schneider may be working on developing a form; this will be revisited to determine if a formal application is desired. Clerk Ylvisaker would like to see an application used, due to the amount of information and detail required. Attorney Dregne suggested a checklist of items required to be attached to the application.

**PAGE 9**

Page 9, (D) 1. Regarding specifics required of the site plan: how should it be laid out, should an engineer/surveyor prepare the plan and should that requirement be specified?

Attorney Dregne suggested adding a "to scale" statement to the requirement, or have the town engineer recommend what he would like to see.

Gruebling suggested having Town Engineer Greg Hofmeister review the statement and provide a recommendation. Following discussion, the Commission agreed to request Hofmeister review and provide recommendations on this statement prior to the July 28, 2008 meeting.

Attorney Dregne asked if there was an established zoning approval process in place at this time for these requests? He recommended deciding what zoning districts turbines would be allowed in. The zoning code will need to be reviewed and modified accordingly.

Page 9, (D) 4. Attorney Dregne asked for additional information regarding the FAA requirements. Jim Bembinster explained that a 'Non-Hazard Determination' must be provided by the FAA for each turbine; this is routine and is provided by the FAA for all turbines. The process can be done online, the developer submits the GPS coordinates of the turbine site, local pilots review it, and if approved a permit is issued. Bembinster stated that the sites proposed in Union are in proximity of the flight paths for the Dane County Regional Airport in Madison, he has spoken to the FAA about this and they stated that they will be looking at it closely due to this proximity.

Page 9, (D) 6. Gruebling asked for clarification about what is included in this statement. Bembinster stated that electromagnetic interference means interference with cell phones, 911 system, TV signals, AM/FM radio signals.

Attorney Dregne asked if there is an agency that would certify that there is no interference; Bembinster does not believe there is. In which case, Dregne questioned what exactly is being requested in this item. Bembinster felt that what would be required would be a statement from the developer that the turbine will not block any signals. Gruebling feels the statement as it reads now does not have any detail in it, this is needed.

Eric KostECKI, WPPI, stated that the microwave paths are picked out and ensured that there is no interference. He further explained that a map with "Microwave Beam Path Study" of the signals is created as part of this process. Following discussion, the Commission agreed to change the statement to "Provide Microwave Beam Study and electromagnetic interference mitigation plan".

Page 9, (D) 5. Blasting: State and federal blasting requirements exist; per Dregne the Town can adopt more stringent requirements. Is there any other kind of constricton within the Town that would require blasting? If so, the issue should be addressed in an ordinance that would address blasting in general. Gruebling stated that when asked, the Town Board wanted it left in the ordinance. He believes it is not a big issue and it should be left in.

#### **PAGE 16**

Page 16, (C) Blasting: The Commission agreed to change the statement "...kept on site at the WESF office..." to "...kept by the applicant..."

#### **PAGE 9**

Page 9, (D) 7. Add cross reference "...with requirements as set forth in..." to statement.

Page 9, (D) 8. Add statement requiring submittal of a storm water management and erosion control plan that meets the requirements of the Rock County Storm water Management Ordinance.

The Commission agreed that the Town Engineer and Building Inspector should be asked if there are best practices, etc. available that could be referenced regarding foundation excavation?

Additionally, the Town Engineer should be consulted to see if there is an appropriate way to get assurances with regard to groundwater quality. It would be requested that this information be provided prior to the July 28, 2008 meeting.

"Zoning Administrator": who is it? Attorney Dregne stated that someone will need to be put

in charge of reviewing the application, this is a decision that has yet to be made. Attorney Dregne suggested adding insurance requirements to Page 9.

**PAGE 10**

Noise standards/requirements must be decided prior to making further determinations regarding what is required for submission with the application.

**PAGE 21** Page 21, (N). How much foundation is reasonable to remove upon decommissioning? Gruebling feels that the Town should not regulate this, it is a decision that should be left up to the landowner and power company.

“Exhibit A” referenced within Section N is to be determined by the Town; it doesn’t need to be a separate exhibit and can be included in the paragraph.

Attorney Dregne stressed the importance of the Town obtaining a form of financial assurance from the developer regarding decommissioning, i.e. letter of credit. Zweizig stated that Supervisor Don Krajeck suggested having the purchasing utility be a partner in the decommissioning costs.

**Removal of MET Towers from moratorium**

Per KostECKI, MET towers are 197 feet tall.

Motion by Kim Gruebling to recommend to the Town Board allowing an amendment to the Large Wind Energy moratorium so that a MET Tower can be put up. Second by Eric Larsen.

Attorney Dregne asked KostECKI if he would provide specifics regarding the MET towers so the Plan Commission can review it and exclude it specifically. He also recommended having the language ready to recommend to the Board. Are MET towers up for a limited amount of time? Per KostECKI, they remain in place for at least one year.

Motion carried by unanimous voice vote; Renee Exum abstained.

**Process for producing the next draft of the ordinance**

The options for drafting the ordinance are the Citizens Committee, Town Attorney.

Motion to recommend to the Town Board that the Town Attorney make the revisions to the ordinance made by Eric Larsen. Second by Dave Pestor.

Motion carried by unanimous voice vote.

**Town of Union**

**Plan Commission special meeting**

**July 28, 2008**

**Review, discussion and possible modification of the Draft Large Wind Turbine Siting Ordinance.**

During the current moratorium the Large Wind Turbine Citizens Committee has developed a recommended ordinance to protect the public health and safety of residents.

Commissioner Larsen brought up a concern regarding email communications from Citizens’ Committee members, specifically an email sent by Committee Member Scott McElroy to all Plan Commission members asking questions about a motion made at the last meeting.

Larsen felt the email was opening up a discussion, which he did not feel was appropriate. He would like ground rules established for how these situations are dealt with in the future.

Town Chairman Kendall Schneider confirmed that it was appropriate for Plan Commission members not to respond to the email, it should have gone to Clerk Ylvisaker for processing to members. Additionally, Schneider added that the minutes in question had not been

officially approved by the Plan Commission at that time. All correspondence like this should go to Clerk Ylvisaker, who can contact Schneider with any questions regarding distribution and responses.

## **FINDINGS OF FACT**

Town Attorney Matt Dregne stated that he felt the Plan Commission was getting closer to what is needed to lay out a factual basis for the ordinance with the current draft Findings of Fact.

Town Attorney Dregne raised the following organizational points with regard to the Findings:

Page 1: Under the heading "Findings of Fact", and before the "Whereas" statements, insert heading of "Recitals". Insert heading of "Findings" after the recitals.

Reference to "Exhibit A": As a general rule it is good to insert source material information; however Attorney Dregne would prefer that they be included in the recitals instead of as an exhibit.

Doug Zweizig requested that any other sitings that the Citizens Committee members or Plan Commission members think are important be sent to Exum for inclusion in the list.

Page 2, (A) 1: Attorney Dregne felt the entire paragraph should be removed as it is more of a "philosophy" than a fact.

Zweizig felt that in the past, power companies have made statements implying that the Town is unaware of the adverse effects of coal powered power plants, the benefits of wind power, etc. Therefore, he would prefer that some statement be left in to demonstrate the Town's recognition of the need for renewable energy.

It was agreed to change the paragraph to include the statement "...however, wind energy facilities must be sited in such a way that they protect the health and safety needs of the residents..." or something similar.

Page 2, (A) 4: Attorney Dregne felt that the paragraph suggests that the Town does not have an evidentiary basis for the standards it is adopting.

Zweizig feels that it is better to be conservative when dealing with points of uncertainty. Following discussion, it was agreed that paragraph 4 would be removed.

Page 2, (A) 7, 8: Both paragraphs need to be revisited, once it is determined whether or not the issues they address will remain in the ordinance or not.

Page 3, (B) 3, 4: The use of the word "noise" should be tied to wind turbine noise specifically.

Paragraphs 3 & 4 should be combined to create one paragraph.

Page 3, (B) 5: The statement "...the risk for annoyance..." should be changed to "...the risk for adverse health effects..." per Attorney Dregne.

Pages 3-4, (B) 6: The statement "...different type of annoyance..." should be replaced with "...different type of health effects..."

