

CHAMPAIGN COUNTY ZONING BOARD OF APPEALS NOTICE OF SPECIAL MEETING

Date: **February 1, 2010**
Time: **6:30 P.M.**
Place: **Lyle Shields Meeting Room
Brookens Administrative Center
1776 E. Washington Street
Urbana, IL 61802**

**Note: NO ENTRANCE TO BUILDING
FROM WASHINGTON STREET PARKING
LOT AFTER 4:30 PM.
Use Northeast parking lot via Lierman Ave.,
and enter building through Northeast
door.**

*If you require special accommodations please notify the Department of Planning & Zoning at
(217) 384-3708*

EVERYONE MUST SIGN THE ATTENDANCE SHEET – ANYONE GIVING TESTIMONY MUST SIGN THE WITNESS FORM

AGENDA

1. Call to Order
2. Roll Call and Declaration of Quorum
3. Correspondence
4. Approval of Minutes (January 14, 2010)
5. Continued Public Hearings

Case 634-AT-08 Part B. Petitioner: Zoning Administrator

Request: Amend the Champaign County Zoning Ordinance as follows:

1. **Add definitions for “SMALL WIND TURBINE TOWER” and “BIG WIND TURBINE TOWER,” and revise the definition for “WIND FARM.”**
2. **Amend subsection 4.2.1. to allow BIG WIND TURBINE TOWER as a second principal use on lots in the AG-1 and AG-2 Zoning Districts.**
3. **Amend paragraph 4.3.1E. to add new height regulations that apply to “SMALL WIND TURBINE TOWER” and “BIG WIND TURBINE TOWER.”**
4. **In Section 5.2 replace “wind turbine” with “BIG WIND TURBINE TOWER”, and indicate BIG WIND TURBINE TOWER is only authorized as a second principle use on lots in certain Zoning Districts.**
5. **In Section 6.1.3 add new standard conditions for “BIG WIND TURBINE TOWER” that are similar to the standard conditions for a WIND FARM.**
6. **Add new subsection 7.7 making “SMALL WIND TURBINE TOWER” an authorized accessory use by-right in all zoning districts and add requirements including but not limited to:**
 - a. **the turbine must be located more than one and one half miles from the nearest municipal zoning jurisdiction; and**
 - b. **minimum required yards that are the same as for other accessory structures in the district provided that the overall height is not more than 100 feet; and**
 - c. **an overall height limit of 200 feet provided that the separation from the nearest property line is at least the same as the overall height and authorize private waivers of the separation by adjacent neighbors; and**

CHAMPAIGN COUNTY ZONING BOARD OF APPEALS
NOTICE OF SPECIAL MEETING
FEBRUARY 1, 2010
PAGE 2

Case 634-AT-08, Part B Cont:

- d. a limit of no more than two turbine towers per lot; and
 - e. allowable noise limits; and
 - f. a requirement for engineer certification; and
 - g. a requirement to notify the electrical power provider if interconnected to the electrical grid; and
 - h. a requirement that no interference with neighboring TV, radio, or cell phone reception; and
 - i. a requirement for the removal of inoperable wind turbines.
7. In Section 9.3.1 add fees for SMALL WIND TURBINE TOWER and BIG WIND TURBINE TOWER.
8. In Section 9.3.3 add application fees for BIG WIND TURBINE TOWER Special Use Permit.

Case 658-AT-09:

Petitioner: Zoning Administrator

Request: Amend the Champaign County Zoning Ordinance as follows:

Part A:

- 1. Amend paragraph 6.1.1.C.5 to reference the requirements of Paragraph 6.1.4.P.5
- 2. Amend paragraph 6.1.4.C.11. to:
 - (a) require the wind farm separation from restricted landing areas or residential airports only for restricted landing areas and residential airports that existed on the effective date of County Board adoption of Case 658-AT-09; and
 - (b) reduce the distance of the wind farm separation from restricted landing areas or residential airports so that it is based on the height of the wind farm tower.

Part B:

- 1. Amend paragraph 9.1.11.D.1 to include reference to subsection 6.1 Instead of section 6.1.3.

- 6. New Public Hearings
- 7. Staff Report
- 8. Other Business
- 9. Audience Participation with respect to matters other than cases pending before the Board
- 10. Adjournment

*** Administrative Hearing. Cross Examination allowed.**

CASE NO. 634-AT-08 Part B

SUPPLEMENTAL MEMORANDUM

January 26, 2010

Champaign
County
Department of

Petitioner: **Zoning Administrator**

Prepared by: **John Hall**
Zoning Administrator

JR Knight
Associate Planner



Request: **Amend the Champaign County Zoning Ordinance as follows:**

1. **Add definitions for “SMALL WIND TURBINE TOWER” and “BIG WIND TURBINE TOWER”, and revise the definition for “WIND FARM.”**
2. **Amend subsection 4.2.1. to allow BIG WIND TURBINE TOWER as a second principal use on lots in the AG-1 and AG-2 Zoning Districts.**
3. **Amend paragraph 4.3.1E. to add new height regulations that apply to “SMALL WIND TURBINE TOWER” and “BIG WIND TURBINE TOWER”.**
4. **In Section 5.2 replace “wind turbine” with “BIG WIND TURBINE TOWER”.**
5. **In Section 6.1.3 add new standard conditions for “BIG WIND TURBINE TOWER” that are similar to the standard conditions for WIND FARM.**
6. **Add new subsection 7.7 making “SMALL WIND TURBINE TOWER” an authorized accessory use by-right in all zoning districts and add requirements including but not limited to:**
 - a. **the turbine must be located more than one and one half miles from the nearest municipal zoning jurisdiction; and**
 - b. **minimum required yards that are the same as for other accessory structures in the district provided that the overall height is not more than 100 feet; and**
 - c. **an overall height limit of 200 feet provided that the separation from the nearest property line is at least the same as the overall height and authorize private waivers of the separation by adjacent neighbors; and**
 - d. **a limit of no more than two turbine towers per lot; and**
 - e. **allowable noise limits; and**
 - f. **a requirement for engineer certification; and**
 - g. **a requirement to notify the electrical power provider if interconnected to the electrical grid; and**
 - h. **a requirement for no interference with neighboring TV, radio, or cell phone reception; and**
 - i. **a requirement for the removal of inoperable wind turbines.**
7. **In Section 9.3.1 add fees for SMALL WIND TURBINE TOWER and BIG WIND TURBINE TOWER.**
8. **In Section 9.3.3 add application fees for BIG WIND TURBINE TOWER Special Use Permit.**

STATUS

This case was continued from the January 14, 2010, ZBA meeting. Several revisions to the proposed amendment were made at that meeting and staff has compiled those changes into a Draft Proposed New Subsection 7.7 and a Proposed Draft Amendment showing all proposed changes to the Zoning Ordinance.

A new Finding of Fact will be sent out later this week or will be available at the meeting.

ATTACHMENTS

- A REVISIED Draft Proposed New Subsection 7.7
- B REVISIED Draft Ordinance

1. Add the following new subsection 7.7:

7.7 SMALL WIND TURBINE TOWER

A SMALL WIND TURBINE TOWER shall be allowed as an ACCESSORY USE by Zoning Use Permit in all DISTRICTS as follows:

- A. No SMALL WIND TURBINE TOWER shall be located less than one-and-one-half miles from an incorporated municipality that has a zoning ordinance.
- B. The maximum allowable HEIGHT of a SMALL WIND TURBINE TOWER (measured to the tip of the highest rotor blade) shall be the smaller of the following dimensions:
 1. A dimension equal to 90% of the minimum distance from the base of the proposed SMALL WIND TURBINE TOWER to the nearest DWELLING, PRINCIPAL STRUCTURE, or PRINCIPAL BUILDING under different ownership; or
 2. A dimension equal to 90% of the minimum distance from the base of the proposed SMALL WIND TURBINE TOWER to the nearest third party above-ground electrical transmission lines, communication towers, railroad right of way, or public street right of way. This limit on height may be reduced upon submission of a PRIVATE WAIVER signed by the owner of said electrical transmission line or communication tower or the relevant railroad or public street maintenance jurisdiction. The PRIVATE WAIVER must specify the agreed minimum separation and maximum height; or
 3. A dimension that for any SMALL WIND TURBINE TOWER that must be assembled on the ground and tilted vertically into final position, is no greater than the maximum length that can fit within the LOT LINES prior to being tilted into final position, as measured from the actual point of tilt up; or
 4. 150 feet; provided that

(Note: At the October 15, 2009, meeting the Board decided that any small wind turbine tower between 150 feet and 200 feet tall should be a variance.)

5. The above limits on maximum allowable height notwithstanding, the maximum HEIGHT of a SMALL WIND TURBINE TOWER on a LOT in a subdivision shall not exceed 75% of the minimum required AVERAGE LOT WIDTH when any adjacent and bordering subdivision LOT is vacant; and also provided that

Attachment A. Case 634-AT-08 Part B REVISED Draft Proposed New Subsect. 7.7
JANUARY 26, 2010

6. The HEIGHT is no more than three times the side and rear yard required by paragraph 7.7 D.
7. A SMALL WIND TURBINE TOWER taller than 150 feet must be authorized by VARIANCE.

(Note: Discussion by the Board at the October 15, 2009, meeting indicated that the Board was inclined to allow the 150 feet maximum height for any turbine. Note that the minimum required separation to power lines and other third-party facilities has been relocated to this section to reduce the risk of error in height determinations. Paragraph 5 minimizes conflict between wind turbines and home construction in new subdivisions. Paragraph 6 has been added to clarify that a small wind turbine tower taller than 150 feet must be authorized by variance.)

- C. The maximum allowable rotor diameter for any vertical or horizontal axis SMALL WIND TURBINE TOWER shall be as follows:
 1. 15 feet on a LOT with less than one acre LOT AREA.
 2. 24 feet on a LOT with one acre or more of LOT AREA.

(Note: These heights are the same height limits that apply to residential accessory structures that are found in Footnote 4 of Section 5.3 of the Zoning Ordinance)

3. Rotor diameter greater than 24 feet may be authorized as follows:
 - (a) when the separation distance from the SMALL WIND TURBINE TOWER to the nearest DWELLING under other ownership is a minimum of 8.3 times the rotor diameter, up to a maximum diameter of 75 feet; and
 - (b) when the LOT AREA is three acres or larger.
4. VARIANCES for a maximum SMALL WIND TURBINE TOWER rotor diameter larger than 75 feet shall be prohibited.

(Note: The height limits for non-residential accessory structures are the same as for principal structures and varies by district between 35 feet and 150 feet and is 75 feet for the Light Industrial District. This revision no longer distinguishes between residential and non-residential turbines and requires a greater separation distance for any rotor larger than 24 feet in diameter and requires at least three acres of lot area. The requirement that rotors larger than 24 feet require a separation distance to the nearest dwelling (under other ownership) that is 8.3 times the rotor diameter is intended to minimize nuisance effects (including shadow flicker) from the larger rotors. A 200 feet separation is 8.3 times as long as a 24 feet diameter rotor. The American Wind Energy Association asserts that smaller rotors spin much faster than wind farm rotors and thus the flicker effect is less noticeable. However, even with no shadow flicker there is reason enough to require a greater separation from neighboring dwellings for larger rotors. With this revision even a residential turbine could have a rotor diameter of 75 feet if there is no

other dwelling closer than 622.5 feet. Wind farm turbines generally have rotors that are not over 330 feet in diameter. The 1,200 feet separation required by the Zoning Ordinance is only about 3.6 times the diameter of 330 feet rotor but wind farms also have to mitigate shadow flicker if there will be more than 30 hours annually. The prohibition on variances for rotor diameter is to make sure there is no loophole in the regulations that would allow what is essentially a big wind turbine tower from being authorized either by variance rather than by special use permit or in a district where it could not be authorized by special use permit.)

D. A SMALL WIND TURBINE TOWER shall be allowed within any YARD in all DISTRICTS subject to the following:

1. The minimum SIDE YARD as measured to the base of the SMALL WIND TURBINE TOWER shall be one-third of the total HEIGHT and the minimum REAR YARD shall be same as the minimum SIDE YARD less the width of any ALLEY that may exist; and provided there is

(Note: The minimum required side yard is approximately one third the maximum allowable height for principal structures in most (but not all) zoning districts. This requirement results in a much greater side and rear yard requirement than for other accessory structures but a wind turbine tower is allowed to be much taller than other kinds of accessory towers.

Thus, a 150 feet tall wind turbine will require a 50 feet side and rear yard. This requirement may act as a height limit on lots with less than a 100 feet of width but wind turbine towers on such lots are probably already limited in height due to proximity of adjacent dwellings.)

2. A required separation distance to the nearest PRINCIPAL STRUCTURE or PRINCIPAL BUILDING under different ownership that is equal to at least a distance of 1.11 times the overall HEIGHT (measured to the tip of the highest rotor blade) of the SMALL WIND TURBINE TOWER; and provided that
3. The blades of the SMALL WIND TURBINE TOWER shall not cross the property line.

E. The number of SMALL WIND TURBINE TOWERS that shall be allowed per LOT is as follows:

1. Only one SMALL WIND TURBINE TOWER shall be authorized on a lot with less than three acres of LOT AREA.
2. No more than ~~two~~ four SMALL WIND TURBINE TOWERS with a total nameplate rating of not more than 100kW shall be authorized on a lot with three acres or more LOT AREA ~~provided however that no more than one non-residential ACCESSORY SMALL WIND TURBINE TOWER shall be authorized less than 1,200 feet from the nearest DWELLING that is under different ownership and conforming to USE.~~

3. One roof-mounted or wall-mounted wind turbine shall be authorized in addition to the above limits. The roof-mounted or wall-mounted wind turbine shall not be more than 15 feet higher than any other portion of the STRUCTURE on which it is mounted.

F. Maximum allowable noise level.

1. A SMALL WIND TURBINE TOWER shall always be operated as recommended by the manufacturer to minimize noise.
2. The maximum allowable noise level of a SMALL WIND TURBINE TOWER at the time of Zoning Use Permit approval shall generally not exceed the regulatory standards set by the Illinois Pollution Control Board (IPCB) as implemented by this Ordinance, except during short term periods due to high winds or power outages as follows:

(Note: The shaded and italicized text is optional text if the Board desires to limit the maximum noise rating to only more powerful small wind turbines. That approach would also require the shaded and italicized text in option subparagraph 3 below.)

- (a) For the purposes of implementing the IPCB noise regulatory standards by this Ordinance, land use shall be considered as follows:
 - (1) A SMALL WIND TURBINE TOWER shall be considered a Class C land use as defined in the IPCB noise regulations regardless of the principal use on the LOT.

(Note: It is not clear whether or not the IPCB noise regulations are intended to interpret a residential wind turbine as a Class C land use or a Class A land use (the same as the dwelling). If a residential wind turbine is Class A the relevant noise limit is 38 decibels rather than 46 decibels if it is considered Class C. Thus, considering a residential wind turbine as Class C results in a higher maximum allowable noise level. This approach could result in residential neighbors arguing over the noise level on the basis that the noise level is greater than allowed by the IPCB even though the noise levels may comply with the Zoning Ordinance.

- (2) Both DWELLINGS and LOTS that are 10 acres or less in area and on which a DWELLING is the PRINCIPAL USE shall be considered as Class A land uses as defined in the IPCB noise regulations.
- (3) A LOT on which a business USE is established as a PRINCIPAL USE shall be considered as Class B land use as defined in the IPCB noise regulations.

(Note: The IPCB noise regulations also identify noise limits for Class C to Class B (business). The County is not obligated to include noise limits for business turbines).

- (4) In accordance with the IPCB noise regulatory standards the maximum noise level shall apply at the property line although for LOTS that are more than 10 acres in area the standard shall apply at the DWELLING.

- (b) There shall be no maximum noise level at the time of construction provided that at the time of application for the Zoning Use Permit to authorize construction or replacement the SMALL WIND TURBINE TOWER is located 900 feet or more from either of the following:
- (1) the nearest property line of a LOT that is 10 acres or less in area and on which a DWELLING is the PRINCIPAL USE;
or
 - (2) a DWELLING on a LOT that is 10 acres or larger.
- (c) If at the time of application for the Zoning Use Permit to authorize construction or replacement the SMALL WIND TURBINE TOWER is located less than 900 feet from any LOT or BUILDING as described in subparagraph 7.7 2.(b), the maximum noise level from the SMALL WIND TURBINE TOWER shall comply with the noise regulatory standards set by the Illinois Pollution Control Board as implemented by this Ordinance and shall be documented by manufacturer's data that shall be submitted with the application.

(Note: The 900 feet distance is an arbitrary standard and is 90% of the minimum 1,000 feet separation for wind farms from non-participating dwellings. A wind turbine that is bordered by farmland for a distance of 900 feet has no maximum noise level. Some small wind turbines can make as much noise as wind farm turbines.

The relevant noise standard for Class C to Class A is the nighttime standard and for Class C to Class B there is only one standard. The IPCB noise regulations specify maximum allowable noise level at eight different sound frequencies but small turbine manufacturers generally provide only a single noise rating if any at all. Attachments to the Supplemental Memorandum dated January 8, 2010, indicate that the Class C to Class A nighttime standard equates to a 46 decibel noise rating and the Class C to Class B standard equates to a 61 decibel rating. Based on information in the report "Wind Turbine Noise Issues" (see p. 12) that was included with the Supplemental Memorandum dated January 8, 2010, the Class C to Class B standard is so high that no minimum separation from adjacent businesses appears to be warranted.)

3. The Zoning Administrator shall include with any zoning use permit for a SMALL WIND TURBINE TOWER a statement that compliance with these requirements does not necessarily indicate compliance with the Illinois Pollution Control Board noise regulations.

(Note: As reviewed above, it is not clear whether or not the IPCB noise regulations are intended to interpret a residential wind turbine as a Class C land use or a Class A land use (the same as the dwelling) and interpreting it as Class C results in a much higher allowable noise than would interpreting it as Class A. Another difference between this approach and a literal interpretation of the IPCB noise regulations is that if a dwelling is constructed within 900 feet of an existing wind turbine that does not comply with the IPCB regulations, this Ordinance will not consider the noise from the turbine to be in violation whereas it is not clear what is the intent of the IPCB regulations in such instances.)