Committee member Cathy Bembinster asked if a definition of "annoyance" could be included within the "Definitions" section of the ordinance, as the word is used throughout studies to describe the effects of wind turbine noise.

Larsen would prefer that the word be replaced with better language if possible, as there is a common definition for the word "annoyance" that people will unconsciously refer to instead of the definition used in the ordinance.

Attorney Dregne felt that all places the word "annoyance" is used, it should be replaced with "adverse health effects." Exum and members of the Citizens Committee will research whether this is a good overall replacement, and confirm that is what is meant when "annoyance"

Page 4, (B) 7: Per Attorney Dregne, change "...risk of residents being annoyed by noise..." to "...health risks due to noise..."

Page 4, (B) 9: Following discussion, remove entire paragraph.

Page 3, (B): Add "...or 5dBa above ambient..." to maximum outside audible SPL statement.

Page 4, (B) 11: Specify that the SPL is higher than 45 dBa at the eyewitness location referenced.

Per Attorney Dregne, personal observations of Plan Commission and Citizens' Committee members can be included as a finding of fact. Specific details, such as date, time, location, sound levels should be included in the statements if at all possible. Any Commission or Committee members who have observations should email them to Commissioner Exum for inclusion in the findings. If Exum has any questions regarding the statements, she will do the best she can and bring a draft back to the next meeting for group discussion.

Jim Bembinster offered sound and distance measuring devices that can be used by individuals, contact him.

Pages 4-5, (C): Regarding how to deal with wind turbines which exceed the sound level requirements after they are erected: how will this be enforced?

Attorney Dregne felt it is important to do the siting/sound requirements correctly up front to avoid ever having to deal with this situation.

Extensive discussion regarding setback and sound level requirements ensued, with no resolution to the issue.

Application requirements still need to be addressed, which Greg Hofmeister and Bob Fahey submitted comments on.

Subsequent meeting dates for working meetings will be scheduled at the July 31, 2008 Plan Commission meeting.  
meeting.

## **JULY 31 2008 Plan Commission Meeting**

### **Review and possible recommendation to the Town Board for adoption of the Draft Large Wind Turbine Siting Ordinance.**

During the current moratorium the Large Wind Turbine Citizens Committee has developed a recommended ordinance to protect the public health and safety of residents.

Chairman Alvin Francis recused himself from the discussion [note: because of a conflict of interest]. Zweizig chaired the discussion.



Zweizig prepared a list of issues to be discussed, and distributed it to the group.

Possible future working meeting dates: August 11, 12, 19. Clerk Ylvisaker will check with the library on the availability of the meeting room for those dates.

Zweizig brought up the issue of the Commission's request to the Board to have Dregne prepare a draft of the ordinance.

Lee feels that it is appropriate to have the attorney review it, as he will be the one defending it.

Motion to recommend that the draft ordinance upon which the Plan Commission would act be prepared by the Town Attorney made by Eric Larsen. Second by Renee Exum.

Clerk Ylvisaker will update the draft ordinance with all the changes approved by the Plan Commission thus far, using the chart of changes prepared by Exum and the minutes from the working meetings.

Clarification that the motion is requesting that Dregne draft the ordinance when the Plan Commission is ready for it to be done, not immediately as the Commission has not reviewed the entire ordinance for changes yet.

Motion carried by unanimous voice vote.

#### **August 12, 2008**

#### **Review, discussion and possible modification of the Draft Large Wind Turbine Siting Ordinance.**

Acting Chairman Doug Zweizig discussed possible topics of discussion for the meeting, including:

- Summary of Issues from Zweizig
- Setbacks
- Page by page review of draft ordinance, starting at page 18
- Personal experiences of Plan Commission members at turbine sites

Commissioner Kim Gruebling requested addressing issues on page 11, regarding ice throw calculation; and page 20, signage and fencing.

**Page 11, (12) (a):** Gruebling doesn't see any information regarding what requirements the requested Ice Throw Calculations plan is supposed to meet; also questions who reviews the information in the plan once submitted. He believes the "Findings" section of the ordinance will state the distance ice throw can travel; doesn't believe it is needed in this section of the ordinance.

Committee member Jim Bembinster stated that the section was included to support the safety part of the setback requirements. Bembinster stated that an astrophysicist from Rutgers University has extensive background in this area, and will do an area specific report for Town of Union for \$350. The calculation in the "Findings" is based on a specific turbine model turning at a specific speed.

Attorney Matt Dregne believes that if this information would be relevant to setback requirements, it needs to be inserted in the ordinance in such a way as to support the setbacks.

Zweizig suggested inserting a statement similar to "unless a larger setback is indicated as a result of the Ice Throw Calculations plan" in the "Setbacks" section of the ordinance.

Gruebling stressed that Plan Commission has a deadline to meet on completing their review of the ordinance; an extension to November 15 has already been granted but that date is the deadline for the Town Board to act on the ordinance. The Plan Commission must be done with their review prior to that.

Doug Lee felt that the draft ordinance has set a short setback distance at 1/2 mile; he believes that the Plan Commission is trying too hard to stay within the 1/2 mile setback recommendation, despite the fact that most of the supporting documentation recommends a further setback distance.

Dave Pestor believes the most important thing is the residential setback, which is needed to deal with residents' health and safety. He feels once the Commission settles on that, everything else within the ordinance will come together.

Lee felt that to ensure public health and safety, if one setback recommendation is larger than all the others, that is the number that should be used.

Gruebling felt the ordinance is placing same value on distance from a road as from a fallow soybean field when looking at ice throw issues; the field won't be in use during the winter when ice throw would be a concern. He could support a larger setback for roads, to address the ice throw issue, but not for fields that no one is working in during the winter.

Attorney Dregne believes that the information on ice throw should be included in the findings, whether it is used in the ordinance setback or not, as it will be supporting information for whatever setback is used.

Zweizig mentioned that throw distances could change, based on new turbines or technology.

Eric Larsen was of the opinion that the entire issue may be a non-issue, as it seems that ice and blade throw happen infrequently.

Pestor stated that the farmer in Brownsville living near a wind farm believed it was an issue; he could feel the ice hitting the ground.

Dregne recommended that the ordinance currently has a nonparticipating land owner setback of 1000' or 5 times the rotor diameter; could add another "or" to this regarding ice throw or blade throw. He felt that would be the best way to incorporate the study into the ordinance, solving the issue.

**Page 18, J (1) (a):** Gruebling believes this setback is not necessary when dealing only with a property line.

Lee felt that if that was the case, future landowners need to know that the piece of property is unbuildable in the future due to the distance to a turbine.

Attorney Dregne stated that although the parcel's future development options may be limited, this fact cannot be used as a basis for adopting a requirement.

Motion to leave statement J (1) (a) as written made by Kim Gruebling. Second by Eric Larsen. Motion carried by unanimous voice vote; Doug Lee abstained from voting.

**Page 19, J (1) (b):** Setback from public road, railroad or power line. Regarding the issue of setback for ice throw, Larsen believes a more likely problem would be the ice left in the road from the ice throw, not the ice in the air.

Bembinster stated that the research documents only detail the size of the chunks, which

can be up to several hundred pounds. The documentation does not specify the distance the ice throw can travel.

Gruebling thought it was unlikely that the larger, heavier pieces would travel very far.

Lee stated that even small items, if coming from a large distance away, can cause damage.

Greg Hofmeister stated that falling ice in larger cities is a much larger danger than ice throw in a cornfield.

Motion to leave statement J (1) (b) as written made by Eric Larsen. Second by Kim Gruebling. Motion carried by unanimous voice vote.

**Page 19, J (1) (c):** Motion to leave statement J (1) (c) as written made by Kim Gruebling. Second by Eric Larsen. Motion carried by unanimous voice vote.

**Page 19, J (1) (d):** Pestor felt that the minimum recommendation should not be used for setbacks, as there is evidence to back up using a larger distance; firmly believes that it should be more than 1/2 mile, possibly 1 mile. The longer the distance, the fewer problems there will be with noise.

Felt that the Town must protect as many people as it can, while realizing it can't protect them all.

Larsen suggested the Plan Commission should decide which findings it has the most faith in, and use that to base the setback requirements on, and specify which finding it is within the ordinance.

Zweizig mentioned that the French Academy of Medicine is recommending .93 mile.

Gruebling reminded the Plan Commission that the Citizens Committee studied this issue and recommended a 1/2 mile setback; he believes that to go with a further setback than that would be weakening our position. Additionally, he stated his opinion that the report from the Committee is very biased; he didn't find anything positive about wind energy within the report. He recognizes that there are points in the report that are very important, such as once the turbines are up they're up. However, although he doesn't know if we need to be down to a 35 dB noise requirement, he would err on the side of caution and support 35 dB. It is possible to find documentation supporting setback recommendations of up to 2 miles, but despite this fact the Committee still recommended 1/2 mile.

Larsen agreed that when he first read the report, he felt everything was negative but thought about it and felt that there would not be a statement saying that wind turbines are good for anyone's health, the best you could hope for would be a neutral statement.

Lee reminded the Commission that the information from the wind energy developers was all positive; it depends on who is presenting the information and their experiences and opinions.

Attorney Dregne commented that it is apparent in the findings that there is no easy answer to this question. However, if the setback requirement will be based on a certain thing (i.e. dBa) it must be consistent throughout ordinance. The challenge now is how to come to an approach that is internally consistent.

Regarding the noise study, Larsen felt it was important to be specific as to what is required in the study to be sure that the findings are good, accurate. Questioned how you know which turbine is making the noise, if there is more than one in the vicinity. For example, Gerry Meyers stated the turbine 1/2 mile away from his home is as loud as the one 1500;

away.

Committee member Jim Bembinster has been to the site (Meyers), and he stated that they can tell depending upon wind gusts, one turbine becomes louder than another.

Referencing the Kemperman/James study, Attorney Dregne sees no mention of setback issues. Therefore, he does not believe that the Town can base any setback requirements on this study, as the study does not deal with setbacks. Sound modeling would allow the Town to deal with technology changes, according to Zweizig, whereas a distance setback would not. This would help in adjusting to emerging technology.

Pestor suggested using a one mile setback, with a statement that if sound modeling would allow less than one mile then a shorter setback would be allowed.

Attorney Dregne thinks this is a viable option, it gives the wind industry the option to use one mile if they can but try the sound modeling.

Larsen thinks that due to the variables in sound studies, industry will make the sound modeling say whatever they want, to get to the setback distance they want. Essentially, there is no minimum setback then.

Zweizig suggested setting a minimum setback as well. The question then became, why not just go with one mile as the setback and make it simple?

Zweizig suggested that during the upcoming week Plan Commission members review the Kemperman and James study thoroughly and see if they want to use it as the basis for the ordinance. Kemperman's enforcement ideas were reviewed by Dregne, and he feels they could be strengthened. Zweizig is concerned about enforcement.

Jim Bembinster suggested that the Town currently puts limits on operation for things like gravel pits, which is based on peoples assumptions that the trucks, etc involved in the operation will make noise. The same idea could be used for wind turbines.

Attorney Dregne mentioned that Kemperman's draft ordinance has a very nice way of laying out the ordinance, which he felt is better than the Town's current draft.

J (1) (d) remains as is for now.

**Page 20, J (1) (e):** Per Hofmeister, sinkholes and groundwater and well protection are issues covered by the DNR.

Bembinster stated that the intention of the section was to avoid oil from a turbine tipping over running directly into the ground through a sinkhole.

Hofmeister countered that this could occur on any farm; additionally sinkholes can be located anywhere. Borings could be done throughout a 100 square foot grid and miss them.

Renee Exum questioned if a map of the depth of the bedrock throughout the Township could be obtained. She believes if the bedrock is shallow, then the Town should require the power companies to change their construction techniques.

Lee believes this issue would addressed by the Conditional Use Permit .

Hofmeister believes that the DNR would provide the regulatory framework for this issue. Excavating bedrock happens all the time for many applications.

Bembinster questioned at what point contractors have to contact the DNR; Hofmeister assumed it would be at the point when they are ready to blast. He didn't know that bedrock is an issue but depth to groundwater may be.

Zweizig asked if the Town should ask the applicant to provide something from the DNR. Hofmeister agreed they should, if groundwater protection is the issue.

Dregne referenced requiring an environmental study (page 9), which includes determination of condition of wells all around construction area before and after construction. The current set up of the ordinance is to do testing, then blast, then test the wells again and if there is a problem it will be mitigated.

Hofmeister stated that blasting can cause problems in wells, such as sediment being stirred up, but those issues generally clear up in a short period of time. They are common and temporary issues. It can be very hard to determine if the problem is long term or not.

Dregne felt that if the DNR has the authority and responsibility to do something about it if there is a problem after blasting, then the Town should let them do that.

Hofmeister felt that the overriding question is whether the Town is going to require these types of items/studies for other types of construction.

Motion to eliminate section J (1) (e) on page 20 made by Kim Gruebling. Second by Eric Larsen. Motion carried by unanimous voice vote.

**Page 20, J (1) (f):** "Emergency communication towers" are just 911 systems. A definition is needed for emergency communication towers. Attorney Dregne suggested replacing the "one mile" statement with "sited in compliance with any requirements shown by the study."

Following discussion, motion was made by Eric Larsen to replace the "one mile" statement within J (1) (f) with "Towers shall be sited in accordance with the findings of the Microwave Beam Study and electromagnetic interference mitigation plan." Second by Kim Gruebling.

Following further discussion the motion was then amended by Eric Larsen to include "The applicant shall minimize or mitigate any interference with electromagnetic communications, such as radio, telephone or television signals caused by any Wind Energy Facility" from the state model ordinance. Second by Kim Gruebling.

Following further discussion, the motion was then amended by Eric Larsen to remove the word "minimize." Second by Kim Gruebling. Motion carried by unanimous voice vote.

**Page 20, J (2):** Motion to remove this section in its entirety made by Kim Gruebling. Second by Eric Larsen. Motion carried by unanimous voice vote.

Lee reported on his findings regarding the issue of Town roads. He spoke to Kathleen Nichols at the Wisconsin DOT, who handles all permitting of wind energy movements and is very knowledgeable in this area. The equipment related to wind energy varies in size weight and length. As a Township, we have jurisdiction over the State and Town roads within our Town, and therefore can require developer to obtain permits through us and require the developer to be escorted by permit service or local law enforcement, and can require that the developer provide the funds to cover the costs associated with permitting. No matter what, there will be road alterations and traffic concerns, signs moved, flagmen, disruptions of traffic.

Lee also talked to Bill Fannucchi at the Public Service Commission, who recommended requiring the developers to provide a risk assessment to let the Town know about their plans for widening roads, removing roads, as the turning radius on the trucks will be beyond the capability of our Town roads.

Fannucchi also stated that there will be damage to the roads, according to everything he's seen put up.

The installer will need to be responsible for flagmen, removal of trees, will have to offer compensation to landowner or Town for trees removed. He recommended leaving nothing not in writing; according to Lee Fannucchi was very strongly opinionated on this, as he has seen many problems in siting and transporting units. He stated that per State ordinance 348.25 & 26 we do have jurisdiction. Requiring a risk assessment will need to be part of the ordinance. Page 18, (h) will need to be revised to include this information. Nichols did say that some installers, particularly General Electric, have been very willing to be community minded, i.e. offer quite a bit of compensation for the work being done just to get them sited. Other installers are not as willing to provide compensation, but some are very open.

Larsen asked what a risk assessment would include. Installers will know site location and the roads they will use, then they will need to figure out what will need to be removed or altered to make corners (remove fences, fill in ditches) according to Lee.

Zweizig asked if "risk assessment" is a standard term;

Dregne suggested asking both Nichols and Fannucchi for standard language, forms, etc they use, Lee will contact them and obtain it. Larsen expressed concern about the roads themselves getting torn up; Lee stated this would be part of the risk assessment.