- G. The SMALL WIND TURBINE TOWER shall have an automatic over speed control to render the system inoperable when winds are blowing in excess of the speeds for which the system is designed and a manually operable method to render the system inoperable in the event of a structural or mechanical failure of any part of the system.
- H. SMALL WIND TURBINE TOWERS shall comply with all applicable regulations of the FAA.
- I. No illumination of the SMALL WIND TURBINE TOWER shall be allowed unless required by the Federal Aviation Administration.
- J. The SMALL WIND TURBINE TOWER shall either be the color supplied by the manufacturer or else painted white or gray or another non-reflective, unobtrusive color that shall be specified in the Zoning Use Permit application.
- K. There shall be a minimum clearance of 15-20 feet between the ground and the lowest arc of the rotor blades for a SMALL WIND TURBINE TOWER.
- L. Any SMALL WIND TURBINE TOWER in a Residential Zoning District must be protected from unauthorized climbing by any of the following means:
 - 1. removal of climbing rungs, if possible, to a height of 12 feet, provided that the SMALL WIND TURBINE TOWER is unclimbable without the rungs; or
 - 2. Devices such as fences at least six feet high with locking portals or anti-climbing devices 12 feet vertically from the base of the SMALL WIND TURBINE TOWER.
- M. The SMALL WIND TURBINE TOWER shall not cause any significant electromagnetic interference with any radio, television, microwave communication, or satellite navigation on other properties and compliance with the following shall be deemed to be full compliance for the purposes of this Ordinance:
 - 1. All wind turbines shall comply with the Federal Communication Commission (FCC) requirements for electromagnetic interference including FCC Part 15. The applicant shall provide a copy of the wind turbine manufacturer's certification of compliance with FCC requirements with the Zoning Use Permit Application.
 - 2. Metal blades shall not be used.

(Note: Non-FCC compliant wind turbines will require a variance.)

Attachment A. Case 634-AT-08 Part B REVISED Draft Proposed New Subsect. 7.7
JANUARY 26, 2010

- N. In the event of destruction by any means or the need for replacement, wind turbine towers and wind turbines located more than one-and-one-half miles from an incorporated municipality that has a zoning ordinance may be replaced as follows:
1. The wind turbine may be replaced on the original tower pursuant to a new Zoning Use Permit provided that the replacement complies with all manufacturer's safety recommendations and requirements.
 2. If a replacement wind turbine cannot be installed on an existing wind turbine tower in compliance with all manufacturer's safety recommendations and requirements and a new SMALL WIND TURBINE TOWER is required, the new SMALL WIND TURBINE TOWER shall be in full compliance with these regulations.

(Note: This change is intended to ensure that before a new turbine is mounted to an existing pole, the applicant must be able to prove that the pole is adequate for the turbine just as would be necessary for any wholly new assembly. The second subparagraph ensures that any replacement of both tower and turbine shall be in full compliance and the permitting process should identify if the maximum noise limit applies.)

- O. If a wind turbine is derelict for six consecutive months the owner shall be notified that they must, within six months of receiving the notice, restore their system to operating condition. If the owner(s) fails to restore their system to operating condition within the six-month time frame, then the owner shall be required, at his expense, to remove the wind turbine from the tower and also remove the tower if it has guy cables, for safety reasons. If the owner fails to remove the wind turbine within one month the Zoning Administrator shall send a notice that the wind turbine is in violation of the Zoning Ordinance and subject to a daily fine as provided for in Section 10.
- P. The Zoning Use Permit application for the SMALL WIND TURBINE TOWER shall include the following:
1. A copy of the manufacturers standard drawings of the wind turbine structure and stamped engineering drawings of the tower, base, footings, and/ or foundations as provided by the manufacturer sufficient to prove that the wind turbine tower is safe for the use intended. Wet stamps shall not be required.
 2. Evidence must be given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
 3. Such evidence and documentation as required to verify that the SMALL WIND TURBINE TOWER meets all other Zoning Ordinance requirements.

1. Revise the following in Section 3.0 Definitions:

(Note: strike out and underlining indicate changes from the current Ordinance)

WIND FARM: A unified development of WIND FARM TOWERS and all other necessary components including cabling, transformers, a common switching station, and maintenance and management facilities which are intended to produce electricity by conversion of wind energy and to deliver the electricity to the power grid ~~and having a name plate capacity of more than 10 megawatts (MW)~~. A WIND FARM is under a common ownership and operating control even though the individual WIND FARM TOWERS may be located on land that is leased from many different landowners. A WIND TURBINE TOWER or WIND TURBINE TOWERS that do not conform to the definitions of either a SMALL WIND TURBINE TOWER or a BIG WIND TURBINE TOWER shall by definition be considered a WIND FARM and may only be authorized as a WIND FARM.

WIND FARM TOWER: A wind turbine nacelle and rotor and the supporting tower structure that are part of a WIND FARM development and intended to produce electricity for the power grid or any WIND TURBINE TOWER that does not conform to the definitions of either a SMALL WIND TURBINE TOWER or a BIG WIND TURBINE TOWER.

2. Add the following in Section 3.0 Definitions:

WIND TURBINE TOWER, BIG: A wind turbine nacelle and rotor and the supporting tower structure and associated control or conversion electronics that is owned (or leased to be owned) by the owner of land on which it is located for the purpose of producing electrical energy to be used onsite by another principal use on the same property provided that any energy not used onsite may be sold to the electric power provider and which is not more than 500 feet in overall height measured to the tip of the highest blade and that is not connected to or part of a system of more than two other BIG WIND TURBINE TOWERS.

WIND TURBINE TOWER, SMALL: A wind turbine nacelle and rotor and the supporting tower structure and associated control or conversion electronics that is owned (or leased to be owned) by the owner of land on which it is located and which produces electrical energy to be used onsite by the principal use on the same property provided that any energy not used onsite may be sold to the electric power provider and which is not more than 150 feet in overall height measured to the tip of the highest blade and with a rotor diameter of not more than 75 feet.

3. Add new subparagraph 4.2.1 C.2. as follows:

2. Up to three BIG WIND TURBINE TOWERS may be authorized as a second PRINCIPAL USE on a LOT as a Special Use Permit in the AG-1 Agriculture and AG-2 Agriculture DISTRICTS.

4. Revise subparagraph 4.3.1 E. as follows:

(Note: strike out and underlining indicate changes from the current Ordinance)

- E. Any tower (including antenna) over 100 feet in HEIGHT shall be subject to the SPECIAL USE requirements in the DISTRICT in which it is located except for the following:

Attachment B. Case 634-AT-08 Part B REVISED Draft Ordinance
JANUARY 26, 2010

- (1) any tower that meets the requirements of Section 4.3.1 C.; or
- (2) any TEST WIND TOWER that does not exceed 200 feet in HEIGHT; or
- (3) any WIND FARM TOWER except as HEIGHT regulations are required as a standard condition in Section 6.1.4. ; or
- (4) any SMALL WIND TURBINE TOWER.

5. **In Section 5.2 replace “Wind Turbine (1-3 wind turbines)” with “BIG WIND TURBINE TOWER¹⁷ (1-3 BIG WIND TURBINE TOWERS)**

6. **Add footnote 17 to the indication for special use permit in all Districts where BIG WIND TURBINE TOWER (1-3 BIG WIND TURBINE TOWERS) is authorized (AG-1, AG-2, I-1, and I-2).**

7. **Add the following footnote 17 in Section 5.2:**

17. A BIG WIND TURBINE TOWER must be located on the same property as another principal use for the purpose of producing electrical energy that shall be used onsite by that other principal use provided that any energy not used onsite may be sold to the electric power provider.

8. **Add “BIG WIND TURBINE TOWER” to Subsection 6.1.3 and indicate the following standard conditions:**

1. No minimum fencing is required.
2. The Minimum lot size is the same as applicable in the zoning DISTRICT.
3. The Maximum HEIGHT is the same as par. 6.1.4 D. 6.
4. The minimum required YARDS are the following:
 - (a) The front setback is the same as par. 6.1.4 C.5.
 - (b) The SIDE and REAR YARDS are the same as par. 6.1.4 C.6.
5. Add the following explanatory provisions:
 - (a) No BIG WIND TURBINE shall be located in the following areas:
 - (1) Less than one-and-one-half miles from an incorporated municipality that has a zoning ordinance.

9. Add the following new subsection 7.7:

7.7 SMALL WIND TURBINE TOWER

A SMALL WIND TURBINE TOWER shall be allowed as an ACCESSORY USE by Zoning Use Permit in all DISTRICTS as follows:

- A. No SMALL WIND TURBINE TOWER shall be located less than one-and-one-half miles from an incorporated municipality that has a zoning ordinance.
- B. The maximum allowable HEIGHT of a SMALL WIND TURBINE TOWER (measured to the tip of the highest rotor blade) shall be the smaller of the following dimensions:
 1. A dimension equal to 90% of the minimum distance from the base of the proposed SMALL WIND TURBINE TOWER to the nearest DWELLING, PRINCIPAL STRUCTURE, or PRINCIPAL BUILDING under different ownership; or
 2. A dimension equal to 90% of the minimum distance from the base of the proposed SMALL WIND TURBINE TOWER to the nearest third party above-ground electrical transmission lines, communication towers, railroad right of way, or public street right of way. This limit on height may be reduced upon submission of a PRIVATE WAIVER signed by the owner of said electrical transmission line or communication tower or the relevant railroad or public street maintenance jurisdiction. The PRIVATE WAIVER must specify the agreed minimum separation and maximum height; or
 3. A dimension that for any SMALL WIND TURBINE TOWER that must be assembled on the ground and tilted vertically into final position, is no greater than the maximum length that can fit within the LOT LINES prior to being tilted into final position, as measured from the actual point of tilt up; or
 4. 150 feet; provided that
 5. The above limits on maximum allowable height notwithstanding, the maximum HEIGHT of a SMALL WIND TURBINE TOWER on a LOT in a subdivision shall not exceed 75% of the minimum required AVERAGE LOT WIDTH when any adjacent and bordering subdivision LOT is vacant; and also provided that
 6. The HEIGHT is no more than three times the side and rear yard required by paragraph 7.7 D.

Attachment B. Case 634-AT-08 Part B REVISED Draft Ordinance
JANUARY 26, 2010

7. A SMALL WIND TURBINE TOWER taller than 150 feet must be authorized by VARIANCE.
- C. The maximum allowable rotor diameter for any vertical or horizontal axis SMALL WIND TURBINE TOWER shall be as follows:
1. 15 feet on a LOT with less than one acre LOT AREA.
 2. 24 feet on a LOT with one acre or more of LOT AREA.
 3. Rotor diameter greater than 24 feet may be authorized as follows:
 - (a) when the separation distance from the SMALL WIND TURBINE TOWER to the nearest DWELLING under other ownership is a minimum of 8.3 times the rotor diameter, up to a maximum diameter of 75 feet; and
 - (b) when the LOT AREA is three acres or larger.
 4. VARIANCES for a maximum SMALL WIND TURBINE TOWER rotor diameter larger than 75 feet shall be prohibited.
- D. A SMALL WIND TURBINE TOWER shall be allowed within any YARD in all DISTRICTS subject to the following:
1. The minimum SIDE YARD as measured to the base of the SMALL WIND TURBINE TOWER shall be one-third of the total HEIGHT and the minimum REAR YARD shall be same as the minimum SIDE YARD less the width of any ALLEY that may exist; and provided there is
 2. A required separation distance to the nearest PRINCIPAL STRUCTURE or PRINCIPAL BUILDING under different ownership that is equal to at least a distance of 1.11 times the overall HEIGHT (measured to the tip of the highest rotor blade) of the SMALL WIND TURBINE TOWER; and provided that
 3. The blades of the SMALL WIND TURBINE TOWER shall not cross the property line.
- E. The number of SMALL WIND TURBINE TOWERS that shall be allowed per LOT is as follows:
1. Only one SMALL WIND TURBINE TOWER shall be authorized on a lot with less than three acres of LOT AREA.

Attachment B. Case 634-AT-08 Part B REVISED Draft Ordinance
JANUARY 26, 2010

2. No more than four SMALL WIND TURBINE TOWERS with a total nameplate rating of not more than 100kW shall be authorized on a lot with three acres or more LOT AREA.
 3. One roof-mounted or wall-mounted wind turbine shall be authorized in addition to the above limits. The roof-mounted or wall-mounted wind turbine shall not be more than 15 feet higher than any other portion of the STRUCTURE on which it is mounted.
- F. Maximum allowable noise level.
1. A SMALL WIND TURBINE TOWER shall always be operated as recommended by the manufacturer to minimize noise.
 2. The maximum allowable noise level of a SMALL WIND TURBINE TOWER at the time of Zoning Use Permit approval shall generally not exceed the regulatory standards set by the Illinois Pollution Control Board (IPCB) as implemented by this Ordinance, except during short term periods due to high winds or power outages as follows:
 - (a) For the purposes of implementing the IPCB noise regulatory standards by this Ordinance, land use shall be considered as follows:
 - (1) A SMALL WIND TURBINE TOWER shall be considered a Class C land use as defined in the IPCB noise regulations regardless of the principal use on the LOT.
 - (2) Both DWELLINGS and LOTS that are 10 acres or less in area and on which a DWELLING is the PRINCIPAL USE shall be considered as Class A land uses as defined in the IPCB noise regulations.
 - (3) A LOT on which a business USE is established as a PRINCIPAL USE shall be considered as Class B land use as defined in the IPCB noise regulations.
 - (4) In accordance with the IPCB noise regulatory standards the maximum noise level shall apply at the property line although for LOTS that are more than 10 acres in area the standard shall apply at the DWELLING.
 - (b) There shall be no maximum noise level at the time of construction provided that at the time of application for the Zoning Use Permit to authorize construction or replacement the SMALL WIND TURBINE TOWER is located 900 feet or more from either of the following:

**Attachment B. Case 634-AT-08 Part B REVISED Draft Ordinance
JANUARY 26, 2010**

- (1) the nearest property line of a LOT that is 10 acres or less in area and on which a DWELLING is the PRINCIPAL USE;
or
 - (2) a DWELLING on a LOT that is 10 acres or larger.
- (c) If at the time of application for the Zoning Use Permit to authorize construction or replacement the SMALL WIND TURBINE TOWER is located less than 900 feet from any LOT or BUILDING as described in subparagraph 7.7 2.(b), the maximum noise level from the SMALL WIND TURBINE TOWER shall comply with the noise regulatory standards set by the Illinois Pollution Control Board as implemented by this Ordinance and shall be documented by manufacturer's data that shall be submitted with the application.
3. The Zoning Administrator shall include with any zoning use permit for a SMALL WIND TURBINE TOWER a statement that compliance with these requirements does not necessarily indicate compliance with the Illinois Pollution Control Board noise regulations.
- G. The SMALL WIND TURBINE TOWER shall have an automatic over speed control to render the system inoperable when winds are blowing in excess of the speeds for which the system is designed and a manually operable method to render the system inoperable in the event of a structural or mechanical failure of any part of the system.
- H. SMALL WIND TURBINE TOWERS shall comply with all applicable regulations of the FAA.
- I. No illumination of the SMALL WIND TURBINE TOWER shall be allowed unless required by the Federal Aviation Administration.
- J. The SMALL WIND TURBINE TOWER shall either be the color supplied by the manufacturer or else painted white or gray or another non-reflective, unobtrusive color that shall be specified in the Zoning Use Permit application.
- K. There shall be a minimum clearance of 20 feet between the ground and the lowest arc of the rotor blades for a SMALL WIND TURBINE TOWER.
- L. Any SMALL WIND TURBINE TOWER in a Residential Zoning District must be protected from unauthorized climbing by any of the following means:
1. removal of climbing rungs, if possible, to a height of 12 feet, provided that the SMALL WIND TURBINE TOWER is unclimbable without the rungs;
or

Attachment B. Case 634-AT-08 Part B REVISED Draft Ordinance
JANUARY 26, 2010

2. Devices such as fences at least six feet high with locking portals or anti-climbing devices 12 feet vertically from the base of the SMALL WIND TURBINE TOWER.
- M. The SMALL WIND TURBINE TOWER shall not cause any significant electromagnetic interference with any radio, television, microwave communication, or satellite navigation on other properties and compliance with the following shall be deemed to be full compliance for the purposes of this Ordinance:
1. All wind turbines shall comply with the Federal Communication Commission (FCC) requirements for electromagnetic interference including FCC Part 15. The applicant shall provide a copy of the wind turbine manufacturer's certification of compliance with FCC requirements with the Zoning Use Permit Application.
 2. Metal blades shall not be used.
- N. In the event of destruction by any means or the need for replacement, wind turbine towers and wind turbines located more than one-and-one-half miles from an incorporated municipality that has a zoning ordinance may be replaced as follows:
1. The wind turbine may be replaced on the original tower pursuant to a new Zoning Use Permit provided that the replacement complies with all manufacturer's safety recommendations and requirements.
 2. If a replacement wind turbine cannot be installed on an existing wind turbine tower in compliance with all manufacturer's safety recommendations and requirements and a new SMALL WIND TURBINE TOWER is required, the new SMALL WIND TURBINE TOWER shall be in full compliance with these regulations.
- O. If a wind turbine is derelict for six consecutive months the owner shall be notified that they must, within six months of receiving the notice, restore their system to operating condition. If the owner(s) fails to restore their system to operating condition within the six-month time frame, then the owner shall be required, at his expense, to remove the wind turbine from the tower and also remove the tower if it has guy cables, for safety reasons. If the owner fails to remove the wind turbine within one month the Zoning Administrator shall send a notice that the wind turbine is in violation of the Zoning Ordinance and subject to a daily fine as provided for in Section 10.
- P. The Zoning Use Permit application for the SMALL WIND TURBINE TOWER shall include the following:
1. A copy of the manufacturers standard drawings of the wind turbine structure and stamped engineering drawings of the tower, base, footings,

Attachment B. Case 634-AT-08 Part B REVISED Draft Ordinance
JANUARY 26, 2010

and/ or foundations as provided by the manufacturer sufficient to prove that the wind turbine tower is safe for the use intended. Wet stamps shall not be required.