**Page 20, (K):** Signage & fencing. Gruebling recommended as a minimum, requiring two signs on each facility, one on the tower and one on the fencing; and requiring one sign at the access drive to facility. He also suggested removing the statement "...for every 40 acres within the Facility" as nothing will be that size. So moved by Kim Gruebling. Second by Eric Larsen. Motion carried by unanimous voice vote.

**Page 20, (L):** Stray and ambient current/voltage. Dregne felt that putting the Town Board in the position of determining what "good utility practices" are is a problem. Utility companies are in a position of litigation for stray voltage and are aware of the issue. Statement as it reads now is not meaningful. Motion to eliminate (L) made by Kim Gruebling. Second by Eric Larsen. Pestor stated that stray voltage is a real issue, has experience in it. Dregne stated if the Town needs to handle stray voltage issues, it needs to be dealt with differently than it is in this statement. Individuals can sue power companies if they are concerned about stray voltage. Pestor explained that it is his understanding that individuals must have their farm tested for stray voltage before the potentially offending utility is installed, and again after it's installed. Dregne suggested the ordinance should require the establishment of a baseline. One question brought up by Dregne was how far from the turbine to Test.

Cathy Bembinster stated that per her findings from the PSC, the problems with stray voltage are in the distribution lines, not transmission lines, and thus stray voltage has not been an issue with wind turbines. Motion withdrawn by Kim Gruebling. Zweizig will request Bob Fahey to comment on the stray voltage issue. Motion to adjourn by Kim Gruebling.

### **Town of Union Plan Commission special meeting August 19, 2008**

#### **Review, discussion and possible modification of the Draft Large Wind Turbine Siting Ordinance.**

Acting Chair Doug Zweizig reviewed his list of "to do" items for the Plan Commission.

Personal experiences of Plan Commission members at turbine sites:

Gruebling has visited sites in Byron, Lincoln Township in Calumet Co, and Montfort some time ago. Found that overall people were happy with the turbines. The issues that were cited were jealousy between those who had turbines on their land and profited and those

who did not; and the conditions of the roads following installation of the turbines. One individual he talked to said that the energy company put up a second antenna for their televisions to get reception, as it had been affected by the turbines. Another individual stated they had problems with shadow flicker and the company planted two pine trees to block it. He spoke to a farmer in Montfort, who was happy with the turbines. An individual he spoke to in Byron felt that the wind towers were inefficient and there should be more nuclear power instead. One individual stated they could hear the turbines when they turned toward the wind. Gruebling talked to the Town Chairman in Lincoln Township about a letter that he (Gruebling) had received when the issue of wind turbine siting in Union started; Chairman stated the letter was full of exaggerations and many facts were misrepresented.

Lee visited wind farms out west; he stated that issues and complaints seemed to depend upon the time of day. Overall, there was about a 60/40 split between those who had positive opinions of the turbines and those that did not. It seemed to Lee that those who had them on their land were positive about them, and those who did not stated they were uncomfortable with them- this may be jealousy.

Eric Larsen went to a site south of Rockford; no one was available to talk to so he simply got out of his car and walked around. It was a nice day, windy, and the windows in the homes surrounding the site were all closed and it seemed that no one was outside. The noise was similar to a plane going overhead. He stood under a tower to see if the reports of unease could be felt; it was not, spent 20-30 minutes there.

Doug Zweizig reviewed his discussion with Rick James. Cited some specific issues with sound studies. He suggested not using the word "ambient" and instead using "background noise."

Gruebling would like to know if Kemperman and James (K&J) have done any preconstruction studies, and how did they turn out after construction? Did they meet their specs? If off, how far are they off? How many have they done?

Zweizig will check on Gruebling's questions and report back to the Commission. Rick James felt that a distance setback would not be needed if they used their sound studies, it would only be needed for safety issues.

Dave Pestor proposed a one mile setback that can be increased or decreased by using sound studies through independent agencies, but not decreased to less than 1/2 mile from a residence. He felt this would put more burden on the energy companies to be sure they have the right sites for the sound studies and have to prove to the Township that the sound studies are accurate using independent agencies.

Larsen questioned why require the one mile setback to begin with, if there is a sound study required? Would the sound study be required, or could the company just accept the one mile setback?

Regarding concerns with enforcement, Zweizig reported that Rick James stated one thing that can be required is that the turbine not be allowed to operate during the night; this is not a big burden on the power company as this is not a peak usage time and can reduce problems with noise contributing to sleep issues.

Zweizig then reviewed the questions he asked Rick James related to the commonly found 5dB over background noise level, and the "annoyance" issue with regard to health effects. James had explained that "5dB difference is clearly perceptible and therefore will be annoying at night, especially for children and even if they continue to sleep through it ...This had been widely, internationally recognized." Additionally, James stated "annoyance is a common concept in community noise discussions, in the literature and in the courts.

In Pedersen and Wayne's 'Wind turbine noise, annoyance and self-reported health and well-

being in different living environments,' the percentage of persons "annoyed" by the turbine noise increased directly with the dBA sound pressure levels. Since response to intrusive noise will differ in degree among recipients, some proportion of those "annoyed" will be "highly annoyed," leading to complaints and legal challenges to the noise sources and regulators."

Overall feelings about K&J approach:

Jim Bembinster stressed the importance of including C weighted testing in the sound testing requirements.

Larsen is not comfortable relying solely on a sound level study system for siting; feels there must be a minimum distance established no matter what. Feels there is too much opportunity for bad data coming out of studies. Others agree, seems to be the general sentiment of the Commission.

Regarding enforcement issues, K&J outline enforcement methods in their ordinance. Attorney Dregne clarified that if there is a lawful ordinance in place and the turbines are not in compliance, there should be no problem in getting a court order to make the turbines stop operating.

Lee suggested that perhaps older wind farm developments did not have ordinances that they could enforce, leading to some of the problems they are experiencing today.

Zweizig asked which ordinance the Citizens Committee would rather see used, the K&J ordinance or the draft the Committee has put together.

Cathy Bembinster believes that the K&J ordinance is a better document. She also believes that a minimum setback should be required, no matter what other studies are required.

Jim Bembinster agrees, he feels the K&J ordinance is the best ordinance he has seen on the issue. Jim Bembinster offered to send the K&J ordinance to Gordon Whitehead, acoustical engineer in Canada, for review and input.

Lee expressed concern that Whitehead might be biased in his opinions, and would recommend contacting someone locally, perhaps with less bias.

Lee also feels that the K&J ordinance is a better document to use, as it has a lot of protections for the Township built into it. Should the theory presented in the K&J document be reviewed by another acoustical engineer? Getting approval for that expenditure, and then getting it done, would be time consuming.

Gruebling feels getting answers to his question about how many studies they've done and what their success rate has been would give the Commission a better idea of how much trust to put into their methodology.

Jim Bembinster cautioned the Commission that using just sound studies does not take into effect multiple turbines and their possible affect on sound levels.

Attorney Dregne stated that at this point, there is no question that a sound study will be required; now the Commission is wondering how good the methodology is that K&J is using. Therefore, is the Commission considering the sound study as an alternative to a distance setback?

Dregne reminded the Commission to keep in mind the severability clause, which means if there is one part of the ordinance that is unenforceable by a court, they can strike that portion without changing the rest of the document. Given that, there would be a back up requirement that could be enforced if both distance and sound setbacks were included. Dregne believes it would be easier to defend an ordinance that requires that the industry



operates within the sound pressure levels, as there is a good deal of research to back it up and it presents a solid argument. Lee stated that there is plenty of documentation to support the 1/2 mile setback as well. However, Dregne stated, he has been unable to determine exactly why the 1/2 mile setback is needed, as there is supporting documentation for other setback distances as well, i.e. 1 mile.

Motion to incorporate the sound measurement aspects of the Kemperman and James into the Town's proposed ordinance, with changes as required (pages 19-32 of the "How To Guide") made by Eric Larsen. Second by Doug Lee.

Larsen is unsure whether the purpose and intent, and definitions in the K&J ordinance should also be incorporated.

Renee Exum feels that definitions should be used, and the draft ordinance should be adjusted to use the same abbreviations and terminology.

The K&J document will totally replace the noise section of the current draft ordinance, as well as the enforcement section.

Gruebling cited an issue with 4. Complaint Resolution, (1) on page 26; he is concerned with establishing a paper trail and someone taking ownership of the complaint. He suggested including someone from the Town Board, Building Inspector, etc in the complaint process, as well as requiring that the complaints be made in writing. Gruebling also wondered how multiple complaints from one individual would be handled, and how many times the same complaint would be investigated.

Dregne believes that the enforcement section could use some work; usually, the Town is placed in the position of deciding how to address complaints. The Commission should try to clarify the complaint procedure, to ensure that the operator has the responsibility to work with the Town on complaint investigation and resolution. Dregne also suggested including a statement clarifying that once the complaint is resolved, it is resolved finally. Gruebling suggested that the Building Inspector contact the company with the complaints, instead of the complainant.

Motion carried by unanimous voice vote.

Physical setback issue:

Lee stated his support for the 1/2 mile setback minimum proposed. Larsen agreed. Motion to adopt 1/2 mile setback made by Doug Lee. Second by Eric Larsen. Pector cited numerous studies and new information suggesting larger setbacks. Believes that based upon what he has read and seen, the setback should be greater than 1/2 mile to ensure public health and safety. Motion to amend the original motion to a 1 mile setback made by Dave Pector. No second, motion failed.

Exum suggested using a required 1/2 mile setback and recommended setback of 1 mile, leaving the decision up to the power company to determine where they wanted to site turbines within those parameters. This would include adopting more stringent sound mitigation requirements if the turbines were sited closer than 1 mile. Larsen would like to see the sound mitigation requirements remain the same for residents no matter how close they are to the turbines.

Zweizig brought up the issue of how to deal with new technologies? Larsen's opinion is that the 1/2 mile setback should be the minimum, with the sound studies results available to push the setback distance out farther if required. This approach would allow for changes in technology.

Dregne reviewed the draft findings, and brought up the fact that the 1/2 mile setback seems to be on the low end of the recommendations. He will adjust the findings to support the decision of the Commission. Original motion carried by unanimous voice vote.

Motion to delete section VI (D) (12) a & b as unnecessary made by Kim Gruebling. Second

by Renee Exum. Motion carried by unanimous voice vote.

Regarding section VI (D) (12) c, shadow flicker: What will be done with the map requested in this section? Dregne believes that the intent is to locate the potential problems and mitigate them. There are larger concerns about shadow flicker, including its effects on yards, buildings and intersections. Jim Bembinster stated it is his understanding is that the mapping that they do is based on one 3'x3' window on a house only. Dregne stated that a more clearly defined standard needs to be laid out than "identify problem zones within a one-mile radius where shadow flicker will interfere with existing or future residences and roadways..." There should be better technical language to use in this section. If available, a specific standard should be cited.

Gruebling felt that the "future residences" statement would be difficult to address. Zweizig agreed that better language is needed; Cathy Bembinster volunteered to draft new language for this section.

Building Inspector Bob Fahey addressed the issue of stray voltage related to wind turbines. He believes that this issue will not be a problem with turbines. Generally, stray voltage found on farms and affects animals. Many farms have not been wired well over the years, and are not kept up as they should be with grounding, bonding, etc. Stray voltage results from poor grounding, bonding, etc. Although the Public Service Commission rules deal with utilities, some of the high voltage wires coming from turbines could be privately owned, in which case the PSC would not regulate them. The Department of Commerce regulates privately owned utilities. Overall, Fahey recommended having something in the ordinance to cover both utility and privately owned wires. It is his opinion that it is a good idea to have pre- and post- construction stray voltage studies done to protect everyone involved. Fahey estimated that studies would cost \$2,000 to \$3,000 per farm. He also suggested that whatever language they use, the term "certified stray voltage investigator" should be included.

Regarding the term "good utility practice" in section VIII (L), Fahey stated that no official definition for this exists. It is similar to the term "workmanlike manner", very subjective and hard to enforce. However, "good utility practices" would be things that utilities do on an everyday basis.

Zweizig asked if Fahey knew of any alternative phrasing that could be used. "Good utility practice" is a term that is used frequently in the industry, and Fahey felt it could be left in. Additionally, the requirement that the "good utility practices" be "approved by the Town of Union Board" should be removed; language stating that the licensee will conform to "all applicable rules and regulations, in the installation and maintenance of all electrical facilities within the WESF, as approved by a commercially certified electrical inspector" should be added.

Dregne noted that there is nothing in the Large Wind Energy ordinance regarding construction specifics, but the Small Wind Energy ordinance has very detailed requirements related to construction. It was explained that this is because there is a larger concern with construction of small turbines, as individuals can put them up themselves. Large turbines are put up by companies with much invested, it is understood that they don't want to risk their investments and therefore have high construction standards.

Regarding stray voltage, Fahey is unsure why two pre- and post- construction stray voltage tests are needed; one each should be sufficient. Change statement to only one pre- and one post-construction stray voltage test. The twice in spring, twice in fall requirement should also be removed.

The issue of defining "nonparticipating parcel" was brought up; this would be a parcel not entered into an agreement with wind energy developer. The definition for "participating landowner" should include the statement "allowing for a shorter setback than would

otherwise be allowed under this ordinance.”

Motion to adjourn made by Eric Larsen.

## **Town of Union Plan Commission special meeting September 5, 2008**

### **Review, discussion and possible modification of the Draft Large Wind Turbine Siting Ordinance.**

Motion that the findings with a revision date of 9.2.08 be accepted into the ordinance made by Commissioner Doug Lee. Second by Doug Zweizig. Motion carried by unanimous voice vote.

Attorney Dregne is going to address and finalize the public roads issue.

Regarding the letter of credit for road maintenance, Dregne, working with the Town Engineer, will determine what type of letter of credit will need to be provided. It will be part of the risk assessment. Attorney Dregne will handle the road maintenance and related issues in his draft of the ordinance.

Decommissioning: the issue of whom is responsible for the decommissioning is yet to be resolved. Doug Lee presented a copy of the Beloit ordinance with decommissioning information included. The ordinance states “...the owner shall cause the facility, including foundation, to be dismantled and removed from the site...” This puts the legal obligation on the land owner. Form of surety will be required of the operator in the amount the Town determines is adequate.

Commissioner Gruebling feels that they need to determine how much it would cost to take a turbine down.

Attorney Dregne suggested that a plan for deconstruction could be provided and reviewed by the Town Engineer, and he could then determine the cost.

Gruebling stated that the Town has separate accounts for different items, such as roads that haven't been put in yet, and this approach may be an option for segregating these funds. An interest bearing account would help take into consideration inflation costs.

Attorney Dregne thinks that a requirement that a decommissioning plan be submitted, including the applicants estimate of costs, which would then be reviewed by the Town Engineer who will make a determination on costs. The applicants would then be required to post financial security, either via a letter of credit or cash in escrow. Attorney Dregne recommended avoiding using a bond if possible.

Greg Hofmeister suggested handling the cost estimate as he does roads, by adding a 10% contingency on top of the estimate. He always adds an estimating contingency, depending upon stage of project.

The plan is to use the Beloit ordinance and our own existing language and combine them to get to what we want. Attorney Dregne will redraft this section to include

- 1) submitting a plan,
- 2) including estimated costs of implementing decommissioning plan,
- 3) a review and approval by the Town and Town Engineer, and
- 4) posting surety in the form of letter of credit or cash in escrow.

Will the landowner be responsible for the decommissioning or the applicant, or is it a joint responsibility?

Eric Larsen stated that when dealing with gravel pits it is only the applicants who are responsible; he was concerned that there would be an issue with inconsistency if the turbines are handled differently.

Attorney Dregne believes that if the surety issue is covered then there should be no issue with which party is responsible, and doesn't think that both need to be responsible.

Commissioner Lee commended that with financial security in the form of continual renewals of a letter of credit or cash in an escrow account, the Town's concerns will be covered and guaranteed no matter what.

Attorney Dregne questioned if the owner of the property would be someone who is part of the application.

The Town will need to have the owner acknowledge that the Town is allowed to enter the owners property to inspect the turbines. It is unclear if that is in the ordinance at this time, but the landowners do need to be tied into the licensing procedure.