2. Evidence must be given that the utility company has been informed of the customer's intent to install an interconnected customer-owned generator. Off-grid systems shall be exempt from this requirement.
 3. Such evidence and documentation as required to verify that the SMALL WIND TURBINE TOWER meets all other Zoning Ordinance requirements.
- (2) In any area leased for underground gas storage or under easement for same, unless the lease or easement requires that gas injection wells and other above-ground appurtenances be located in conformance with paragraph 6.1.4 C.9.
- (3) Less than one mile from the CR Conservation Recreation Zoning District.
- (b) The special use permit for a BIG WIND TURBINE TOWER shall include all land area within 1,320 feet of a public STREET right of way that is also within 1,000 feet from the base of each BIG WIND TURBINE TOWER except that in the case of BIG WIND TURBINE TOWER in compliance with the minimum STREET separation required by paragraph 6.1.4 C. 5. in which case land on the other side of the public STREET right of way does not have to be included in the SPECIAL USE Permit.
- (c) The requirements of paragraphs 6.1.4 C. through 6.1.4 S. with the exception of paragraphs 6.1.4 E., L., and Q. shall apply.
- (d) For purposes of applying paragraphs 6.1.4 C. through 6.1.4 S. to a BIG WIND TURBINE TOWER, PARTICIPATING DWELLING or PARTICIPATING PRINCIPAL USE shall mean a DWELLING or PRINCIPAL USE that is on the same land and under the same ownership as the BIG WIND TURBINE TOWER and NON- PARTICIPATING DWELLING or NON- PARTICIPATING PRINCIPAL USE shall mean a DWELLING or PRINCIPAL USE that is not on the same land as the BIG WIND TURBINE TOWER and is under different ownership than the BIG WIND TURBINE TOWER.

10. Revise paragraph 9.1.9 B. as follows:

B. Prohibited VARIANCES

At no time shall the BOARD or the Hearing Officer grant a VARIANCE in the following instances:

1. To grant a VARIANCE to allow a USE not permissible under the terms of this ordinance in the DISTRICT involved, or any USE expressly or by implication prohibited by the terms of this ordinance in said DISTRICT.

Attachment B. Case 634-AT-08 Part B REVISED Draft Ordinance
JANUARY 26, 2010

2. To waive compliance with any municipal, state, or federal regulation incorporated into this ordinance.
3. To waive compliance with any procedural requirement contained in this ordinance.
4. To waive compliance with regulations pertaining to NONCONFORMING LOTS, STRUCTURES, or USES, except as specifically authorized in Section 8.
5. To authorize any USE or CONSTRUCTION prohibited by Section 14.2.1.
6. To authorize a SMALL WIND TURBINE TOWER rotor diameter larger than 75 feet.

11. Add new subparagraph 9.3.1 D. H. as follows:

H. WIND FARM TOWER or BIG WIND TURBINE TOWER \$4500

12. Add new subparagraph 9.3.1 D. I. as follows:

- I. SMALL WIND TURBINE TOWER
 1. Not over 50 feet in HEIGHT.....\$100
 2. greater than 50 feet in HEIGHT.....\$100 plus \$80 for each
20 feet in excess of 50 feet in height
(round to next highest 20 feet
increment)
 3. Replacement of turbine on existing tower..... \$100

13. Add new subparagraph 9.3.3 B.7. as follows:

7. BIG WIND TURBINE TOWER Special Use Permit.....
\$3,300 per BIG WIND TURBINE TOWER

CASE NO. 658-AT-09

SUPPLEMENTAL MEMORANDUM

Champaign County Department of
January 26, 2010

Petitioner: **Zoning Administrator**



Prepared by: **John Hall**
Zoning Administrator
J.R. Knight
Associate Planner

Request:
1776 E. Washington Street
Urbana, Illinois 61802

(217) 384-3708

Amend the Champaign County Zoning Ordinance as follows:

PART A:

1. **Amend paragraph 6.1.1 C.5. to reference the requirements of paragraph 6.1.4 P.5.**
2. **Amend paragraph 6.1.4 C.11. to require the wind farm separation from restricted landing areas or residential airports only for restricted landing areas and residential airports that existed on the effective date of County Board adoption of Case 658-AT-09.**

PART B:

1. **Amend paragraph 9.1.11 D.1. to include reference to subsection 6.1 instead of subsection 6.1.3.**

STATUS

This is the second meeting for this case. This case was readvertised on January 17, 2010, and a new notice was sent to all municipalities and townships with protest rights. New information has been added to the Finding of Fact regarding the changes in the readvertisement.

All new information is included in the attachments.

OVERSIGHT IN THE LEGAL ADVERTISEMENT

When this case was readvertised on January 17, 2010, the revision to paragraph 6.1.1 C.5. that was intended to be withdrawn was instead included in the ad. At the same time the revision to subparagraph 6.1.4 A.1.(c) was left out of the ad instead of being retained. The draft of the proposed amendment and the Finding of Fact have been revised to reflect this change in content and the change that was proposed for Subparagraph 6.1.4 A.1.(c) will be included in a future text amendment.

REVISED RLA WIND FARM SEPARATION

The revised minimum required separation can be summarized as follows:

- The separation is from the runway to the nearest tip of a blade of the nearest WIND FARM TOWER.
-

- The separation at the sides of a runway for both a restricted landing area (RLA) and a residential airport are based on a ratio of seven horizontal feet for each one foot of overall WIND FARM TOWER HEIGHT.
- The separation at the ends of a runway are based on (1) the slope of the IDOT approach zone (so it is different for an RLA (15:1) than for a residential airport (20:1)) and (2) the overall height of the wind farm tower. Thus, for a residential airport the separation at the end of the runway for a 500 feet tall wind farm tower is 10,000 feet and 8,000 feet for a 400 feet tall wind farm tower. For an RLA the separation at the end of the runway for a 500 feet tall wind farm tower is 7,500 feet and 6,000 feet for a 400 feet tall wind farm tower. However, the runway end separation is only about 700 feet wide for an RLA and 800 feet wide for a residential airport and the acreage taken up by that separation is not large. In fact, it may be that this separation can simply be accommodated by the spacing between wind farm towers. Staff would welcome any evidence that wind farm developers could provide regarding the typical separation between wind farm towers.
- Because the revised separation requires greater separation at the end of the runway than the existing Ordinance it actually provides greater safety than the existing requirement. And because the revised separation is based on actual wind farm tower height it occupies less farmland and allows more wind turbines than the current requirement. For example, for a minimum 1,600 feet long RLA the existing simple RLA wind farm separation requires approximately 1,154 acres per each RLA regardless of wind farm tower height. Assuming wind farm towers that are 400 feet tall, the revised RLA separation requires a total area of only 885 acres (including the separation at the ends of the runway) which is only about 77% of the current requirement of 1,154 acres.

LEGAL RLAS

All nonconforming RLAs that were identified in Case 642-AT-88 (when RLAs were added to the Zoning Ordinance) were registered with Zoning Use Permit and are legally nonconforming the same way that any RLA that existed on October 10, 1973, (the date of adoption of the Ordinance) are legally nonconforming.

ATTACHMENTS

- A Draft Proposed Change to Subparagraph 6.1.1 C.5.
- B Revised Draft Proposed Change to Subparagraph 6.1.4 C. 11.
- C Draft Proposed Change to Subparagraph 9.1.11 D.1.
- D Draft Proposed Amendment (all sections)
- E Revised Finding of Fact

Attachment A. Draft Proposed Change to Paragraph 6.1.1 C.5.
JANUARY 26, 2010

1. Amend paragraph 6.1.1 C.5. to reference the requirements of paragraph 6.1.4 P.5.

5. No Zoning Use Permit for such SPECIAL USE will be issued until the developer provides the COUNTY with an irrevocable letter of credit to be drawn upon a federally insured financial institution within 200 miles of Urbana or reasonable and anticipated travel costs shall be added to the amount of the letter of credit. The irrevocable letter of credit shall be in the amount of one hundred fifty percent (150%) of an independent engineer's cost estimate to complete the work described in Section 6.1.1C4a, except as a different amount may be required as a standard condition in Paragraph 6.1.4 P. This letter of credit, or a successor letter of credit pursuant to Section 6.1.1C6 or 6.1.1C12 shall remain in effect and shall be made available to the COUNTY for an indefinite term, or for a different term that may be required as a standard condition in Paragraph 6.1.4 P.

**Attachment B. Revised Draft Proposed Change to Subparagraph 6.1.4 C. 11.
JANUARY 26, 2010**

1. Revise subparagraph 6.1.4 C. 11. as follows:

11. ~~At least 3,500 feet separation from the exterior above ground base of a WIND FARM TOWER to any RESTRICTED LANDING AREA or RESIDENTIAL AIRPORT. For any legal RESTRICTED LANDING AREA that existed on or for which there had been a complete special use permit application received by *{the date of adoption}*, there shall be a separation from the runway to the nearest tip of a blade of the nearest WIND FARM TOWER as follows:~~

~~(a) The separation from the sides of the runway shall be seven horizontal feet for each one foot of overall WIND FARM TOWER HEIGHT.~~

{Note: IDOT only requires a height restriction to the side of an RLA for a distance of 135 feet from the runway centerline.}

~~(b) The separation from the end of the runway shall be 15 feet for each one foot of overall WIND FARM TOWER HEIGHT in a trapezoidal shape that is the width of the runway approach zone based on the requirements of 92 Ill. Admin. Code 14.520, except as follows:~~

~~(1) that part of the separation that is more than 3,000 feet from the end of a runway may be a consistent width based on the widest point of the runway approach zone.~~

~~(c) An area of separation that is the area defined by a line joining the separation from a side of the runway required in subparagraph (a) to the separation from an end of the runway required by subparagraph (b).~~

{Note: In addition to eliminating the wind farm separation for any new RLA or Residential Airport, this revision also reduces the basic separation from a standard 3,500 feet for each wind farm to a formula based separation based on the actual height of the wind farm tower and also expands the approach zone separation based on the height of the wind farm towers. The revised approach zone separation is also related to whether the approach zone is for an RLA or a residential airport. The Illinois Department of Transportation has adopted a 15 to 1 approach slope for Restricted Landing Areas (RLAs) and a 20 to 1 slope that applies to airports and presumably to residential airports.}

The existing original version of the RLA wind farm separation is in fact based on the "side transition surface" for airports that is a slope of seven horizontal feet for each vertical foot and that extends to a height of 150 feet above the ground. See 92 Ill. Admin. Code 14 APPENDIX A Airport Standards. The existing originally adopted the RLA wind farm separation was simply based on the maximum allowable wind farm tower height of 500 feet times the seven horizontal feet for a total separation of 3,500 feet. For a minimum 1,600 feet long RLA the existing simple RLA wind farm separation requires approximately 1,154 acres per each RLA. There will probably be waivers requested for most wind farms because wind farm towers are generally less than 500 feet tall. Waivers for wind farms will probably be controversial and it would be best to improve the Ordinance to reduce any unnecessary waivers.

For wind farm towers that are 400 feet tall this revised RLA separation at the sides of both an RLA and a residential airport will be 2,800 feet. The separation at the end of an RLA with 400 feet tall wind farm towers will increase to 6,000 feet. Assuming a minimum 1,600 feet long RLA and wind farm towers that

Attachment B. Revised Draft Proposed Change to Subparagraph 6.1.4 C. 11.
JANUARY 26, 2010

are 400 feet tall, the total area of RLA separation will be 885 acres which is only about 77% of the current requirement of 1,154 acres.

If wind farm turbines are installed at a density of about 70 acres per wind turbine, the change could result in nearly four additional wind turbines per RLA even though the degree of safety is arguably increased due to the longer separation at the ends of the runways.

At this time it is believed that there are no existing RLAs in any area proposed for wind farm development but it is impossible to verify.

The proposed amendment will also have no effect on any pending RLA Special Use Permit (SUP) or complete SUP application that has been received. At this time the only pending RLA SUP is Case 645-S-09 and that Case will be unaffected by the proposed amendment.)

12. For any legal RESIDENTIAL AIRPORT that existed on or for which there had been a complete special use permit application received by {the date of adoption}, there shall be a separation from the runway to the nearest tip of a blade of the nearest WIND FARM TOWER as follows:
- (a) The separation from the sides of the runway shall be seven horizontal feet for each one foot of overall WIND FARM TOWER HEIGHT.
- (b) The separation from the end of the runway and for a distance of 50 feet on either side of an end of the runway, shall be 20 feet for each one foot of overall WIND FARM TOWER HEIGHT in a trapezoidal shape that is the width of the runway approach zone based on the requirements of 92 Ill. Admin. Code 14.520, except as follows:
- (1) that part of the required separation that is more than 3,000 feet from the end of a runway may be a consistent width based on the widest part of the runway approach zone.
- (c) An area of separation that is the area defined by a line joining the separation from a side of the runway required in subparagraph (a) to the separation from an end of the runway required by subparagraph (b).

(Note: Note that this separation is different only in the specification of the separation at the end of the runway and that is based on the difference between the IDOT requirements for airport approach zones versus IDOT requirements for RLA approach zones.

There is only one Residential Airport in the County and it is nowhere near any area proposed for a wind farm. There are unlikely to be any additional future residential airports because the Illinois Department of Transportation Division of Aeronautics has no guidelines for residential airports.

Airports have an FAA protected separation that amounts to nearly four miles.)

**Attachment C. Case 658-AT-09 Draft Proposed Change To Subpar. 9.1.11 D.1.
JANUARY 22, 2010**

1. Revise subparagraph 9.1.11 D.1. as follows (no changes from previous version):

D. Conditions

1. Any other provision of this ordinance notwithstanding, the BOARD or GOVERNING BODY, in granting any SPECIAL USE, may waive upon application any standard or requirement for the specific SPECIAL USE enumerated in Section 6.1.3 ~~Schedule of Requirements and Standard Conditions~~ Standards for Special Uses, to the extent that they exceed the minimum standards of the DISTRICT, except for any state or federal regulation incorporated by reference, upon finding that such waiver is in accordance with the general purpose and intent of this ordinance, and will not be injurious to the neighborhood or to the public health, safety and welfare.

Attachment D. Case 658-AT-09 Draft Proposed Amendment
JANUARY 26, 2010

1. Amend paragraph 6.1.1 C.5. to reference the requirements of paragraph 6.1.4 P.5.

5. No Zoning Use Permit for such SPECIAL USE will be issued until the developer provides the COUNTY with an irrevocable letter of credit to be drawn upon a federally insured financial institution within 200 miles of Urbana or reasonable and anticipated travel costs shall be added to the amount of the letter of credit. The irrevocable letter of credit shall be in the amount of one hundred fifty percent (150%) of an independent engineer's cost estimate to complete the work described in Section 6.1.1C4a, except as a different amount may be required as a standard condition in Paragraph 6.1.4 P. This letter of credit, or a successor letter of credit pursuant to Section 6.1.1C6 or 6.1.1C12 shall remain in effect and shall be made available to the COUNTY for an indefinite term, or for a different term that may be required as a standard condition in Paragraph 6.1.4 P.

2. Revise subparagraph 6.1.4 C. 11. as follows:

11. For any legal RESTRICTED LANDING AREA that existed on or for which there had been a complete special use permit application received by *{the date of adoption}*, there shall be a separation from the runway to the nearest tip of a blade of the nearest WIND FARM TOWER as follows:
- (a) The separation from the sides of the runway shall be seven horizontal feet for each one foot of overall WIND FARM TOWER HEIGHT.
 - (b) The separation from the end of the runway shall be 15 feet for each one foot of overall WIND FARM TOWER HEIGHT in a trapezoidal shape that is the width of the runway approach zone based on the requirements of 92 Ill. Admin. Code 14.520, except as follows:
 - (1) that part of the separation that is more than 3,000 feet from the end of a runway may be a consistent width based on the widest point of the runway approach zone.
 - (c) An area of separation that is the area defined by a line joining the separation from a side of the runway required in subparagraph (a) to the separation from an end of the runway required by subparagraph (b).
12. For any legal RESIDENTIAL AIRPORT that existed on or for which there had been a complete special use permit application received by *{the date of adoption}*, there shall be a separation from the runway to the nearest tip of a blade of the nearest WIND FARM TOWER as follows:
- (a) The separation from the sides of the runway shall be seven horizontal feet for each one foot of overall WIND FARM TOWER HEIGHT.
 - (b) The separation from the end of the runway and for a distance of 50 feet on either side of an end of the runway, shall be 20 feet for each one foot of overall WIND FARM TOWER HEIGHT in a trapezoidal shape that is the

Attachment D. Case 658-AT-09 Draft Proposed Amendment
JANUARY 26, 2010

width of the runway approach zone based on the requirements of 92 Ill. Admin. Code 14.520, except as follows:

(1) that part of the required separation that is more than 3,000 feet from the end of a runway may be a consistent width based on the widest part of the runway approach zone.

(c) An area of separation that is the area defined by a line joining the separation from a side of the runway required in subparagraph (a) to the separation from an end of the runway required by subparagraph (b).

3. Revise subparagraph 9.1.11 D.1. as follows:

D. Conditions

1. Any other provision of this ordinance notwithstanding, the BOARD or GOVERNING BODY, in granting any SPECIAL USE, may waive upon application any standard or requirement for the specific SPECIAL USE enumerated in Section 6.1 Standards for Special Uses, to the extent that they exceed the minimum standards of the DISTRICT, except for any state or federal regulation incorporated by reference, upon finding that such waiver is in accordance with the general purpose and intent of this ordinance, and will not be injurious to the neighborhood or to the public health, safety and welfare.

REVISED DRAFT – January 26, 2010

658-AT-09

**FINDING OF FACT
AND FINAL DETERMINATION
of
Champaign County Zoning Board of Appeals**

Final Determination: *{RECOMMEND ENACTMENT / RECOMMEND DENIAL}*

Date: February 1, 2010

Petitioner: Zoning Administrator

Request: Amend the Champaign County Zoning Ordinance as follows:

PART A:

1. Amend paragraph 6.1.1 C.5. to reference the requirements of paragraph 6.1.4 P.5.
2. Amend paragraph 6.1.4 C.11. to require the wind farm separation from restricted landing areas or residential airports only for restricted landing areas and residential airports that existed on the effective date of County Board adoption of Case 658-AT-09.

PART B:

1. Amend paragraph 9.1.11 D.1. to include reference to subsection 6.1 instead of subsection 6.1.3.

FINDING OF FACT

From the documents of record and the testimony and exhibits received at the public hearing conducted on **January 14, 2010, and February 1, 2010**, the Zoning Board of Appeals of Champaign County finds that:

1. The petitioner is the Zoning Administrator.
 2. The need for the amendment came about as follows:
 - A. New requirements for wind farm development were added to the Zoning Ordinance by the adoption of Ordinance No. 848 (Case 634-AT-08 Part A) by the County Board on May 21, 2009.
 - B. Case 645-S-09 for a proposed restricted landing area within the area of an anticipated wind farm has revealed what appears to be a weakness in the wind farm amendment.
-

- C. The weakness in the wind farm regulations is that an agricultural RLA can be established with no approval necessary from the County and once established it will create an area of approximately 1,100 acres where no wind farm tower may be established.
 - D. Wind farm towers provide tremendous economic benefit to the landowner and more importantly the local school system and eliminating so much possible income would be injurious to the district.
 - E. There were also several minor errors or oversights in the final wording of Ordinance No. 848 that if not corrected could cause unnecessary complications for any wind farm review and so those oversights have also been included in this case.
3. Municipalities with zoning and townships with planning commissions have protest rights on all text amendments and they are notified of such cases. No comments have been received to date.