Attorney Dregne asked if at this point the Town is assuming that there will be an application form. Acting Chairman Doug Zweizig stated that was the assumption.

Therefore, Dregne asked if an application form would need to be developed or if an existing form could be used, and what specific information does it need to include. One specific item it needs to include is a statement that the owner is allowing the Town to access the property.

A checklist seems to be the best way to go, it would be easy for attorney Dregne to compile. It was agreed to proceed with a checklist format and to have Dregne draft it.

Regarding a standard for reclamation after decommissioning: Zweizig wants to be sure that the decommissioning requirements are "standard". The idea of not requiring the land to be returned to its previous condition is inconsistent with what is currently required for gravel pits; however pits are more intrusive to the land than turbines.

Hofmeister suggested prohibiting the burying of materials, restoring the topsoil and leaving it in a condition that is not erodible. There would be no need to go through a reseeding program if the land will be returned to a farm field.

Zweizig asked how much top soil and sub soil would be needed;

Hofmeister stated that not much is needed, and was not sure that the Town would need to be concerned with regulating the amounts. Per Greg, would prohibit burying materials. Also restoration of top soil, leaving it in a condition that is not erodible, similar language. No need to go through a seeding program if it will be returned to a farm field.

Doug Z: how much top soil and sub soil is needed?

Greg, not much, not sure that town needs to be concerned with it. Should we ask for a reclamation plan?

Committee member Jim Bembinster cited the sample decommissioning information provided by EcoEnergy; the wording is acceptable to all and will be incorporated into the ordinance by Dregne.

Larsen requested that the depth be increased to 48"; the existing language requires 42". Attorney Dregne will prepare a "reimbursement section" that addresses licensing costs and ordinance development cost recovery fees.

According to Dregne, a public hearing is not legally required in this instance, as it is a permitting process/issue. No policy decisions are being made. No neighbor notification is needed, only for stray voltage testing. Permits should go directly to the Town Board.

What is the required timeline for the Board to take action on requests?

Per Dregne, nothing needs to be specified by the Town or in the ordinance, as there is no way to know how long the process may take.

## **TOWN OF UNION**

### **Regular Plan Commission Meeting**

**September 25, 2008**

**Public Hearing: Review and recommendation of action on request made by Donald Maas, 7337 N. Pleasant Prairie Rd., Evansville, WI and Harold and Mary Abey, 7828 N. State Rd. 104, Evansville, WI to obtain a conditional use permit for 12 months to erect a 60 meter wind measurement tower (MET tower) to collect information for wind turbine feasibility. No utilities or roads will be constructed in conjunction with this request.**

Chairman Francis recused himself due to a conflict of interest; the discussion was chaired by Commissioner Doug Zweizig.

Zweizig requested that those speaking please keep their comments to 3 minutes, and provide their name.

**Gary Haltaufderheide [employee of wind developer EcoEnergy]** provided a brief presentation of the application. EcoEnergy is requesting to install a temporary 60 meter MET tower on the Abey and Maas properties. EcoEnergy will be acting on their behalf this evening.

The tower will record wind speeds and temperatures in the area. Installing the tower gives EcoEnergy information about wind speed and temperatures. A MET tower is installed about 7 miles from the proposed site in Magnolia, and it is gathering good information. MET towers gather accurate information for a distance of approximately 2 miles surrounding the tower. EcoEnergy would like to reaffirm the findings of the existing tower in Magnolia. EcoEnergy wants to obtain accurate data to help make people more comfortable with this project.

The tower would be painted in bands of FAA approved orange and white paint.

The crop dusting company in the area has been contacted and they have no objection, they stated they will talk to their pilots about the tower.

Guy wires will be supported by anchors 4.5 feet into the ground; there will be no concrete foundations. A solar panel will be used to run the data collection equipment.

Five sensors are located on tower, measuring wind speeds and directions. Personnel in EcoEnergy's Madison office will review the data. The location of the tower is such as they

are trying to take the least amount of farm land out of production and stay as close to lot line as possible.

The location as shown on the map may vary 10 feet in either direction, to find the best location. EcoEnergy Employee Haltaufderheide contacted neighbors via phone to notify them of the request.

**Committee Member Susan Pestor:** regarding the accuracy of the readings, all the information that the Citizens Committee received from the industry stated that readings should be taken at hub height. She is unsure why these readings will not be taken at hub height, and questions if other outside companies will be verifying their information.

**Curt Bjurlin, project manager with [wind developer] EcoEnergy:** regarding having a MET tower shorter than turbine itself and whether it will provide accurate data: the first stage in a project is to install a temporary tower about 60 meters tall and at a later time-if the tower indicates there is a good wind resource there-then an 80 meter tower would be installed. At that time, EcoEnergy would take all the materials related to the project, including permits and land owner agreements, and hand it over to a financing company which would employ an independent engineer to evaluate the data and investigate whether the project was financeable.

**Committee Member Jim Bembinster, Hwy. C:** would EcoEnergy be willing to provide the name of who they spoke to about crop spraying?

[Eco Energy Employee] Haltaufderheide stated he spoke to "Brian" at Seneca Foods in Janesville.

Bembinster stated that another company does the crop spraying here and this person has indicated to Bembinster that the tower could be a problem.

**Harold Abey Sr.:** has spoken to the individual who does crop spraying in this area, and what he told the Abey is different than what Bembinster has said. He is willing to come to any meeting and give his opinion. Doesn't have his name, but he lives in Oregon.

**[Wind Developer] Bjurlin** stated that crop dusters are allowed to fly at a lower altitude than other airplanes and at a closer proximity to things. It is part of the job description of crop dusters to fly close to and around obstructions, including power lines, silos, etc.

Commissioner Lee would like to get the aircraft information first hand, and find out if it will be a financial burden to the affected airplane flyers. Would like to hear from them directly, from the pilot who flies off Maas' property. Would it put them out of business?

Gruebling agrees that Lee makes a good point, however this is an open meeting that was published in paper and the crop duster could have come if he wanted to and felt that the issue would affect his livelihood.

Lee stated that he may not live in the area, and therefore does not have easy access to meeting information.

**Tom Drew, Magnolia:** the MET tower referenced earlier is located on their property. They have had no problems with anything related to the tower. Has a person who crop dusts within 1/2 mile of tower and he has had no problems.

Lee presented an article from Lubbock, Texas where a crop duster hit a MET tower and the pilot was killed. He would prefer to see the tower lit, it is only one foot lower than the FAA required height for lighting. Would EcoEnergy be willing to install lighting? [Wind Developer] Bjurlin stated that lighting the tower would require more electricity than would be generated by the solar panel.

**Elaine Strassburg, Cty C:** would the main purpose of this tower be to determine if it's feasible to erect a wind turbine?

[Wind Developer] Bjurlin stated yes, the sole purpose of tower is to evaluate wind speed with the future purpose of harnessing the resource with a turbine.

Strassburg asked if there is a specific period of time that the tower would be up and what would be the status of the tower once the measurements are complete.

Zweizig explained that the application is for 12 months, after that time it would be taken down.

Bjurlin stated that at the 12 month expiration date, they may wish to request a renewal if wind resources measurements are positive. In any case, the MET towers are temporary structures.

Public hearing closed at 8:38 p.m.

Commissioner Exum mentioned that EcoEnergy is on record stating that the turbines could power 1200 homes; does the MET tower in Magnolia indicate the capability could be less?

[Wind developer] Bjurlin stated that the information gathered from the Drew property indicates it may, but a MET tower in the center of the project area will provide better information. The tower location on the map is not the highest location in area, but it will provide better information about wind flow and variability.

EcoEnergy is basing their evaluation thus far on the Drew property data but would have better answer with data from the proposed MET tower.

Gruebling asked if any members of the Plan Commission visited the MET tower site in Magnolia; several had including Exum, Zweizig and Pestor. It is a 60 meter tower, as is the one proposed for Union.

Attorney Dregne stated that the request is located in an A1 district; the zoning ordinance lists allowed conditional uses within A1 parcels - where does this request fit in the existing list?

Lee believes that it doesn't fit. Is there another zoning district that would allow something like this? No. Cell towers have been permitted, perhaps under the "telephone and telegraph transmission lines" item. Both temporary and permanent structures need to be allowed under conditional uses or permitted uses. MET tower is not really a wind turbine, thinks that the town has jurisdiction but it is not clearly addressed in ordinance.

Recused Plan Commission Chairman Alvin Francis stated that the "temporary" provision was used in the past, for an asphalt plant on the George property when Highway 14 was repaved.

Zoning ordinance section 17.03 (C) allows for temporary uses in any zoning district, and therefore items that are not allowed as a conditional or permitted use on a permanent basis can be approved on a temporary basis.

Does it need to comply with setbacks?

Attorney Dregne stated that it is reasonable to assume that they must comply with setbacks. The section in question also states that the approval is subject to any conditions set by the Plan Commission.

Would an 80 meter tower be permanent?

[Wind Developer] Bjurlin stated that 80 meter towers can be permanent, but would likely not be in the same location as the 60 meter tower.

If setbacks apply, then putting the MET tower on the lot line would not meet the setback requirements.

[Wind Developer] Bjurlin stated that there would be no fence around tower, but it is a climbable structure with the proper equipment. This site was chosen to minimize the impact on surrounding Ag land.

A variance would be needed to address the setback issue, which would be reviewed and approved or denied by the Board of Adjustment.

Attorney Dregne stated that the Plan Commission could issue a CUP with the condition that the variance be approved by the Board of Adjustment.

Commissioner Krajeck asked if the property owners could agree to waive the setback requirements. Attorney Dregne stated they could not, as the setback requirement is a zoning ordinance requirement, and state law requires variance requests go to the Board of Adjustment, who grant variances if the legal standards are met. If they chose to move the tower, it would need to be 50 feet from a property line.

Commissioner Lee asked if the 50 foot setback would apply to the tower itself, or the guy wires; Attorney Dregne felt and the Plan Commission agreed that the setback would be from the guy wires. Attorney Dregne felt that considering that the applicants are trying to minimize Ag land disturbance and the fact that the tower is a temporary structure, they would have a good case for a variance.

Commissioner Pestor stated that if a CUP for the MET tower was granted before the large wind energy ordinance is completed, [wind developer] EcoEnergy should acknowledge that granting the CUP for the MET tower in no way implies that the Town is agreeing to a wind turbine.

[Wind Developer]Bjurlin agrees.

Commissioner Pestor does not want EcoEnergy to get the wrong intent, and assume that a turbine may be put up.

Lee believes that the Town has an obligation to let EcoEnergy investigate to see if turbines are feasible, since we've spent so much time on the large wind energy ordinance.

[Wind Developer] Bjurlin stated that EcoEnergy has no problem agreeing to Pestor's request and putting it in writing.

Exum asked if EcoEnergy would share the data collected from the tower with the Town; Bjurlin stated that they would, and they are currently sharing the information from the tower on the Drew property with the Town of Magnolia.

Bjurlin further stated that the information is generally shared on an annual basis, and that the raw data is proprietary, but would provide analyzed data, either in hard copy or electronically.

Exum wondered if the Town would be concerned with the accuracy of the data provided.

Gruebling doesn't think that the Town should be concerned about it, as it is not under their authority.

Zweizig stated that the Town can only be concerned with issues of health and safety.



Motion to approve the request made by Donald Maas, 7337 N. Pleasant Prairie Rd., Evansville, WI and Harold and Mary Abey, 7828 N. State Rd. 104, Evansville, WI to obtain a conditional use permit for 12 months to erect a 60 meter wind measurement tower (MET tower) to collect information for wind turbine feasibility. No utilities or roads will be constructed in conjunction with this request. The approval is conditioned upon the applicants either obtaining a variance to the setback requirements, or moving the tower to meet the setback requirements, and notifying the Plan Commission which of the two alternatives they intend to implement and where the tower will ultimately be located. Motion made by Kim Gruebling. Second by Eric Larsen.

[Wind Developer] Bjurlin asked for clarification that if they do not obtain a variance they can choose to move the tower. That is correct.

Exum expressed concern about crop dusters. It is indicated that the tower will have orange paint, would like that included in the motion as a requirement, as well as requiring that the guy wires be identified with cable balls, or similar markers.

[Wind Developer] Bjurlin stated that typically, yellow bands are placed on the outermost sections of guy wire.

Motion to amend the original motion to include a method for increased visibility on the MET tower for air traffic and increased visibility on the guy wires, specifically orange paint on the tower and yellow tape or flags which will remain in place and visible for 12 months on the outermost guy wires, to meet FAA regulations made by Renee Exum. Second by Kim Gruebling.

Amendment carried by unanimous voice vote.

**Regarding the draft wind ordinance:** Attorney Dregne distributed copies which were current as of 9.24.08 to the Plan Commission.

Commissioner Krajeck mentioned that if the Plan Commission intends to have a public hearing on the final ordinance, it will have to be done at the October meeting.

Attorney Dregne stated that the summary of the wind ordinance process, which was developed at the beginning of process, states that the Plan Commission will hold a public hearing (they have had two) and it then makes a final recommendation to the Town Board.

The Town Board is required to hold a public *meeting*, not necessarily a public *hearing*. It will be the Board's decision how they wish to proceed.

Gruebling would like to have the final review of the ordinance at the next regular meeting, but it should be the first item on the agenda. Additionally, he believes that the Plan Commission has done its duty on having public hearings, and doesn't need to hold more.

It was agreed that the final draft of the ordinance will be reviewed at regular October meeting, and it will be first on the agenda.

#### **Town of Union Plan Commission meeting October 30, 2008**

##### **Final review of the Wind Energy Systems Licensing Ordinance.**

Chairman Alvin Francis recused himself due to a conflict of interest. Co-chairman Doug Zweizig chaired the discussion.

Items noted by Attorney Matt Dregne for discussion were reviewed.

*Page 7, paragraph 9. Confirmation of the SPL measurements that were presented at the public hearing.* The sound levels presented by Eco Energy throughout the Town as detailed on a map distributed at the public hearing were reviewed.

Attorney Dregne was unclear on what sound scale is being used on the map. He also questioned whether this finding provides any useful information to support any of the provisions of the ordinance.

Commissioner Renee Exum stated that the study was trying to establish ambient sound levels.

Attorney Dregne does not feel that paragraph 9 is needed, as it does not establish any type of baseline readings. Motion to remove section nine from page 7 of the Wind Energy Systems Licensing Ordinance made by Renee Exum. Second by Eric Larsen. Motion carried by unanimous voice vote.

*Page 21, paragraph b. and paragraph b sub (1):*

Replace "...either..." with "...the lower of..." in paragraph b. Section b (1) will remain "...outside any occupied structure or."

*Page 22, top of page:*

Leave in "...from a state highway or other major road."

*Page 22, paragraph 3 sub (c):*

Greg Hofmeister recommended leaving the statement as it is (35 dBA<sub>Leq</sub> 10 min), as it is written in such a way for technical specifications. Agreed by all.

*Page 22, bottom of page.*

The reasoning behind the requirement is to duplicate the seasonal environment which existed at the time the original study was done.

*Page 25, paragraph 3 sub (f):*

Change statement to "...including on any Participating Parcel or Project Parcel..."

*Page 26 sub (d)*

Doug Lee questioned whether "fiber optics" should be so specific, in case newer technology becomes available. It was agreed to change "fiber optic" to "underground communication lines."

*Page 28, paragraph 7*

Change statement to "...be acceptable if all of the following conditions are satisfied...". Add "...measured as the sum of those times during which shadow flicker occurs during any calendar year..." to paragraph 7 sub. (a).

Don Krajeck requested clarification regarding whether the 10 hour requirement means at one receptor or a sum of several receptors; it was agreed that it is one receptor, Dregne will add language to clarify this point. Agreed by all to leave wording as "...shadow flicker shall not fall..." vs. "...shadow flicker will not fall..."

*Page 28, paragraph 7*

Change "...flicker shall not fall..." to "...flicker will not fall ..."

*Page 29, paragraph 7 sub (d)*

Wording will remain "...flicker will not..."