GENERALLY REGARDING THE EXISTING ZONING REGULATIONS

4. Existing Zoning regulations regarding the separate parts of the proposed amendment are as follows:
- A. Requirements for the development of wind farms were added to the *Zoning Ordinance* in Ordinance No. 848 (Case 634-AT-09 Part A) on May 21, 2009. These requirements included a 3,500 feet separation from any restricted landing area or residential airport to the base of any wind farm tower.
 - B. Ordinance No. 848 also reorganized Section 6 of the *Zoning Ordinance* to make it more clear that all the requirements in Section 6.1 are standard conditions and are waiveable as part of a Special Use Permit. However, some references to standard conditions and Section 6 in other parts of the *Zoning Ordinance* were not updated.
 - C. The following definitions from the *Zoning Ordinance* are especially relevant to this amendment (capitalized words are defined in the Ordinance):
 - (1) “BUILDING, MAIN or PRINCIPAL” is the BUILDING in which is conducted the main or principal USE of the LOT on which it is located.
 - (2) “NON-ADAPTABLE STRUCTURE” is any STRUCTURE or physical alteration to the land which requires a SPECIAL USE permit, and which is likely to become economically unfeasible to remove or put to an alternate USE allowable in the DISTRICT (by-right or by SPECIAL USE).
 - (3) “RESIDENTIAL AIRPORT” is any area described or defined as an AIRPORT under the *Illinois Aviation Safety Rules (92 Ill. Admin. Code Part 14)* and which is classified as a Residential Airport by the Illinois Department of Transportation, Division of Aeronautics.
-

- (4) “RESTRICTED LANDING AREA” is any area described or defined as a Restricted Landing Area under the *Illinois Aviation Safety Rules* (92 Ill. Admin. Code Part 14) and as further regulated by the Illinois Department of Transportation, Division of Aeronautics.
- (5) “SPECIAL CONDITION” is a condition for the establishment of the SPECIAL USE.
- (6) “SPECIAL USE” is a USE which may be permitted in a DISTRICT pursuant to, and in compliance with, procedures specified herein.

SUMMARY OF THE PROPOSED AMENDMENT

- 5. The proposed amendment revises portions of the recently adopted Ordinance No. 848 (Zoning Case 634-AT-09 Part A), as follows:
 - A. There is a proposed revision to Paragraph 6.1.1 C.5. to reference the requirements of Paragraph 6.1.4 P.5., as follows:
 - (1) Paragraph 6.1.1 C.5. is a part of the requirements for reclamation agreements for non-adaptable structures. It describes the requirements for the term and amount of an irrevocable letter of credit. This letter is provided so that if the County has to remove the non-adaptable structure it can draw on those funds.
 - (2) Paragraph 6.1.4 P.5 is part of the recent wind farm text amendment and modifies the requirements of Paragraph 6.1.1 C.5. for the special case of a wind farm.
 - (3) The proposed revision will make it clear that the specific provisions in Paragraph 6.1.4 P.5. are the relevant requirement for wind farms, instead of Paragraph 6.1.1 C.5
 - B. There is a proposed revision to Subparagraph 6.1.4 C.11 to change the requirements for separation of wind farm towers from Restricted Landing Areas (RLA’s) and Residential Airports, as follows:
 - (1) Originally, there was a flat 3500 feet separation between RLA’s and wind farm towers.
 - (2) The proposed amendment first revises the separation so that it only applies to RLA’s that were existing or for which a complete application had been received by the date of adoption of this text amendment.
 - (3) The separation is also divided into two different separations, as follows:
 - (a) A separation from the sides of the runway of seven feet for every vertical foot of wind farm tower height.
 - (b) A separation from the ends of the runway that is trapezoidal in shape and based on IDOT approach slopes. The approach separation extends 15 feet for every vertical foot of tower height for RLA’s and 20 feet for every vertical foot of tower height for Residential Airports.

(c) These separations are from the edge of the runway to the tip of the nearest blade of the nearest wind farm tower to prevent any wind farm tower blades from overhanging into the area of the separation.

C. There is a proposed revision to Subparagraph 9.1.11 D.1 that changes a reference to Subsection 6.1.3 to a reference to 6.1 because Section 6 was reorganized in the wind farm text amendment to make it clear that every requirement listed in Subsection 6.1 is a standard condition.

GENERALLY REGARDING RELEVANT LAND USE GOALS AND POLICIES

6. The *Land Use Goals and Policies* (LUGP) were adopted on November 29, 1977, and were the only guidance for amendments to the *Champaign County Zoning Ordinance* until the *Land Use Regulatory Policies- Rural Districts* were adopted on November 20, 2001, as part of the Rural Districts Phase of the Comprehensive Zoning Review (CZR) and subsequently revised on September 22, 2005. The relationship of the Land Use Goals and Policies to the Land Use Regulatory Policies is as follows:
- A. Land Use Regulatory Policy 0.1.1 gives the Land Use Regulatory Policies dominance over the earlier Land Use Goals and Policies.
 - B. The Land Use Goals and Policies cannot be directly compared to the Land Use Regulatory Policies because the two sets of policies are so different. Some of the Land Use Regulatory Policies relate to specific types of land uses and relate to a particular chapter in the land use goals and policies and some of the Land Use Regulatory Policies relate to overall considerations and are similar to general land use goals and policies.

REGARDING SPECIFICALLY RELEVANT LAND USE GOALS AND POLICIES

7. There are goals and policies for agricultural, commercial, industrial, and residential land uses, as well as conservation, transportation, and utilities goals and policies in the Land Use Goals and Policies, but due to the nature of the changes being proposed none of these specific goals and policies are relevant to the proposed amendment.

REGARDING THE GENERAL LAND USE GOALS AND POLICIES

8. Regarding the General Land Use Goals and Policies:
- A. The first, third, fourth, and fifth General Land Use Goals appear to be relevant to the proposed amendment, and are as follows:
 - (1) The first General Land Use Goal is promotion and protection of the health, safety, economy, convenience, appearance, and general welfare of the County by guiding the overall environmental development of the County through the continuous comprehensive planning process.
 - (2) The third General Land Use Goal is land uses appropriately located in terms of utilities, public facilities, site characteristics, and public services.

- (3) The fourth General Land Use Goal is arrangement of land use patterns designed to promote mutual compatibility.
- B. The proposed amendment *{ACHIEVES}* the first, third, and fourth General Land Use Goals because of the following:
- (1) Based on evidence that there will be significant positive effects on Equalized Assessed Valuation that will benefit local taxing bodies from the establishment of wind farms in the County.
 - (2) The need for bona fide Restricted Landing Areas and Residential Airports appears to be very limited because in the 21 years since the requirements for those uses were added to the *Zoning Ordinance* only four applications for RLA's have been received and only one residential airport has been established in the county.
 - (3) At this time it is believed there are no existing RLAs in any area proposed for wind farm development but it is impossible to verify.
 - (4) The proposed amendment will have no effect on any pending RLA Special Use Permit (SUP) or complete SUP application that has been received. At this time the only pending RLA SUP is Case 645-S-09 and that Case will be unaffected by the proposed amendment.
 - (5) The proposed amendment could have an unintended consequence for Restricted Landing Areas (RLA) that are established after the effective date and that could eventually be affected by wind farm development (or expansion of future established wind farms) that may have been unforeseen at the time the RLA was established. The Board could require a separation as a standard condition of a wind farm special use permit approval.
 - (6) There is only one Residential Airport in the County and it is nowhere near any area proposed for a wind farm. There are unlikely to be any future residential airports because the Illinois Department of Transportation Division of Aeronautics has no guidelines for residential airports.
 - (7) Airports have an FAA protected separation that amounts to nearly four miles.
 - (8) Regarding safety concerns at RLA's and Residential Airports:
 - (a) IDOT only requires a height restriction to the side of an RLA for a distance of 135 feet from the runway centerline.
 - (b) In addition to eliminating the wind farm separation for any new RLA or Residential Airport, the amendment readvertised on January 17, 2010, also reduces the basic separation from a standard 3,500 feet for each wind farm to a formula based separation based on the actual height of the wind farm tower and also expands the approach zone separation based on the height of the wind farm towers.
-

- (c) The revised approach zone separation is also related to whether the approach zone is for an RLA or a residential airport. The Illinois Department of Transportation has adopted a 15 to 1 approach slope for Restricted Landing Areas (RLAs) and a 20 to 1 slope that applies to airports and presumably to residential airports.
- (d) The existing original version of the RLA wind farm separation is based on the “side transition surface” for airports that is a slope of seven horizontal feet for each vertical foot and that extends to a height of 150 feet above the ground. See 92 Ill. Admin. Code 14 APPENDIX A Airport Standards.
- (e) The existing originally adopted RLA wind farm separation was simply based on the maximum allowable wind farm tower height of 500 feet times the seven horizontal feet for a total separation of 3,500 feet. For a minimum 1,600 feet long RLA the existing simple RLA wind farm separation requires approximately 1,154 acres per each RLA.
- (f) There will probably be waivers requested for most wind farms because wind farm towers are generally less than 500 feet tall. Waivers for wind farms will probably be controversial and it would be best to improve the Ordinance to reduce any unnecessary waivers.
- (g) For wind farm towers that are 400 feet tall this revised RLA separation at the sides of both an RLA and a residential airport will be 2,800 feet. The separation at the end of an RLA with 400 feet tall wind farm towers will increase to 6,000 feet. Assuming a minimum 1,600 feet long RLA and wind farm towers that are 400 feet tall, the total area of RLA separation will be 885 acres which is only about 77% of the current requirement of 1,154 acres.
- (h) If wind farm turbines are installed at a density of about 70 acres per wind turbine, the change could result in nearly four additional wind turbines per RLA even though the degree of safety is arguably increased due to the longer separation at the ends of the runways.
- (i) The Board could require a separation for a RLA or Residential Airport as a standard condition of a wind farm special use permit approval.

C. The fifth General Land Use Goal is:

Establishment of processes of development to encourage the development of the types and uses of land that are in agreement with the Goals and Policies of this Land Use Plan

The proposed amendment appears to *{ACHIEVE}* the fifth General Land Use Goal because it will make the *Zoning Ordinance* more consistent and clear, as follows:

- (a) Clarifying that the Site Reclamation requirements in Subparagraph 6.1.1 A. are standard conditions, which are therefore able to be waived, matches the intent of

the original legal advertisement for Case 273-AT-00, which added those requirements to the *Zoning Ordinance*.

- (b) The proposed change to Subparagraph 6.1.1 C.5. will make it clear which reclamation agreement requirement applies in the case of a wind farm special use permit.

~~Based on the requirement in subparagraph 6.1.4 M. there should not be any land that is subject to more shadow flicker than allowed by that paragraph because all land subject to greater shadow flicker will receive mitigation and so the requirements of paragraph 6.1.4 M. make the requirement of paragraph 6.1.4 A.1.c. obsolete.~~

- D. None of the General Land Use Policies appear to be relevant to the proposed amendment.

DOCUMENTS OF RECORD

1. Application for Text Amendment from Zoning Administrator, dated December 4, 2009
2. Preliminary Memorandum for Case 658-AT-09, dated January 7, 2010, with attachments:
 - A Draft Proposed Change to Subparagraph 6.1.4 A. 1.(c)
 - B Draft Proposed Change to Subparagraph 6.1.4 C. 11.
 - C Draft Proposed Change to Subparagraph 9.1.11 D.1.
 - E Excerpts from Section 6 of the *Zoning Ordinance* (with revisions from recent text amendments)
 - F Draft Finding of Fact for Case 658-AT-09 (attached separately)
3. Supplemental Memorandum for Case 658-AT-09, dated January 14, 2010, with attachments:
 - A Revised Draft Proposed Change to Subparagraph 6.1.4 C.11.
 - B 92 Ill. Admin. Code 14 APPENDIX A Airport Standards
 - C ALTERNATIVE Proposed Change to Subparagraph 6.1.4 C.11
 - D 92 Ill Admin. Code 14 APPENDIX E Restricted Landing Area Standards
4. Excerpts of the Minutes of March 12, 2009, and March 26, 2009, submitted by Sherry Schildt on January 14, 2010
5. Supplemental Memorandum for Case 658-AT-09, dated January 26, 2010, with attachments:
 - A Draft Proposed Change to Subparagraph 6.1.1 C.5.
 - B Revised Draft Proposed Change to Subparagraph 6.1.4 C. 11.
 - C Draft Proposed Change to Subparagraph 9.1.11 D.1.
 - D Draft Proposed Amendment
 - E Revised Finding of Fact

FINAL DETERMINATION

Pursuant to the authority granted by Section 9.2 of the Champaign County Zoning Ordinance, the Zoning Board of Appeals of Champaign County determines that:

The Zoning Ordinance Amendment requested in **Case 658-AT-09** should ***{BE ENACTED / NOT BE ENACTED}*** by the County Board in the form attached hereto.

The foregoing is an accurate and complete record of the Findings and Determination of the Zoning Board of Appeals of Champaign County.

SIGNED:

Doug Bluhm, Chair
Champaign County Zoning Board of Appeals

ATTEST:

Secretary to the Zoning Board of Appeals

Date



1 **MINUTES OF REGULAR MEETING**

2 **CHAMPAIGN COUNTY ZONING BOARD OF APPEALS**

3 1776 E. Washington Street

4 Urbana, IL 61801

5 **DATE:** January 14, 2010

6 **PLACE:** Lyle Shields Meeting Room
1776 East Washington Street

7 **TIME:** 6:30 p.m.

8 Urbana, IL 61802

9 **MEMBERS PRESENT:** Doug Bluhm, Catherine Capel, Thomas Courson, Melvin Schroeder, Eric
10 Thorsland, Paul Palmgren

11 **MEMBERS ABSENT :** Roger Miller

12 **STAFF PRESENT :** Connie Berry, John Hall, J.R. Knight

13 **OTHERS PRESENT :** Barbara Wysocki, Steve Burdin, Barbara Gerdes, Herb Schildt, Jeff Veazie,
14 Jed Gerdes, Sherry Schildt, Phillip Geil, Lisa Karcher, Hal Barnhart, Carl
15 Smith, Terry Ladage, Bill Fabian, Jeff Tock,

16 **1. Call to Order**

17 The meeting was called to order at 6:30 p.m.

18 **2. Roll Call and Declaration of Quorum**

19 The roll was called and a quorum declared present.

20 **3. Correspondence**

21 None

22 **4. Approval of Minutes**

23 None

24 **Mr. Thorsland moved, seconded by Mr. Courson to re-arrange the agenda and hear Case 645-S-09,
25 Robert and Barbara Gerdes prior to Case 634-AT-08, Part B. The motion carried by voice vote.**

26 **5. Continued Public Hearing**

27 Case 634-AT-08 Part B. Petitioner: Zoning Administrator Request: Amend the Champaign County
28 Zoning Ordinance as follows: 1. Add definitions for "SMALL WIND TURBINE TOWER" and "BIG
29 WIND TURBINE TOWER" and revise the definition for "WIND FARM."; and 2. Amend subsection
30 4.2.1. to allow "BIG WIND TURBINE TOWER" as a second principal use on lots in the AG-1 and
31 AG-2 Zoning Districts; and 3. Amend paragraph 4.3.1.E. to add new height regulations that apply to

DRAFT

SUBJECT TO APPROVAL

1 "SMALL WIND TURBINE TOWER" and "BIG WIND TURBINE TOWER."; 4. In Section 5.2
2 replace "wind turbine" with "BIG WIND TURBINE TOWER," and indicate "BIG WIND TURBINE
3 TOWER" is only authorized as a second principle use on lots in certain Zoning Districts; and 5. in
4 Section 6.1.3. add new standard conditions for "BIG WIND TURBINE TOWER" that are similar to
5 the standard conditions for a WIND FARM; and 6. Add new subsection 7.7 making "SMALL WIND
6 TURBINE TOWER" an authorized accessory use by-right in all zoning districts and add
7 requirements including but not limited to: (a) the turbine must be located more than one and one half
8 miles from the nearest municipal zoning jurisdiction; and (b) minimum required yards that are the
9 same as for other accessory structures in the district provided that the overall height is not more than
10 100 feet; and (c) an overall height limit of 200 feet provided that the separation from the nearest
11 property line is at least the same as the overall height and authorize private waivers of the separation
12 by adjacent neighbors; and (d) a limit of no more than two turbine towers per lot; and (e) allowable
13 noise limits; and (f) a requirement for engineer certification; and (g) a requirement to notify the
14 electrical power provider if interconnected to the electrical grid; and (h) a requirement that no
15 interference with neighboring TV, radio, or cell phone reception; and (i) a requirement for the
16 removal of inoperable wind turbines. 7. In Section 9.3.1. add fees for SMALL WIND TURBINE
17 TOWER and BIG WIND TURBINE TOWER; and 8. In Section 9.3.3. add application fees for BIG
18 WIND TURBINE TOWER Special Use Permit.

19
20 Mr. Hall distributed a new Supplemental Memorandum dated January 14, 2010, to the Board for review. He
21 said that the new memorandum has new information and a new draft finding of fact. He said that in the
22 January 8, 2010, Supplemental Memorandum the Illinois Pollution Control Board's Class C to Class B noise
23 rating was discussed and unfortunately when he calculated the noise rating he used the incorrect limits and
24 instead of being 49 decibels it should be 61 decibels. He said that Page 12 of the handout titled, *Wind*
25 *Turbine Noise Issues* by Anthony L. Rogers, Ph.D. and James F. Manwell, Ph.D. includes a Figure 7.
26 Sample wind turbine noise from a wind turbine. He said that based on information in the report the Class C
27 to Class B standard is so high that no minimum separation from adjacent businesses appears to be warranted.
28 He said that the noise curve begins at 60 decibels when the turbine itself puts out 102 decibels therefore what
29 the diagram tells staff is that a wind farm tower with a height of 150 feet at the base of the tower the noise
30 level is reduced from 102 decibels to 60 decibels. He said that if a wind farm turbine has that great of a
31 noise reduction just due to the height then for Class C to Class B where the noise limit is 61 decibels he does
32 not believe that there is a noise issue because there is only going to be some distance to the property line and
33 as Figure 7. indicates, virtually within a few feet it is already less than 60 decibels. He said that he is
34 somewhat embarrassed relying on this graph but it is the only information that he has. He said that the
35 Supplemental Memorandum dated January 14, 2010, gets rid of any separation requirements for distances
36 from a small wind turbine for businesses. He said that Page 3 of the Supplemental Memorandum indicates
37 that Item (b)(3) referring to any separation to the nearest property line on which a business use is established
38 has been stricken.