*Pages 35-36, effective date of ordinance*

Change "...passage or publication..." to "...passage and publication..."  
Other concerns or questions:

*Page 27, paragraph d sub (6):*

Clearance should be changed to 75 feet instead of 40 feet.

*Page 27, paragraph h:*

Change to "...his or her..." from "...her..."

*Page 18 sub (pp):*

Change statement to "Wind Energy Systems Facility License or WESF License."

*Page 8 paragraph c sub (1):*

Exum questioned whether the statement "a) the setbacks set forth in the State of Wisconsin 2007 Draft Model Wind Ordinance are unsubstantiated by science..." needed further clarification. It was agreed to add "...not based on empirical evidence related to health effects..." to replace "...unsubstantiated by science..."

### **Recommendation to the Town Board of adoption of the Wind Energy Systems Licensing Ordinance.**

Motion to recommend that the Town Board adopt Ordinance 2008-06 Wind Energy Systems License Ordinance made by Doug Lee. Second by Dave Pestor. Motion modified to include "as amended by the Plan Commission at its October 30, 2008 meeting" made by Doug Lee. Second by Dave Pestor.

Roll call vote: Doug Zweizig – Yes; Eric Larsen – Yes; Dave Pestor – Yes; Renee Exum – Yes; Kim Gruebling – Yes; Doug Lee – Yes. Motion carried 6-0.

Town Board will hold a public hearing on the ordinance at their meeting on November 13, 2008.

### **The Town of Union Special Board Meeting November 13, 2008**

#### **Public Hearing: Adoption of Ordinance #2008-06, Wind Energy Systems Licensing Ordinance**

Public hearing opened at 7:02 pm.

**Harold Abey Sr.:** Regarding the 1/2 mile setback in the ordinance, wonders where wind turbines could be sited in Union with this restriction?

Town Chairman Schneider explained that there are allowances within the ordinance for neighbors to waive the setback, down to 1,000 feet.

Abey stated that at a meeting in October 2007, an attorney from Fond du Lac cited a statute which stated that towns may not enact provisions that increase cost, decrease efficiency, or prevent siting of wind turbines.

Attorney Matt Dregne clarified that the statute does not exactly say that, it states that any ordinance must be health and safety related, or not substantially increase cost, or allow for an alternative system.

Abey asked if the 1/2 mile [setback] prevent[s] installation; Dregne stated that it does not, as neighboring landowners can enter into agreement with the wind developer to reduce the setback to 1,000 feet.

Chairman Schneider noted that the sound modeling outlined in the ordinance has to be complied with as well, regardless of the setback distance.

**(Recused Chairman of Plan Commission) Alvin Francis:** Believes that the provision allowing participating landowners to agree to have turbines sited within 1,000 feet is misleading, as the sound modeling still has to prove that the sound is not excessive even if it's closer to a residence. [NOTE: Commissioner Francis recused himself because he has signed or is considering signing a contract with Wind Developer EcoEnergy]

Attorney Dregne confirmed that the statute Abey was referring to is Wis. Stat. s. 66.0401. He provided a copy for review. Dregne agreed that the Statute is confusing,

**Harold Abey Sr.:** Regarding the recent request to site a MET tower on the property line of two property owners, both neighbors agreed to the siting location of the tower, but the Town Board overruled the neighbors agreement and said that the tower could not be sited in that location.

Attorney Dregne clarified that the reason the request was not approved as submitted was not within the Large Wind Energy ordinance, it was the Town's zoning ordinance which has minimum setback requirements which require that a MET tower must meet side yard, rear yard setbacks.

Abey noted that although both parties agreed on the location, the Board still overrode it. He believes this could happen again with the large wind energy ordinance.

Attorney Dregne stated that under the Large Wind Energy Ordinance, property owners will be able to enter into those agreements and the agreements will be binding; the Town has no control over the agreements.

**Harold Abey Jr.:** Stated that Town Building Inspector Bob Fahey said that the MET tower was considered an antenna, and it could be put anywhere they wanted to. Dregne stated that the Plan Commission addressed the issue at their meeting, at which Fahey was not present, and their decision at that time was that the tower was subject to the side and rear yard setbacks outlined in the Town's zoning code, and the applicants could get a variance to locate the tower in the location they desired or move it to a location that conformed to the setback requirements.

**Linda Kawula:** Has talked to a lot of people around Wisconsin, and feels that the Town's proposed ordinance is the most solid ordinance in Wisconsin that she has read. Supports the ordinance as written, allows land owners to sign off for shorter setbacks. Has talked extensively with individuals living in the Fond du Lac area near a wind farm, who are having problems with the wind farm and wish that their town boards had been more proactive in developing an ordinance for them.

Schneider read in a letter received from Commissioner Doug Zweizig supporting the ordinance.

Schneider then read in a letter from [Wind Developer] Gary Haltaufderheide.

**Keith Henning:** Stated that many people support and do not support this ordinance. Gas prices went up during the last year, they may go up again and if they do, we may be more willing to put up turbines closer to homes if it would reduce energy costs. Sound appears to be the major issue regarding these turbines.

Schneider stated that the Town's Comprehensive Plan was just completed in October 2006, and there was an opportunity to address the issue of wind turbines then and have it included in the Plan. No one addressed the issue.

The issue was then brought up immediately after the Comprehensive Plan was approved;

felt this was a “backdoor” way to address the issue.

Attorney Dregne expressed his opinion that the Plan Commission did the absolute best they could to get the best information possible and draft a comprehensive ordinance. He has never seen a process so thorough, or a Plan Commission work so hard on an issue, in the 15 years he’s practiced law and worked with local governments. He believes the issue will not go away, and hopes we get to a point where all objectives can be met together.

**Kevin Kawula:** Is hoping their town [Spring Valley] adopts an ordinance like the Town of Union is considering. Believes that allowing land owners to sign off on the setbacks is a good option. Surprised that [wind developer] Gary Haltaufderheide didn’t provide a copy of the contracts the landowners are given to sign; believes they are not good contracts. Noted that wind turbines don’t work if there is no power.

Public hearing closed at 7:32 p.m.

### **Adoption of Ordinance #2008-06, Wind Energy Systems Licensing Ordinance**

Schneider stated that the Board has seen the process, and extensive commitment made by citizens to the process. It is clear that the ordinance protects residents and provides for some possibility of putting up a tower within the Town.

**George Franklin** stated that he went up to the Fond du Lac wind farm, and talked to people who owned them. One turbine was located within 500 feet of a house, and the landowner was compensated for being that close. Drove up to one and stood there, sounded like if you had your car running. He noted that there was some shadow flicker. Franklin believes that the sound would bother some people, and not others. As an example, he noted that he built grain bin a few years ago with brother, and the sound of the dryers running drove one neighbor nuts. They tried to muffle the sound, but couldn’t make it better for her. It is his understanding that there are other styles of turbines available that may be a better design, a horizontal type, doesn’t know why they’re not being proposed here. Franklin believes that the ordinance does allow for setbacks to be adjusted, and overall it’s a good ordinance.

Schneider stayed at wind farm in Germany during the past summer for two days. He noted that the turbines don’t produce electricity until 14 mph wind speed is reached, and don’t even turn until 9 mph wind speeds are reached. At the farm he stayed at, the lighting on all 100 of the turbines all came on at one time. During his visit, he spoke to people living in Freiberg, Germany, at the base of Alps, who stated that the wind towers aren’t paying for themselves, and they are now starting to look at solar power as a better alternative.

Motion to adopt Ordinance 2008-06 Wind Energy Systems Licensing Ordinance made by Kendall Schneider. Second by Don Krajeck.

Roll call vote: Kendall Schneider – Yes; George Franklin – Yes; Don Krajeck – Yes. Motion carried 3-0.

### **Dismissal of the Large Wind Energy Citizens Committee**

The Board expressed their gratitude to the members of the Citizens Committee for their hard work and dedication to the process of developing the Large Wind Energy Ordinance.

Motion to dismiss the members of the Large Wind Energy Citizens Committee from their appointments made by Kendall Schneider. Second by Don Krajeck. Motion carried by unanimous voice vote.