39
40 Mr. Hall stated that the Supplemental Memorandum dated January 14, 2010, includes revised paragraph
41 7.7.B. that clarifies the relationship of maximum allowable height to minimum required side and rear yard.
42 He said that in regards to rotor diameter the revised paragraph 7.7.C. clarifies that the limits for rotor
43 diameter apply to both vertical and horizontal axis wind turbines. He said that amended subparagraph

1 7.7.F.2. is based on the corrected Class C to Class B noise limit and other minor changes. He said that new
2 subparagraph 7.7.F.4. indicates the following: The Zoning Administrator shall include with any zoning use
3 permit for a SMALL WIND TURBINE TOWER a statement that compliance with these requirements does
4 not necessarily indicate compliance with the Illinois Pollution Control Board noise regulations. He said that
5 the way that the current draft ordinance deals with noise is that what the Board approves could still violate
6 the ICPB noise regulations because the Board and staff does not know if the ICPB and the IEPA are willing
7 to consider a residential wind turbine as a Class C land use. He said that the ICPB and the IEPA could easily
8 indicate a residential wind turbine is a Class A land use in which the allowable noise limit reduces from 46
9 decibels to 38 decibels. He said that it is unknown what the ICPB and the EPA will think if a turbine is built
10 where there are no residents within 900 feet therefore by their own rules there is no noise limit but the next
11 day a home could be built right over the property line in which case there is Class C noise going to a Class A
12 land use. He said that there is no way of knowing how this situation will be dealt with by ICPB or the IEPA
13 because there is no one to ask so what the County should do is decide what the County finds acceptable for
14 the *Zoning Ordinance* and then include this notice, included in new subparagraph 7.7.F.4., so that
15 landowners do not have a false understanding. He said that the County is not trying to encourage arguments
16 between neighbors but he believes that the County is obligated to make people aware of this issue. He said
17 that the most important thing that he would like to hear from the Board at tonight's hearing is about the new
18 approach to noise. He said that what went out in the January 8, 2010, Supplemental Memorandum was not a
19 change from previous versions of the amendment but was much more specific.

20
21 Mr. Bluhm asked the Board if there were any questions for Mr. Hall.

22
23 Mr. Courson stated that the IEPA may revise their noise standards in the future therefore he believes that the
24 notice to landowners is an excellent idea. He said that he also believes that the restriction of no more than
25 two turbines is too small and he would like to see four off-grid residential turbines allowed because it is
26 cheaper to run four 12-volt small turbines than two large turbines.

27
28 Mr. Hall asked Mr. Courson if those are generally at a limited rating.

29
30 Mr. Courson stated that the rating on those turbines is 500 watts.

31
32 Mr. Hall asked Mr. Courson if he is comfortable in indicating the allowance of four small wind turbines or
33 allowing four that are each less than 10 kilowatts.

34
35 Mr. Courson stated no, he would rather just indicate the allowance of four.

36
37 Mr. Hall stated that in stating that four turbines are allowed then the County could end up with four 100
38 kilowatt small wind turbines.

39
40 Mr. Courson stated true, if someone had that much land and money.

41
42 Mr. Bluhm called Mr. Herb Schildt to testify.

43

1 Mr. Herb Schildt, who resides as 398 CR 2500N, Mahomet submitted and read a prepared statement. He
2 stated the following: As you know, I am Chairman of the Newcomb Township Plan Commission. He said
3 that Case 634-AT-08, Part B is still under review by the township and tonight he is speaking strictly for
4 himself. He said that it is his view that all proposed wind turbine installations must meet the IPCB noise
5 standards before they are permitted and there must be no exceptions. He said that in other words, the County
6 must not grant permits for wind turbines in situations that do not meet Illinois regulations and it is difficult
7 for him to imagine arguments to the contrary. He said that the noise standards are also important because
8 they contribute to that delicate balance between the right of one landowner to install a wind turbine and the
9 right of an adjoining landowner to be free of adverse effect. He said that simply put he sees the noise
10 requirement with no exceptions as a crucial part of this amendment.

11
12 Mr. Schildt added that he would find the allowance of four small wind turbines very troubling.

13
14 Mr. Bluhm asked the Board if there were any questions for Mr. Schildt.

15
16 Mr. Courson asked Mr. Schildt how he would determine taking wind noise measurements on a wind turbine
17 that has not been constructed.

18
19 Mr. Schildt stated that he believes that Mr. Hall's current proposal is very good. He said that the County
20 would need to rely on manufacturer's data. He said that he agrees with Mr. Hall in that he does not believe
21 that the County needs to enforce it but he has trouble with the County permitting something that does not
22 meet Illinois law.

23
24 Mr. Courson asked Mr. Schildt if the manufacturer's rating would be sufficient.

25
26 Mr. Schildt stated that the manufacturer's rating would be better than nothing. He said that Mr. Hall pointed
27 out at the November 19, 2009 meeting that the box rating could produce noise levels that would exceed IPCB
28 standards if they were not adjusted.

29
30 Mr. Hall asked Mr. Schildt if he is comfortable with the current version which indicates that if there is no
31 dwelling within 900 feet, Class A land use, then there is no worry about the noise output from the wind
32 turbines because there are no IPCB noise regulations that would apply. He said that the IPCB noise
33 regulations only apply when the Class C sound gets to a Class A land use.

34
35 Mr. Schildt stated that he is not sure that he would characterize the term as Class C sound but staff is
36 offering the ZBA the option of selecting a threshold at which the noise regulations would be applied and that
37 is more the direction of his commentary. He said that there should be no exceptions because noise is noise
38 no matter what the size of the turbine that generates it.

39
40 Mr. Hall stated that Mr. Schildt's last comment is the reason for his question because Mr. Schildt indicated
41 that he agreed with enforcing the IPCB noise regulations and his position is that all the County can do is its
42 best attempt at implementing the IPCB noise regulations. He said that the County is not the IEPA.

43

1 Mr. Schildt stated that he believes that Mr. Hall misunderstood his statement. He said that he agrees with
2 Mr. Hall in that the County cannot be in an enforcement position after the fact but it is in the position to not
3 grant permits to devices that "out of the box" indicate that is known to violate the IPCB standards, i.e.:
4 Illinois law.

5
6 Mr. Hall stated that his understanding of Illinois law is that if someone comes to staff and indicates that they
7 have a wind turbine that is rated at 100 decibels and there is no one who lives within one-quarter mile of
8 their property then that wind turbine would meet the IPCB noise regulations.

9
10 Mr. Schildt stated that if it meets the regulation then it meets the regulation. He said that nothing that he has
11 said conflicts with Mr. Hall's statement.

12
13 Mr. Hall informed Mr. Schildt that he has not gone on record to indicate that he agrees with the approach
14 proposed in the draft ordinance.

15
16 Mr. Schildt stated that there are problems with the draft ordinance because there is an option of a threshold.

17
18 Mr. Hall agreed that the italicized area in amended subparagraph 7.7.F.2. does need to be addressed by the
19 Board.

20
21 Mr. Schildt stated that the italicized area in that subparagraph is the threshold that he has been referring to
22 and when he indicates no exceptions that is what he is talking about. He said that he had just assumed that
23 everyone had done their homework.

24
25 Mr. Hall stated that he has done his homework but he did not realize what he was speaking about.

26
27 Mr. Schildt stated that he should have elaborated more on what he was discussing in regards to the threshold
28 option. He said that in Mr. Hall's memorandums he has made a very strong point about offering an option in
29 shaded and italicized text.

30
31 Mr. Hall stated that the shaded and italicized text came from the last meeting where the Board discussed the
32 idea that instead of applying the IPCB noise regulations across the board to all wind turbines maybe they
33 only need to be applied to those wind turbines that make more noise. He said that this was before he had a
34 better understanding of what the IPCB noise regulations are really all about. He said that currently he does
35 not believe that the Board needs to apply those regulations to only some and not others but it is clearly the
36 Board's choice. He said that if the Board would review the Supplemental Memorandum dated January 14,
37 2009, subparagraph 7.7.F.2. indicates shaded and italicized text which indicates the following: with a
38 manufacturer's nameplate rating of more than 5/10/40 kilowatts. He said that if the Board chooses to do this
39 then the County is apt to receive noise complaints in some instances when not allowing that threshold should
40 have guaranteed no valid noise complaints. He said that no matter what the County does it is apt to get noise
41 complaints but the question is whether or not they will be valid therefore if the Board chooses not to require
42 this noise limit for some class of wind turbines then the County will receive noise complaints that are
43 probably valid. He said that it still isn't going to be a violation of the *Zoning Ordinance* but it is not a good

1 situation.

2

3 Mr. Schildt stated that this is what he was stating when he indicated no exceptions. He said that it is difficult
4 for him to imagine successful arguments to not require an installation that meets the Illinois regulations. He
5 said that he would recommend that the shaded and italicized text be removed from amended subparagraph
6 7.7.F.2.

7

8 Mr. Hall stated that relevant evidence in the Supplemental Memorandum dated January 14, 2010, has been
9 added which summarizes what staff found about noise. He said that Page 14 of the Revised Draft Finding
10 dated January 14, 2010, Item (d) An informal review of wind turbine manufacturers indentified the following
11 manufacturers who claim noise ratings that equal or exceed the IPCB noise regulations: i: Swift Wind
12 Turbine which is a 1.5kW; and ii: Kestrel e400^l which is a 3kW; and iii: Jacobs 31/20 which is a 20kW with
13 a 300 foot separation; and iv: Honeywell WT650 which is a 2.2kW; v: Falcon line of vertical axis wind
14 turbines and; vi: Hummer line of horizontal axis wind turbine which is 500W up to 20kW. He said that the
15 manufacturers of these wind turbines indicate that they meet the IPCB noise standards therefore there is a
16 pretty broad range of wind turbines that do comply with the IPCB noise regulations. He said that this noise
17 standard would limit the choices for many rural residences because it would be easy to be within 900 feet
18 from an adjacent dwelling in the rural area. He said that Mr. and Mrs. McCall have been very interested in
19 this text amendment because they desire to construct a wind turbine but all of their property is within 900
20 feet of two adjacent dwellings therefore they will have a limited choice of wind turbines if the Board goes
21 with the draft that is before them. He said that he actually believes that the Board choosing to go with this
22 draft would be a reasonable thing to do but he wishes that the McCalls were present at tonight's meeting so
23 that they could present comments.

24

25 Mr. Schildt stated that the McCalls would not be too limited because there are at least a half dozen models
26 available.

27

28 Mr. Schildt stated that he still finds the allowance of four wind turbines unacceptable.

29

30 Mr. Hall asked Mr. Schildt if he would find the allowance for four turbines more acceptable if the nameplate
31 ratings were limited.

32

33 Mr. Schildt stated that he could imagine four really little wind turbines that probably wouldn't bother anyone
34 but he cannot begin to imagine what Champaign County would look like if people started putting up four,
35 by-right, really large turbines all over the place. He said that four 100 kW wind turbines is essentially a wind
36 farm and that is not the intent of small wind. He said that if someone really wants to do something like that
37 there are provisions in the zoning code and they can apply for a wind farm because there is nothing that
38 would stop someone from applying. He said that if the use is limited to their property perhaps a wind farm
39 special use permit would be obtainable.

40

41 Mr. Hall stated that such a use would not really be a wind farm.

42

43 Mr. Schildt stated that effectively it would be a wind farm. He said that if someone owned two separate lots

1 then they could place eight wind turbines and then they would actually qualify as a wind farm.
2
3 Mr. Hall stated that in that instance the two lots would be treated as one zoning lot and the owner would still
4 be limited to four turbines.
5
6 Mr. Schildt asked if that would be the instance if it were under two different owners.
7
8 Mr. Hall stated that two different owners would be an entirely different situation because there would be two
9 different properties.
10
11 Mr. Schildt stated that the wind turbines could be owned by one owner on two different properties therefore
12 the point is that it is hard for him to image four 100 kW wind turbines on land in residential areas and it
13 would be a real stumbling block for him with this ordinance.
14
15 Mr. Bluhm asked the Board if there were any additional questions for Mr. Schildt and there were none.
16
17 Mr. Bluhm asked if staff had any additional questions for Mr. Schildt and there were none.
18
19 Mr. Bluhm called Mr. Jeff Tock to testify.
20
21 Mr. Jeff Tock stated that he had no comments to present to the Board regarding this case at this time.
22
23 Mr. Bluhm called Mr. Phillip Geil to testify.
24
25 Mr. Phillip Geil, who resides at 2060B CR 125E, Mahomet stated that he has a 10kW turbine. He said that
26 no one could put up four 100kW turbines because they could not do anything with the electricity that they
27 produce. He said that a person cannot present more electricity back to the electric company than they could
28 effectively use in terms of net metering. He said that someone may put four 10kW turbines and that would
29 just about supply the electricity that he uses at the present time. He complimented Mr. Hall because he does
30 believe that this is a very good ordinance at the present time.
31
32 Mr. Geil stated that in regards to the noise issues he would like to say that even at the highest wind his
33 turbine cannot be heard. He said that the only time that he hears his turbine is when it essentially furls
34 automatically because the wind is too high and the blades are slowing down. He said that if the Board would
35 review one of the references that were made available they would see that the Bergey unit produces no more
36 noise than essentially the surrounding noise from the wind itself. He said that there is no wind noise issue
37 with the turbine that he has and that is standing underneath it or anywhere on his lot.
38
39 Mr. Bluhm asked the Board if there were any questions for Mr. Geil and there were none.
40
41 Mr. Bluhm asked if staff had any questions for Mr. Geil.
42
43 Mr. Hall stated that Mr. Geil's turbine is an interesting example because his turbine is within 900 feet from

1 at least one neighbor's dwelling and no complaints have been received. He said that the noise standards that
2 Mr. Geil described in his testimony that his turbine cannot be discerned from the surrounding sound is more
3 than is allowed by the IPCB regulations therefore the draft ordinance which Mr. Geil complimented would
4 not allow the re-construction of his wind turbine without a variance. He said that all of the data that staff has
5 received regarding Bergey units indicates that they exceed the IPCB regulations.

6
7 Mr. Geil stated that he believes that he has an earlier NREL report than the one that was distributed to the
8 Board for review. He said that there were two different Bergey units that were reviewed in this report and
9 the unit that he has is the second unit that was reviewed. He said that he will find this report and submit it to
10 staff for review and distribution. He asked that if his unit cannot be heard why would the County be worried
11 about the noise that it produces?

12
13 Mr. Hall stated that is a good question for the Board.

14
15 Mr. Geil stated that if his unit exceeds the limit then the limit makes no sense.

16
17 Mr. Bluhm asked the Board and staff if there were any further questions for Mr. Geil and there were none.

18
19 Mr. Bluhm called Mr. Terry Ladage to testify.

20
21 Mr. Ladage stated that he had no comments regarding Case 634-AT-08, Part B at this time.

22
23 Mr. Bluhm called Mr. Steve Burdin to testify.

24
25 Mr. Steve Burdin, who resides at 2527 CR 450E, Mahomet stated that he submitted a packet at the end of
26 December for the Board's review and he hopes that the Board enjoyed it. He said that a couple of things
27 have come up since he submitted this packet in December and discussed those changes. He said that as the
28 Board may recall in the document he had contacted Windtronics and WePower and the response that was
29 received from Windtronics was disappointingly untechnical because it appeared that the technical sales
30 people were not very informed about acoustics. He said that he received a call from the WePower sales
31 technicians which turned out to be just as technically nonexistent as the one from Windtronics because the
32 technicians were not able to give information on how the measurements were done and they did not give him
33 the impression that they were trying to pursue a more authoritative measurement. He said that he did learn
34 from one of the Windtronics sales technicians that along Interstate 80 and U.S. Route 30 near New Lennox a
35 WT6500 blade tip power system wind turbine unit is proposed for testing with the hope of installing 150
36 units therefore if the Board is interested they may get a chance to listen to one of these units. He said that he
37 mentioned in the packet the costs and how this might become more attractive. He said that a Honeywell
38 turbine has a MSRP of \$5,995 which is pretty low in price when you compare other turbine prices especially
39 if you consider the \$1,500 installation cost that is quoted by Honeywell. He said that Mr. Geil commented
40 that given the amount of money involved someone could use solar power far more cost effectively than any
41 wind and this may become a game change which would make hybrid systems more attractive.

42
43 Mr. Burdin stated that he received a copy of the *Wind Turbine Noise Issues* from the University of

1 Massachusetts at Amherst in his packet and the document is a good paper with a lot of information. He said
2 that Page 5 includes an error which indicates that the threshold of pain for the human ear is about 200Pa
3 when it should truly read 20Pa and this can be verified by the cartoon illustrated on Page 6 of the document.
4 He said that whether the document is addressing sound pressure or sound power is not the reason why
5 decibels would be used and the sentence on Page 5 implies that indication. He said that the only reason why
6 decibels are used is to make it more convenient to represent very largely spaced numbers. He said that a
7 factor of 100,000 is the human hearing range which is a pretty big number therefore they use decibels to
8 make it convenient. He said that whether sound pressure or sound power is a preferable unit to some extent
9 depends, and he could argue his case because he is really concerned with what he hears in comparison to
10 where he is standing and that is sound pressure not sound power which is a function or property of where the
11 sound is emitted at the point of emission.
12

13 Mr. Burdin stated that Page 7 of the *Wind Turbine Noise Issues* document discusses the simple 6dB rule
14 which may be easier to use to judge how sound falls with distance than what he discussed in his packet. He
15 said that Page 18 discusses measurements and what is frustrating is that when Sony makes an acoustic
16 measurement an engineer is going to ask how the measurements were determined. He said that everybody
17 who does this will say that they used IEC 61400-11 and that is fantastic however he cannot get his hands on
18 IEC 61400-11 unless he shells out about \$2,000. He said that industry loves their standards and they do not
19 like anyone else to change them or propose something differently but the paragraph on Page 18 raises the
20 specter of the possible inadequacy of how the measurements are done. He said that he raised this issue
21 during the wind farm ordinance and there are several lower noise units which are available and the ordinance
22 should be flexible enough to allow people to put up turbines even in areas with higher population density.
23 He said that when he saw the draft of the City of Champaign's ordinance he was concerned about how
24 restrictive it might be but it was actually embracing the possibility of wind power.
25

26 Mr. Bluhm asked the Board if there were any questions for Mr. Burdin and there were none.
27

28 Mr. Bluhm asked if staff had any questions for Mr. Burdin.
29

30 Mr. Hall stated that in Mr. Burdin's document he made several valid criticisms of fixed separation
31 requirements. He said that he spoke about site specific determinations although staff has been unable to
32 come up with anything that would work on a permitting basis. He asked Mr. Burdin how this could be done
33 on an as of right basis.
34

35 Mr. Burdin stated that his initial idea was to have some sort of pamphlet which would indicate a simple way
36 for people to figure, by themselves, how loud the turbine will be at any given distance. He said that he is not
37 sure if a pamphlet is something that the County could generate for distribution or if the County even expects
38 to hear from landowners if they are doing some by-right before they try to install a wind energy system. He
39 said that he believes the calculations could be made pretty understandable for people and to a certain extent
40 the County could indicate that if a turbine is over 100 decibels then they need to be careful and if 30 decibels
41 then there is no worry. He said that one area of the ordinance states that a fixed setback will be required for
42 an equivalent that does not have a specification for sound therefore it could be changed to state that if no
43 noise specifications are indicated then the turbine should not be considered by the owner.

1
2 Mr. Hall stated that if the County could hire a noise consultant to develop such guidance then he believes
3 that it could help some people but for most manufacturers who provided the noise data that noise data was
4 less than the IPCB standards.

5
6 Mr. Burdin stated that if there is no noise data to begin with then perhaps the County could discourage
7 people from considering those units. He said that to some extent there is no wind turbine that does not meet
8 certain regulations because it depends on where it is being placed as to where you are measuring the noise.
9 He said that if the County expects people to contact them or inquire on wind energy then perhaps some
10 guidelines would be appropriate for distribution to the public. He said that these guidelines may be better
11 than hiring some professional noise consultant to prepare something really fancy.

12
13 Mr. Bluhm requested that Mr. Burdin indicate the section of the Finding of Fact that indicates the fixed
14 separation.

15
16 Mr. Hall stated that on Page 13 of 29 of the Revised Draft Summary of Evidence dated January 14, 2010,
17 paragraph xiii. indicates the following: A fixed separation for noise can have undesirable results such as
18 overprotection if it is larger than necessary. Unless the separation is set so low that it will clearly be
19 inadequate in some instances there will always be some degree of overprotection.

20
21 Mr. Thorsland stated that paragraph xv. indicates the following: landowners who feel that the 900 feet
22 separation is unreasonable will have to apply for a variance and provide convincing and reliable evidence
23 regarding the noise performance of their desired wind turbine. Such evidence will probably have to be
24 developed by a professional noise consultant. He said that he believes that the 900 foot setback is too
25 excessive. He said that if he was looking to purchase a turbine and he was the one that would be sitting the
26 closest to it he would not pick out the Bergey which is 120dB when he could pick out the Honeywell which
27 indicates that he won't hear it all. He said that Mr. Burdin has a valid point that if a turbine does not have a
28 sound rating then the larger setback should be required. He said that he was uncomfortable with a ten foot
29 side yard setback with a 150 foot tower but not with a 50 foot setback with a 150 foot setback.

30
31 Mr. Bluhm asked the audience if anyone desired to sign the witness register to present testimony regarding
32 this case and there were none.

33
34 Mr. Bluhm closed the witness register.

35
36 Mr. Hall asked the Board if they desired to eliminate the threshold.

37
38 Mr. Thorsland stated yes. He said that he does not believe that the technology will make the turbines less
39 powerful and noisier but will make them quieter and more powerful. He said that people can find a turbine
40 which is the desired size and get it on the lot without exceeding the limits of the IPCB. He said that he
41 would be more interested in allowing four units per lot.

42
43 Mr. Hall stated that Page F-3 of Attachment F. of the January 7, 2010, Supplemental Memorandum Item

1 #E.2 indicates that no more than two small wind turbine towers shall be authorized on a lot with three acres
2 or more lot area provided that no more than one non-residential accessory small wind turbine tower shall be
3 authorized less than 1,200 feet from the nearest dwelling that is under different ownership and conforming to
4 use.

5
6 Mr. Thorsland stated that he is very intrigued by the Honeywell unit and he would not want his property to
7 be limited to just two units because he could personally see use for one unit for one structure and another
8 unit for a different structure on his property. He said that the turbines are getting smaller, quieter, cheaper
9 and more efficient. He recommends four units.

10
11 Mr. Bluhm stated that it could be stated that no more than two units are allowed on a property without a
12 special use permit.

13
14 Mr. Hall stated that if more than two units were desired then a variance would be required.

15
16 Mr. Courson stated that it depends on what type of system someone is considering. He said that the County
17 is telling one person that if they only want a 24-volt system then they could have two units but if they are
18 going to install a 48-volt system then they have to get a variance.

19
20 Mr. Hall stated that if the Board just indicates four and no limit is placed upon those four then the Board is
21 only considering four pretty small turbines.

22
23 Mr. Courson stated that on his lot he could build a 100,000 square foot house but he does not have \$100
24 million dollars to do so therefore someone is not going to put \$5 million dollars worth of turbines on their
25 property to run a household.

26
27 Mr. Hall stated that if the four turbines do not meet the IPCB standards then a variance will be required
28 anyway.

29
30 Mr. Courson stated that if someone is on 160 acres in CR then they would need more than two small towers.

31
32 Mr. Thorsland stated that he has a neighbor with a lot of money and a lot of land and he could not see that
33 neighbor wanting to be limited to two units.

34
35 Mr. Hall stated that going with four units per property with no limits could generate some protests.

36
37 Ms. Capel asked Mr. Hall what type of limit would be reasonable.

38
39 Mr. Courson stated that four 10kW units would be more than anyone would need.

40
41 Mr. Hall stated that currently there is no power limit on two units and it could be left that way and add text
42 indicating that four is allowed as long as they do not exceed 10kW each.

43

1 Mr. Courson asked Mr. Hall if it would be better to add that text or just put a total cap of 50kW on it
2 regardless of someone having one or four units.

3
4 Mr. Hall stated that there is no kilowatt rating in the definition of small wind.

5
6 Mr. Thorsland stated that someone could have two at whatever kilowatt rating they want or four if they are
7 no more than 10kW each.

8
9 Mr. Hall stated that Mr. Thorsland is indicating that no power rating would be on the limit of two.

10
11 Mr. Courson stated that he would have no problem with stating that no more than four turbines with a total
12 cap of 100 kW is allowed.

13
14 Mr. Hall read the following text for the Board's consideration: No more than two or more than four
15 provided the total rating is no more than 40 kW.

16
17 Mr. Bluhm stated that the previously read text appears to apply for both the two and the four.

18
19 Mr. Hall stated that this is why it is very hard to draft text on the spot.

20
21 Mr. Palmgren stated that a maximum of four units up to a maximum of 50kW.

22
23 Mr. Bluhm stated that the problem with that is that there are no power ratings in the definition of small wind.

24
25 Mr. Hall stated that as the Zoning Administrator he is concerned that currently there is no limit when
26 someone just has two units and no one has complained.

27
28 Mr. Thorsland stated that someone could desire to have one unit that is 30kW and three additional units for
29 his outbuildings for his chickens.

30
31 Mr. Bluhm stated that the three additional units would be exempt because chickens are agriculture.

32
33 Mr. Hall stated that for the four units it would make more sense to limit the total rating and that way the
34 property owner has options. He said that if they buy one unit one year and five years they may want an
35 additional unit.

36
37 Mr. Thorsland stated that the Board is going to use a total rating on four units then it would make sense to
38 use the same rating on two units.

39
40 Mr. Courson stated that he would recommend 40kW for two or 40kW cap for four.

41
42 Mr. Hall stated that Item #E.2. on Page F-3 should be revised to indicate the following: No more than four
43 small wind turbine towers with a total rating of no more than 40kW shall be authorized on a lot with three

1 acres or more lot area provided however that no more than one non-residential accessory small wind turbine
2 tower shall be authorized less than 1,200 feet from the nearest dwelling that is under different ownership and
3 conforming to use.

4
5 Ms. Capel stated that we would be limiting any small wind application on three acres to 40kW.

6
7 Mr. Courson stated yes.

8
9 Mr. Hall stated that even with no more than one turbine it could only go up to 40kW.

10
11 Ms. Capel asked the Board members if this is truly the intention.

12
13 Mr. Thorsland stated that the variance process is available if a larger unit is desired.

14
15 Mr. Hall stated that the other unintended consequence is that if a business desired to put up a 100kW turbine
16 that would require a variance to do so.

17
18 Mr. Thorsland asked if a business would already be a variance case.

19
20 Mr. Hall stated no. He said that before the revision a business could put up a 100kW small wind turbine and
21 provided that they met the separation for noise and the separation for rotor diameter it would be by-right.

22
23 Mr. Courson stated that the limit could be raised to 100kW total.

24
25 Mr. Hall stated that the Board could indicate several options such as there is no limit on the output of one
26 turbine but more than one, with a limit of four, would have a total rating limit 40kW.

27
28 Ms. Capel stated that the Board discussed having no rating limitation on two turbines and she agrees with
29 that limitation. She said that two small turbines is better than one really big turbine and if someone truly
30 requires four turbines on their property then there is a limit of 40kW total.

31
32 Mr. Courson stated that someone could need two turbines for the same reason that they needed four but they
33 could also get by with one turbine.

34
35 Mr. Hall asked Mr. Courson what he would consider as too big for one turbine.

36
37 Mr. Courson stated that he had a grain elevator stop by his home to ask questions about his turbine because
38 the cost of propane is getting too high to run the dryers. He said that the gentleman did not like the answer
39 to his question about how much it would cost to install a turbine large enough to run his dryer but he could
40 see someone needing a large turbine, 100kW, to run their grain dryers. He said that a turbine large enough
41 for his purpose would probably cost in the range of \$1 million dollars therefore the gentleman decided that
42 he would stay with propane to fuel his dryers.

43

1 Mr. Bluhm asked the Board if they prefer allowing one turbine with no rating limit.

2
3 Ms. Capel stated no. She said that she would prefer allowing two turbines with no rating limit and anything
4 above two turbines would have a total rating unit of 40kW.

5
6 Mr. Hall stated that the finding of fact indicates that a Vestas V17, 9kW unit typically costs \$180,000
7 installed on a 132 foot tower.

8
9 Mr. Schroeder stated that his electrical bill costs \$250 per month and he runs his grain dryers too therefore
10 why would he waste money on such a unit and pay taxes on it. He said that there are very few people that
11 should even consider this option unless they want to throw their money away.

12
13 Mr. Hall stated that this ordinance will apply to business applications as well as the average homeowner.

14
15 Mr. Schroeder stated that the average homeowner will not be able to afford it and it may even be
16 questionable for a business owner.

17
18 Mr. Thorsland stated that it would help some people if a business was allowed to install a 100kW turbine
19 without a public hearing.

20
21 Mr. Hall stated that the way the ordinance is drafted currently no more than one non-residential accessory
22 small wind turbine tower shall be authorized less than 1,200 feet from the nearest dwelling. He said that
23 currently if a business does install a 100kW turbine it will be the only unit that can be placed on the property
24 and it has to be at least 1,200 feet from the nearest dwelling.

25
26 Mr. Thorsland stated that the business has a limit already without a variance therefore the ordinance does
27 treat a business a little differently.

28
29 Mr. Hall stated that the change that the Board made earlier regarding a cap of 40kW would also cap the
30 business at 40kW although the business owner could come to the Board to request a variance.

31
32 Mr. Thorsland asked Mr. Hall what the fee would be for a variance request.

33
34 Mr. Hall stated that a variance would cost \$200 but the real problem is staff time and the Board's time.

35
36 Mr. Thorsland asked if there was a way that the Board could split a business use from this part of the
37 ordinance.

38
39 Mr. Hall stated yes, it is all in the way that the Board writes the ordinance.

40
41 Mr. Thorsland stated that he believes that a business should be treated differently. He said that Ms. Capel
42 has a valid point in that someone could have enough land to install two turbines but to keep from turning the
43 acreage into a miniature wind farm appears to be a problem.

1
2 Mr. Courson stated that the Board could limit one turbine at 100kW or four turbines with a total rating of
3 100kW.
4
5 Mr. Hall stated that the text in Item #E.2 on Page F-3 could indicate the following: No more than 4 small
6 wind turbine towers with a total capacity of 100kW shall be authorized on a lot with three acres or more lot
7 area. He said that if it is a business that installs one 100kW turbine then that is okay but they cannot install
8 any more but a homeowner could install four turbines provided that the a total capacity is not over 100kW.
9
10 Mr. Courson stated that the homeowner could also install one 100kW turbine.
11
12 Mr. Hall stated yes.
13
14 Mr. Thorsland stated that if either is at its capacity and required additional turbines then they could request a
15 variance.
16
17 Mr. Hall stated yes.
18
19 Mr. Hall read the text for Item #E.2. for the Board: No more than 4 small wind turbine towers with a total
20 capacity of no more than 100kW shall be authorized on a lot with three acres or more lot area provided
21 however that no more than one non-residential accessory small wind turbine tower shall be authorized less
22 than 1,200 feet from the nearest dwelling that is under different ownership and conforming to use.
23
24 Mr. Thorsland stated that the Board could be evil and indicate that no more than 99.99kW which would
25 knock out all of the 25kW units out of the picture.
26
27 Mr. Hall suggested that the Board not be that evil.
28
29 Mr. Courson stated that this text gives more flexibility to the property owner.
30
31 Mr. Hall stated that the text does not give flexibility to non-residential uses because they can only have one if
32 they are less than 1,200 feet from the nearest dwelling. He asked the Board if this was reasonable.
33
34 Mr. Thorsland stated that this is without a variance.
35
36 Mr. Hall stated yes.
37
38 Mr. Thorsland stated that if the business owner has a good reason then they can pony up and request a
39 variance.
40
41 Mr. Hall stated that if they even want to put two 10kW units they still need to come before the Board for a
42 variance.
43

1 Ms. Capel stated that this would hold non-residential properties to a different standard and that does not
2 make sense.

3
4 Mr. Hall stated that the limit goes back to the time when there was no limit on kilowatt ratings. He said that
5 the text in Item #E.2. could be revised to indicate the following: No more than 4 small wind turbine towers
6 with a total capacity of 100kW authorized on a lot with three acres or more lot area.. He said that if the
7 business does one 100kW unit then that is all that they can have without a variance otherwise they are more
8 like a residence in that they could have four smaller units and separation based on rotor diameter will always
9 be there. He asked the Board if they agreed to the new text for Item #E.2.

10
11 The Board agreed to have Item #E.2. to read as follows: No more than 4 SMALL WIND TURBINE
12 TOWERS with a total capacity of 100kW authorized on a lot with three acres or more LOT AREA.

13
14 Mr. Hall stated that Page F-6 Item N. of Attachment F. of the Supplemental Memorandum dated January 8,
15 2010, discusses replacement of an existing turbine. He said that when someone originally installs their wind
16 turbine it may not be within 900 feet of a dwelling but when it comes time to replace the turbine that
17 situation may have changed. He said that he believes that a permit should be required for the replacement of
18 a wind turbine and it may be difficult to enforce because people may believe that they do not need a permit
19 but it should be required.

20
21 Ms. Capel asked what the fee would be for replacement.

22
23 Mr. Hall read Item #N as follows: In the event of destruction by any means or the need for replacement,
24 wind turbine towers and wind turbines located more than one-and-one half miles from an incorporated
25 municipality that has a zoning ordinance may be replaced as follows: 1. the wind turbine may be replaced on
26 the original tower pursuant to a new Zoning Use Permit provided that the replacement complies with all
27 manufacturer’s safety recommendations and requirement. He said that if someone could still get a turbine
28 back on the existing tower then this text would grant the property owner that right, even if there is a dwelling
29 next door. Mr. Hall read N.2. as follows: 2. If a replacement wind turbine cannot be installed on an existing
30 wind turbine tower in compliance with all manufacturer’s safety recommendations and requirements and a
31 new small wind turbine tower is required the new small wind turbine tower shall be in full compliance with
32 these regulations. He said that if residences come in next door and the turbine owner cannot get a wind
33 turbine to go back on the original tower then everything has to be in compliance and the owner’s choice of
34 turbines may be limited.

35
36 Mr. Thorsland stated that presumably the wind turbine was up and running when new residences were
37 constructed therefore the new property owners were aware of its existence.

38
39 Mr. Hall stated this would be an instance when the County granting this permit could well be in violation
40 with the IPCB standards.

41
42 Ms. Capel stated that a permit would be required to replace a turbine on the top of an existing tower.

43

1 Mr. Bluhm stated not if the existing tower can be used.
2
3 Ms. Capel asked why the County would be in violation.
4
5 Mr. Hall stated that a zoning use permit needs to be required for any replacement so that there is assurance of
6 reliable enforcement. He said that if a permit is not required the County will not know if the property owner
7 is only replacing the turbine.
8
9 Ms. Capel asked Mr. Hall how the County will know that the turbine is being replaced any way.
10
11 Mr. Hall stated that it will be indicated on their permit application.
12
13 Mr. Capel asked what if they do not get a permit.
14
15 Mr. Hall stated that this is true for the whole *Zoning Ordinance* because there are times when no one bothers
16 to contact the office and then they later find that they are in violation.
17
18 Mr. Courson stated that a lot of the towers come up and down for maintenance. He asked Mr. Hall if the
19 County will require a permit if someone takes a tower down to replace a damaged blade and then puts the
20 system back up.
21
22 Mr. Hall stated no.
23
24 Mr. Bluhm stated that if the turbine is destroyed or it just wears out and a new whole new turbine is required
25 then a permit is required for that replacement.
26
27 Mr. Courson stated that he believes that it is too restrictive. He said that he has had two turbines come down
28 therefore he would have had to have two permits to replace the same size turbines under a different
29 company.
30
31 Mr. Hall stated that the current rules do not require permits for such an occurrence.
32
33 Mr. Courson stated that under Item N. he would have to obtain a permit to replace the same size turbine on
34 an existing tower.
35
36 Mr. Hall stated yes, but the fee for a replacement turbine is \$100 and the Board could decide that it should be
37 less than that but if a permit is not required then the County cannot enforce the other provision which is that
38 if a new tower and turbine is required then that new system must be in compliance with the noise
39 requirement. He said that this is a scenario where the owner cannot obtain a turbine to fit on the existing
40 tower therefore an entire system is required.
41
42 Mr. Schroeder left the meeting at 9:14 p.m.
43

1 Ms. Capel stated that Mr. Hall is indicating that the County will not force the owner to install a whole new
2 system if only the turbine can be replaced on top of the existing tower.
3
4 Mr. Hall stated yes, but that might violate the IPCB regulations.
5
6 Mr. Bluhm stated that if the unit was there before the other residences were built it would be much like
7 moving in next to an existing airport because you knew it was there and if there are noise issues then it is just
8 your problem.
9
10 Mr. Hall stated yes.
11
12 Mr. Courson asked Mr. Hall if this would stay in effect if the height of the tower was changed.
13
14 Mr. Hall stated that if the same turbine was being re-used but the height of the tower was being changed.
15
16 Mr. Courson stated that perhaps the tower would be shortened.
17
18 Mr. Hall stated that shortening the tower would not raise any concerns.
19
20 Mr. Courson stated that noise levels would change if the tower was made lower. He said that most people
21 would try to save money in using the same tower.
22
23 Mr. Bluhm stated that the replacement fee is \$100. He asked Mr. Hall what the permit fee would be for a
24 new unit.
25
26 Mr. Hall stated that it depends on the height of the new unit but if it was 100 feet in height the fee would be
27 \$340 and if it 150 feet in height the fee would be \$500.
28
29 Mr. Bluhm asked Mr. Courson to indicate the height of his unit.
30
31 Mr. Courson stated that his unit was 40 feet.
32
33 Mr. Hall stated that the permit fee would be the same as if he put up a new unit.
34
35 Mr. Bluhm stated that he does not agree with that fee schedule because someone would be paying the same
36 amount as if they were putting up a new unit under 100 feet.
37
38 Mr. Hall stated that the same amount of work is completed by staff but the Board can change the fee if it
39 desires.
40
41 Mr. Thorsland asked Mr. Hall if a permit fee is charged for replacement of an existing accessory structure.
42
43 Mr. Hall stated yes.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43

Ms. Capel stated that it is going to cost the same whether the owner replaces the turbine or the turbine and the tower.

Mr. Hall stated yes, but only for a unit that is less than 50 feet tall otherwise there is a cost break for only replacing the turbine. He asked the Board if there was anything in the City of Champaign's ordinance that indicated something missing in the County's ordinance.

Mr. Thorsland stated that Page 6 of the City of Champaign's ordinance addresses minimum ground clearance. He read the text from Item #1.o.1.. as follows: The blade tip of a Wind Energy Conversion System, at its lowest point, shall have a ground clearance of no less than twenty (20) feet.

Mr. Hall stated that the County is more restrictive. He said that Item #K, Page F-6 of Attachment F. of the Supplemental Memorandum dated January, 8, 2010, indicates the following: There shall be a minimum clearance of 15 feet between the ground and the lowest arc of the rotor blades for a small wind turbine tower.

Mr. Bluhm stated that he would prefer making the County requirement similar to the City of Champaign's requirement and revising Item #K to indicate a minimum clearance of 20 feet.

Mr. Hall stated that he will revise Item #K to indicate a minimum clearance of 20 feet.

Mr. Bluhm stated that a turbine was just installed in Gifford.

Mr. Hall stated that Gifford has zoning.

Mr. Bluhm stated that the lot is small and the turbine is in the back yard. He said that a new subdivision is going in right behind the lot and the mono-pole unit appears to be in the wrong location.

Mr. Bluhm asked the Board if there were any further revisions.

Mr. Hall stated that there is a lot of new information in the finding and if the Board is comfortable without reviewing all of this information the Board could take action on this case tonight. He said that any changes that he will make to the Findings are not critical although he might need to capture Mr. Schildt's concerns regarding the number of wind turbines allowed but those concerns will already be included in the minutes.

Ms. Capel stated that the case could be continued to the special meeting on February 1st.

Mr. Hall stated that the continuance would allow the public to see what has been added to the finding. He said that if the Board is just verifying what has been included in the finding then final action should not take very long.

The consensus of the Board was to continue Case 634-AT-08, Part B. to the February 1, 2010, Special Meeting.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43

Mr. Courson moved, seconded by Mr. Thorsland to continue Case 634-AT-08, Part B. to the February 1, 2010, special meeting. The motion carried by voice vote.

Case 645-S-09 Petitioner: Robert and Barbara Gerdes Request: Authorize the construction and use of a "Residential Landing Area" as a Special Use in the AG-1 Agriculture Zoning District. Location: An approximately 83 acre tract that is approximately the West Half of the Southwest Quarter of Section 33 of Ayers Township and commonly known as the farm at 52 CR 2700E, Broadlands.

Mr. Bluhm informed the audience that this is an Administrative Case and as such the County allows anyone the opportunity to cross examine any witness. He said that at the proper time he will ask for a show of hands for those who would like to cross examine and each person will be called upon. He requested that anyone called to cross examine go to the cross examination microphone to ask any questions. He said that those who desire to cross examine are not required to sign the witness register but are requested to clearly state their name before asking any questions. He noted that no new testimony is to be given during the cross examination. He said that attorneys who have complied with Article 6.5 of the ZBA By-Laws are exempt from cross examination.

Mr. Hall stated that staff has not received any new information to date regarding this case. He said that the Petitioners and their attorney are present at tonight's meeting.

Mr. Bluhm asked the Board if there were any questions for Mr. Hall and there were none.

Mr. Bluhm called Jeff Tock to testify.

Mr. Jeff Tock, attorney for Robert and Barbara Gerdes, stated that when he appeared before the Board at the last public hearing he requested a continuance of the public hearing because he felt that the subject restricted landing area was an agricultural use and not subject to the restrictions of the *Champaign County Zoning Ordinance* to require a special use permit. He said that since the last public hearing he has received correspondence from Mr. Hall regarding the interpretation of the statute by the State's Attorney's office which said that the restricted landing area could only be used by the owners of the property which are Robert and Barbara Gerdes and not be used for the benefit of their son, Jed Gerdes. He said that he disagrees with that interpretation therefore he has requested that the Circuit Court make an interpretation of the application of the statute to the zoning provisions of the *Champaign County Zoning Ordinance* and their interpretation will take some time for that determination. He requested that Case 645-S-09 be continued for 90 days.

Mr. Bluhm asked the Board if there were any questions for Mr. Tock and there were none.

Mr. Bluhm asked if staff had any questions for Mr. Tock and there were none.

Mr. Bluhm stated that Case 645-S-09 could be continued to the April 15, 2010, public hearing.

Mr. Tock submitted a copy of the Complaint for Declaratory Judgment that was filed with the Champaign

1 County Circuit Court as a Document of Record.

2
3 **Mr. Courson moved, seconded by Mr. Palmgren to continue Case 645-S-09 to the April 15, 2009,**
4 **public hearing. The motion carried by voice vote.**

5
6 **Mr. Thorsland moved, seconded by Mr. Courson to re-arrange the agenda and hear Case 658-AT-09**
7 **prior to Case 634-AT-08, Part B. The motion carried by voice vote.**

8
9 **6. New Public Hearings**

10
11 **Case 658-AT-09 Petitioner: Champaign County Zoning Administrator Request: Amend the**
12 **Champaign County Zoning Ordinance as follows: Part A: 1. Delete subparagraph 6.1.4.A.1.c. to**
13 **make consistent with paragraph 6.1.4.M.;and 2. Amend paragraph 6.1.4.C.11 to require the wind**
14 **farm separation from restricted landing areas or residential airports only for restricted landing areas**
15 **and residential airports that existed on the effective date of County Board adoption of Case 658-AT-**
16 **09; and Part B: 1. Amend paragraph 6.1.1.A.5 to reference the requirements of paragraph 6.1.4.P.5.;**
17 **and 2. Amend paragraph 9.1.11.D.1. to include reference to subsection 6.1 instead of subsection 6.1.3.**
18

19 Mr. Hall distributed a new Supplemental Memorandum date January 14, 2010, to the Board for review. He
20 clarified that Case 658-AT-09 has zero effects on any pending RLA special use permit case or application.
21 He said that at this time there is only one case like this which is Case 645-S-09, Robert and Barbara Gerdes
22 and Case 658-AT-09 will have no effect on the Zoning Ordinance requirements that relate to their case. He
23 said that their case, should it be approved as an RLA, would forever receive the separation from a wind farm,
24 as adopted in the Zoning Ordinance. He said that the separation can always be waived in any given case but
25 the point is that the separation would have to be waived or it would not to apply. He said that Case 645-S-09
26 brought to his attention that other people seeing its success or failure could get into their mind that if they do
27 an agricultural RLA then they would always receive the benefit of a 3,500 foot separation from any wind
28 farm that would wander into their vicinity. He said that prior to Case 645-S-09 and in the twenty years that
29 RLAs have been an authorized use in the Zoning Ordinance there have only been three cases therefore the
30 County does not see RLAs that often. He said that it is known that there are a lot of people who are opposed
31 to wind farms especially if they don't happen to get a wind turbine themselves. He said that rather than
32 leave the possibility of a situation that could just result in a lot of ill will because someone could claim an
33 agricultural RLA and if the outlined requirements are met no hearing at the ZBA would be necessary and an
34 RLA would exist which would trigger the need for a wind farm separation. He said that rather than let other
35 cases like Case 645-S-09 get started he felt that it was worth floating a text amendment case to attempt to
36 close the hole in the Ordinance. He said that he may find out that he has misjudged what he believes will be
37 the reaction of the Environment and Land Use Committee and if he has misjudged it then he will deal with
38 the consequences but he believes that they will agree with him in that there is a hole in the Ordinance and it
39 needs to be fixed. He said that at the same time that he believes that there is a hole in the wind farm
40 separation for RLAs he knows that there are at least two or three instances where not as good of job in
41 drafting the original wind farm ordinance was done as should have been. He said that in regard to Item #2 of
42 Part B. it was very clear throughout the four ZBA hearings regarding the wind farm amendment that every
43 requirement for a wind farm is a standard condition that could be waived and it is written as such. He said

1 that what was forgotten was to change the reference in Section 9 of the Zoning Ordinance to refer to not only
2 Subsection 6.1.3. but to also include Subsection 6.1.4. and all the other changes that were being done to the
3 standard conditions at the time. He said that in his mind the Board will be correcting an over sight because
4 staff and the Board were very clear that any requirement for a wind farm is a standard condition that can be
5 waived by the County Board. He said that a waiver requires two specific findings which in fact are two of
6 the five findings that are required for a variance. He said that in terms in the deliberation that the Board has
7 to do in regards to a waiver it is significant deliberation because a waiver cannot be approved without
8 justification as to why the Board is approving it therefore he does not want anyone to believe that approving
9 a waiver is an easy thing to do. He said that approving a waiver is much easier than a variance and much
10 easier than re-advertising the special use permit when something is found that needs to be waived.

11
12 Mr. Hall stated that staff has determined that Item #1 under Part B of Case 658-AT-09 is not necessary
13 therefore it has been withdrawn and no longer part of the case.

14
15 Mr. Hall stated that Part A. Item #1 is a bit of housekeeping because when the wind farm amendment left the
16 Zoning Board of Appeals and went to the Environment and Land Use Committee they changed some things
17 including the shadow flicker requirement. He said that the shadow flicker requirement, included in
18 paragraph 6.1.4.M., and the final state of paragraph 6.1.4.M. means that subparagraph 6.1.4.A.1.c. does not
19 make sense therefore rather than to ask a wind farm developer to request a waiver of something that doesn't
20 make any sense it is better to amend the Ordinance. He said that the reason why there is Part A and Part B is
21 because Part B changes those parts of the ordinance that apply within one-and-one half miles of a zoned
22 municipality and the County has to give the municipality the opportunity to protest or not protest. He said
23 that Part A applies to only those areas more than one-and-one half miles from a zoned municipality although
24 municipalities can still comment but it is hoped that the County will not have to slow down and wait for that
25 comment. He said that he is hoping that Part A could be recommended at tonight's hearing so that it could
26 go to the Committee of the Whole in January and then the full County Board by the end of the month. He
27 said that townships have the right to protest on both Part A and Part B and in fact, as far as he knows, any
28 township that contacts staff about this text amendment will have their statutory 30 days in which to protest.
29 He said that if the Board takes action on Part A at tonight's meeting the townships will have 30 days to
30 protect before this case goes to the County Board and if the townships indicate that they want to protest the
31 County Board can deal with that protest at the County Board meeting if things progress as he hopes.

32
33 Mr. Hall stated that the new Supplemental Memorandum dated January 14, 2010, also lays out another
34 version of this amendment and he wanted to offer this version to the Board. He said that as far as staff
35 knows there are no existing RLAs in any of the areas proposed for wind farms therefore ultimately what the
36 text amendment is about is making the RLA wind farm separation apply only to RLAs that are already in
37 existence. He noted again that the Gerdes RLA still gets the benefit of the separation and is not part of this
38 amendment and in fact it is the only RLA that he is aware of that either exists or is proposed in the area of a
39 proposed wind farm. He said that whatever happens with this amendment the Board would at least limit the
40 application of the wind farm separation to RLAs that existed on the date of adoption of this amendment,
41 which he hopes to be January 21, 2010, would close the hole in the ordinance which was his ultimate goal in
42 proposing the amendment.

43

1 Mr. Hall stated that Attachment A of the Supplemental Memorandum dated January 14, 2010, proposes two
2 alternatives to what went out in the original memorandum. He said that the 3,500 feet separation was a
3 product of the "side transition surface" that applies to airports and that is a slope of seven horizontal feet for
4 each vertical foot. He said that the "side transition surface" that IDOT regulates for airports goes up to a
5 height of 150 feet and staff took that same proportion of 7:1 multiplied by the maximum height of a 500 feet
6 wind tower and achieved the 3,500 feet separation. He said that he knows of no wind farm tower in the state
7 of Illinois that is 500 feet tall and truly he knows of no wind farm tower in Illinois which is more than 400
8 feet tall. He said that not only does the 3,500 feet separation create a situation that places neighbors in
9 conflict but is probably much greater than it has to be. He said that the County should have slowed down,
10 even though at the time it would have been difficult to slow down the wind farm amendment, and put in a
11 formula for the separation based on the height of the wind farm towers. He said that Attachment A of the
12 new memorandum proposes the following: For any conforming restricted landing area or conforming
13 residential airport that existed on {the date of adoption} there shall be a separation of seven horizontal feet
14 for each one foot of overall wind farm tower height and the separation shall extend from the exterior above-
15 ground base of the nearest wind farm tower to the center and ends of the runway. He said that he believes
16 that the Board could take the approach that this is not a substantive change from what the legal
17 advertisement indicated and regardless what the Board recommends to close the hole is not terribly
18 important and can be subject to more or less criticism later but personally he believes that Attachment A is
19 an improvement. He said that Attachment C of the Supplemental Memorandum dated January 14, 2010,
20 goes further and he would not recommend that the Board go with that alternative. He said that Appendix E.
21 from the IDOT regulations is attached to the Supplemental Memorandum dated January 14, 2010, and it
22 illustrates that restricted landing areas already have a "side transition surface" of 4:1, which is much steeper
23 than the "side transition surface" for airports. He said that Attachment C suggests that the 3,500 feet
24 separation could be divided into two different separations, 7:1 for residential airports seven times the height
25 of the wind farm towers and for restricted landing areas the ratio of 4:1 would be applied for four times the
26 overall wind farm tower height. He said that should there ever be an existing RLA that is effected by a wind
27 farm instead of having a separation similar to that for an airport they would receive a lesser separation, for
28 example, for a wind farm tower that has a height of 500 feet there would be a 2,000 feet separation from that
29 RLA. He said that for a 400 feet wind farm tower, which is believed to be more typical in Illinois, there
30 would be a 1,600 feet separation. He said that if the RLA is on an 80 acre parcel a typical 80 acre parcel is
31 1,300 feet wide on its own so the size of the separation becomes much less of an issue although it still
32 provides a very significant separation. He said that if the Board believes that something this refined is what
33 the County should have then the case could be re-advertised. He said that the Board could re-advertise this
34 case in the January 17th News Gazette and have a special ZBA meeting on February 1st and get an alternative
35 version to the County Board within the same time frame. He said that staff will later recommend that the
36 January 28, 2010, ZBA meeting be cancelled due to lack of items for the agenda other than one of the cases
37 on the agenda tonight if they are continued. He said that the re-advertisement option does not require any
38 additional ZBA per diems, something that has to be carefully monitored, but does require re-advertisement
39 and would result in a more refined amendment but his main concern is to get this changed as soon as
40 possible. He said that the Board needs to be careful in not rushing this too much because it is not intended to
41 create any unnecessary ill will amongst the public but this is a very serious topic and he believes that ELUC
42 will agree. He said that he believes that ELUC will appreciate getting this corrected as soon as possible and
43 before he advertised Case 658-AT-09 he reviewed it with the Chair of ELUC and the Chair was comfortable

1 with this case proceeding.
2
3 Mr. Bluhm asked the Board if there were any questions for Mr. Hall.
4
5 Mr. Palmgren stated that it was his understanding that there are no pending wind farm permit applications
6 but it has been discussed that the wind farms will have wind towers that are 500 feet in height.
7
8 Mr. Hall stated that this is not his understanding and he is not aware of any wind farm in Illinois that has a
9 wind tower that is more than 400 feet in height but he has not done an exhaustive search.
10
11 Mr. Palmgren stated that he was under the impression that the wind farm that has been proposed would have
12 500 feet wind towers.
13
14 Mr. Hall stated that he cannot comment on any proposed wind farms.
15
16 Mr. Palmgren asked if the County requirements for the RLAs are different from the State.
17
18 Mr. Hall stated no.
19
20 Mr. Palmgren asked Mr. Hall if existing non-conforming RLAs would be grand-fathered.
21
22 Mr. Hall stated that when Case 642-AT-88 was being presented staff notified every existing RLA that staff
23 was aware of and requested that they come to the office to document their existence and they would be
24 treated as a nonconforming of record RLA. He said that any truly nonconforming RLAs that would have any
25 concern about this are those that never bothered to comply with the Zoning Ordinance and anyone else who
26 is nonconforming with the Zoning Ordinance does not get the protection of the Zoning Ordinance.
27
28 Mr. Palmgren asked Mr. Hall how many nonconforming, nonregistered RLAs there are in the County.
29
30 Mr. Hall stated that it is unknown but there was a count that was taken in 1988 and it unknown how
31 exhaustive that procedure was when it was completed.
32
33 Mr. Palmgren stated that if there is an existing RLA that did not register in 1988 and desires to register now
34 would need to apply for a special use permit and prove that it will be for the public good before it is
35 approved.
36
37 Mr. Hall stated yes.
38
39 Mr. Palmgren stated that a tower up to 500 feet in height is allowed under small wind.
40
41 Mr. Hall stated no, not unless the Board approves a variance from 150 feet up to 500 feet.
42
43 Mr. Palmgren stated that perhaps it is big wind tower that allows up to 500 feet in height.

- 1
2 Mr. Hall stated that big wind tower requires a special use permit and has almost the same standards as a
3 wind farm.
4
- 5 Mr. Palmgren stated that he favors the 7:1 for all RLAs.
6
- 7 Mr. Hall stated that the County only has one residential airport that he is aware of and it is his understanding
8 that IDOT no longer supports the idea of a residential airport. He asked Mr. Palmgren if he could comment.
9
- 10 Mr. Palmgren stated that it depends on who you get to talk to at IDOT, and what day of the week it is. He
11 said that he has had a lot of discussion with Dale Rusk at IDOT and some days Mr. Rust is okay with it and
12 others he indicates that he wishes that IDOT, would have never done it. Mr. Palmgren stated that there are a
13 number of residential airports in Illinois but Champaign County only has one and it will probably be the only
14 one in Champaign County. He said that Aero-Place Subdivision was originally set up as a residential RLA
15 and then the term was changed to a residential airport because IDOT had brought forth a different
16 classification and encouraged the owner at the time to apply for the new classification.
17
- 18 Mr. Hall stated that there is less of a concern with residential airports because there are fewer of them and it
19 is much less likely that they will be proposed.
20
- 21 Mr. Palmgren stated that there are fewer residential airports in this area right now but there is a trend for
22 more in Illinois due to the closing of many small airports. He said that in various areas of the country where
23 the area is heavily populated the residential airports are a big thing.
24
- 25 Mr. Bluhm asked Mr. Hall if the measurements for separation of 4:1 and 7:1 are from the base of the tower.
26
- 27 Mr. Hall stated yes.
28
- 29 Mr. Bluhm asked Mr. Hall if the blade sticking into that separation is considered.
30
- 31 Mr. Hall stated that the height goes to the tip of the rotor therefore the way that the separation is written we
32 do not take into account the direction or any part of the rotor. He said that it could be easily done but it
33 would create a verification problem when the hearing is at the ZBA but if that is a concern of the ZBA then
34 he would suggest that the Board add some distance to the wind tower base that would be sufficient to
35 provide for the arc of the rotor.
36
- 37 Mr. Bluhm stated that if the tip of the blade was used then the pattern of the rotor is being encompassed.
38
- 39 Mr. Hall stated that he tends to think that 3,500 feet to the base of the tower should be enough.
40
- 41 Mr. Thorsland stated that it would be easier if the Board would defer to Attachment A and use the 7:1 ratio.
42
- 43 Mr. Hall stated that we are not creating a sloped surface like IDOT has because IDOT. He said literally we

1 are saying that it has to be this far away so that we have this buffer around the land use and the way that this
2 amendment is drafted it could be that far away and if the rotor is perpendicular to that separation it could
3 extend in there as much as 150 feet which only leaves 3,300 feet of separation.

4
5 Mr. Thorsland stated that if the Board went to the trouble of adopting the two different standards for the two
6 different types of airports there would be a catch but to keep it easier the Board could default to the larger
7 ratio of 7:1 and it would take care of Mr. Hall's concerns. He said that Mr. Palmgren has indicated that a
8 new application for a residential airport will be rare.

9
10 Mr. Bluhm stated 4:1 would be closer and he would rather see it go to the tip of the blade.

11
12 Ms. Capel asked if the tip of the blade is being considered for the height.

13
14 Mr. Hall stated yes.

15
16 Mr. Bluhm stated that this is what he was originally asking Mr. Hall and Mr. Hall indicated the rotor.

17
18 Mr. Hall stated that he believed that the rotor was the entire attachment.

19
20 Mr. Bluhm stated no. He said that the hub is in the middle and the blades are beyond the hub.

21
22 Mr. Hall stated that the hub and the blades make up the rotor.

23
24 Mr. Palmgren asked Mr. Hall to indicate the width of a rotor on a 500 foot tower.

25
26 Mr. Hall stated that generally the maximum is 340 feet.

27
28 Mr. Palmgren stated that 340 feet is a pretty fair distance.

29
30 Mr. Hall stated that the wind turbine developers know the orientation of the turbine in the beginning
31 therefore perhaps it would make more sense to have the separation based from the runway to the arc of the
32 rotor.

33
34 Mr. Palmgren stated that this comes down to safety and the more distance the better.

35
36 Mr. Bluhm asked Mr. Palmgren if he agreed with Mr. Thorsland's recommendation of 7:1.

37
38 Mr. Palmgren stated that he prefers 7:1 versus 4:1.

39
40 Mr. Thorsland asked Mr. Hall if the case would need to be re-advertised.

41
42 Mr. Bluhm stated that if the tip of the blade is being included in the 7:1 then you are pretty well getting the
43 sweep of the rotor.

1
2 Mr. Thorsland stated that he likes simple.

3
4 Mr. Bluhm stated that since the terminology has been clarified he prefers the 7:1.

5
6 Mr. Schroeder asked if there was going to be a map that airports will have that will determine where all of
7 the wind farm towers are located. He asked how the aircrafts will identify the wind towers.

8
9 Mr. Palmgren stated that there is a section map and generally the wind farm towers are indicated in a group
10 and not individually. He said that generally in populated areas a pilot has to fly 500 feet above the ground
11 level and he could see how a 500 foot tower could cause some problems. He said that he had a friend tell
12 him that he was flying just above the cloud deck and as he was approaching he could see something coming
13 out of the clouds and it was the blade from a 500 foot wind tower. He said that it is ultimately the pilot's
14 responsibility to stay away from the towers because they towers are there and they cannot move.

15
16 Mr. Bluhm asked the Board if there were any additional questions for Mr. Hall and there were none.

17
18 Mr. Bluhm called Ms. Sherry Schildt to testify.

19
20 Ms. Sherry Schildt, who resides at 398 CR 2500N, Mahomet stated that she was interested in the separation
21 and the rationale for changing it because she remembered something from the wind farm hearings and she
22 went back and checked the record. She said that the rationale in the memorandum and the preliminary
23 finding of fact indicates that wind farm towers provide tremendous economic benefit to the landowner and
24 more importantly to the local school system and eliminating such possible income would be injurious to the
25 district. She said that the March 12, 2009, minutes indicate that there was an exchange between Ms. Schertz
26 and Mr. Hall about taxes and the minutes indicate the following: Mr. Hall stated that the tax implications
27 are not relevant to the material facts of what the Board needs to be concerned about which are to protect the
28 public health, safety and welfare of the neighbors of the wind farm. Ms. Schertz stated that testimony is
29 being given about the tax benefits but the Board is not supposed to consider it. Mr. Hall stated that it is not
30 material to the standards required in the *Ordinance* to protect the public health, safety and welfare. He said
31 that it may be considered in the facts regarding a specific wind farm when it is proposed but it is immaterial
32 to what the *Ordinance* should require. He said that he is aware that the Board has heard a lot of testimony
33 regarding about it and staff will present the Board with a finding of fact which outlines material evidence to
34 the amending of the *Zoning Ordinance*. He said that a lot of time should not be spent discussing tax issues
35 because it is irrelevant to what belongs in the *Zoning Ordinance*. Ms. Schildt said that she was confused by
36 the rationale that the County should defer to the wind farm developers in regard to the wind towers because
37 of the financial benefit and she asked if there was a recent change in the policy.

38
39 Mr. Hall stated no. He said that he remembers saying that very thing and he would say it again, in the case
40 of a wind farm amendment, that the idea is to protect the public health, safety and welfare. He said that in
41 this case he would still argue that unnecessarily reducing wind farm towers is injurious to the district and it
42 may contradict what he said in March.

43

1 Ms. Schildt stated that at the March 26, 2009, public hearing a memorandum was submitted by Mr.
2 Palmgren which discussed his concerns and pointed out that there should be a separation of 3,500 feet. She
3 said that she was concerned about reducing the 3,500 feet and doing away with the safety issue. She said
4 that the March 26, 2009, minutes indicates the following: Mr. Palmgren commented that in regard to
5 Paragraph 6.1.4.C.10, he does like the 3,500 feet separation from the exterior above-ground base of a wind
6 tower to any restricted landing area or residential airport. He said that this is fine for the side but it should be
7 specified as to how close the turbines can be at both ends of the runway. He said that he feels that a 7,500
8 feet separation, using the 15:1 ratio, as stated in his attachment to the March 20, 2009, Supplemental
9 Memorandum, should be added to indicate how close a turbine can be located from the front and rear of the
10 runway. Mr. Hall stated that Paragraph 6.1.4.C.10 established a minimum and a greater separation off the
11 end of his runway is something that staff would catch during the review of the wind farm that will be located
12 near his subdivision. He said that he would prefer not to keep adding statements. Mr. Palmgren agreed.
13

14 Ms. Schildt stated that she was concerned that the Board was going to do away with the safety standards that
15 were agreed upon by all parties at that time. She submitted copies of the minutes from the March 12, 2009,
16 and March 26, 2009, public hearings.
17

18 Mr. Bluhm asked the Board if there were any questions for Ms. Schildt and there were none.
19

20 Mr. Bluhm asked if staff had any questions for Ms. Schildt and there were none.
21

22 Mr. Bluhm called Mr. Jeff Tock to testify.
23

24 Mr. Jeff Tock, attorney for Robert and Barbara Gerdes in Case 645-S-09. stated that the January 14, 2010,
25 Supplemental Memorandum indicates that the proposed amendment is not intended to apply to any RLA for
26 which application has been made prior to adoption of the amendment. He said that the language for the
27 proposed amendment does not incorporate any reference to any applications that may be outstanding but
28 refers to any conforming restricted landing area or residential airport which existed on the date of adoption
29 of the amendment. He asked if the RLA does not exist, does "exist" mean to have approval of a special use
30 permit or does "exist" mean to have a grass runway that is functional. He said that there is ambiguity in the
31 language and he requested that it get further clarification so that the ordinance, as revised, will clearly
32 include the Gerdes application for the RLA that has been continued to April 15th.
33

34 Mr. Hall stated that the language could indicate that any application that was made by January 1, 2010,
35 would serve the purpose.
36

37 Mr. Tock agreed.
38

39 Mr. Bluhm asked if it would be better to use January 14, 2010.
40

41 Mr. Hall stated that he has no problem with going back to January 1, 2010, and he believes that it is a good
42 idea but it is up to the Board.
43

1 Mr. Bluhm asked the Board if there were any questions for Mr. Tock and there were none.

2
3 Mr. Bluhm asked if staff had any questions for Mr. Tock and there were none.

4
5 Mr. Bluhm called Mr. Jed Gerdes to testify.

6
7 Mr. Jed Gerdes, who resides at 1448 CR 2700E, Ogden stated that in discussing changing the setbacks from
8 3,500 feet to 7:1 a lot of things that people forget is the turbulence that is created by the wind towers that
9 effect flight. He said that the setbacks that have been reviewed are setbacks for towers that do not create
10 turbulence that would affect flight and narrowing it down to the smallest possible amount would definitely
11 affect the flight more than would a pole out there and this is a serious issue which should be taken into
12 consideration. He asked the Board if they have ever had anyone try to buy them off. He said that since the
13 last public hearing regarding his case he was contacted by Horizon Wind Energy and they wanted to speak to
14 his family although they could not because they were busy hauling grain.

15
16 Mr. Bluhm requested that Mr. Gerdes keep his testimony to only relevant information.

17
18 Mr. Gerdes stated that his testimony is relevant to the ZBA because Horizon asked his family if they could
19 buy them off and if his family did not agree Horizon would just go to the ZBA and request waivers or reduce
20 the setbacks to an RLA. He said that Mr. Hall indicated that in 1988 staff requested that owners of RLAs
21 register with the County and most of those owners that are still alive probably don't know that this is even
22 going on. He said that there is a new generation in the County that has inherited these RLAs without a clue
23 that any of this is going on and therefore the County is subjecting a lot of existing RLAs to something that
24 they have no clue about until a wind tower is constructed. He said that he believes that the County should
25 notify all the owners of existing RLAs in the County about the amendment before it is adopted and having a
26 double standard is dangerous. He said that Trisler RLA that was mentioned at the last meeting is being
27 decommissioned this year and those pilots will be looking for somewhere to fly out of. He said that the
28 purpose of the Ordinance is to protect the safety and welfare of the public not to see how many wind turbines
29 can be developed in the County. He said that if there is favoritism in the County then it is no different than
30 the U of I Trustees and the Admission's Administration giving favor to some students who have political
31 connections over others and such double standards are very dangerous.

32
33 Mr. Bluhm asked the Board if there were any questions for Mr. Gerdes and there were none.

34
35 Mr. Bluhm asked if staff had any questions for Mr. Gerdes and there were none.

36
37 Mr. Bluhm asked the audience if anyone desired to sign the witness register to present testimony regarding
38 Case 658-AT-09.

39
40 Mr. Bluhm called Mr. Terry Ladage to testify.

41
42 Mr. Terry Ladage, who resides at 344 CR 1300N, Champaign stated that he originally attended the meeting
43 for Case 645-S-09 but as a pilot he can relate to the conversations that have taken place at tonight's hearing

1 and would be happy to entertain any questions from the Board members. He said that he brought a copy of
2 the Illinois Department of Transportation's Administrative Codes for airport markings, approach angles, and
3 side slope angles that have been previously discussed.

4
5 Mr. Palmgren stated that it is his understanding that he owns an existing RLA.

6
7 Mr. Ladage stated yes. He said that he lives west of Champaign on the current Litchfield RLA, in existence
8 since 1980, and his home residence is based at that location. He said that the RLA has gone through the
9 certification process through the FAA and the IDOT. therefore he is well versed in what is being discussed
10 this evening.

11
12 Mr. Palmgren asked Mr. Ladage if his RLA was registered with the County in 1988.

13
14 Mr. Ladage stated that he cannot answer Mr. Palmgren's question because the actual owner and name of that
15 operation is with some other party, of which he is a partner with, who handles all of the paperwork that is
16 coming forth from Champaign County Board members, etc. He said that the issue that concerns him is the
17 stipulated 20:1 glide slope ratio off of the ends of the runway. He said that as he hears the numbers that are
18 being presented this evening with regard to the possibility of as much as a 500 foot wind generator there
19 would be a 10,000 foot, almost two miles, difference from one end and the other end. He said that when you
20 are looking at a traffic pattern altitude of 800 feet and a possibility of the turbines being at a height of 500
21 feet there is a minimum clearance issue of 300 feet given cloud obstructions overhead. He said that pilots
22 subjected to those types of conditions, even though it has already been admitted that it is truly the pilot's
23 responsibility to maintain safe operations, there is still going to be some circumstances that mandate those
24 operations given types of weather conditions, turbulence and vertigo challenges. He requested that the
25 Board consider the most distance possible for the benefit of everyone's safety.

26
27 Mr. Bluhm asked Mr. Ladage if the 20:1 glide slope would be clear of obstruction.

28
29 Mr. Ladage stated yes.

30
31 Mr. Bluhm asked Mr. Hall if such was noted in the diagram.

32
33 Mr. Hall stated that the IDOT diagram for an RLA indicates 15:1.

34
35 Mr. Ladage stated that the document that he has is dated 1985 therefore it could have changed.

36
37 Mr. Hall stated that it is 20:1 off of an airport.

38
39 Mr. Thorsland stated that the County has an Ordinance for the wind farm and when the wind farm
40 application comes to the Board it will be reviewed as to where the wind towers will be located in reference
41 to the location of any existing RLAs. He said there will be a narrow angle of either 15:1 or 20:1 and no
42 tower would be allowed within this area. He said that the Board decides in the end whether or not the
43 particular site that the proposed wind farm will be located is a valid location and he believes that by the time

1 an actual wind farm application is received the Board will have a map that will show if an RLA is in the
2 area. He said that he would hope that the people in the area of the proposed wind farm will know enough to
3 come to the Board to indicate that they have an RLA. He said that he does not know how to address this
4 issue tonight and if the Board wants to apply the 7:1 for the residential airport to the sides at the 15:1 to the
5 end.

6
7 Mr. Hall stated that the 20:1 is for airports and an airport has a much greater separation of four miles. He
8 said that he has only ever suggested that the 7:1 ratio would apply.

9
10 Mr. Thorsland stated that he agrees that the 7:1 ratio is all that has been discussed but the Board has a
11 reasonable concern that 7:1 on the end would be a very different situation than on the sides.

12
13 Mr. Hall stated that in regards to the end of the runway is protected by IDOT with a distance of 3,000 feet at
14 a slope of 15:1.

15
16 Mr. Ladage stated that he is not certain about the 3,000 feet but he is certain about the 15:1 and 20:1
17 mandates that IDOT requires.

18
19 Mr. Palmgren agreed that it is 3,000 feet.

20
21 Mr. Hall stated that at 3,000 feet the protection is at a lower height therefore 3,500 feet would be more
22 protection for a tower height of 500 feet.

23
24 Mr. Thorsland stated that the ends are much shallower than the sides and if we use the 7:1 ratio you don't get
25 that end slope protection.

26
27 Mr. Bluhm stated that if the Board requires a 3,500 feet separation there is protection.

28
29 Mr. Thorsland stated that the Board is not requiring a 3,500 feet separation but 7:1.

30
31 Mr. Hall stated that perhaps this is justification for leaving it at 3,500 feet.

32
33 Mr. Thorsland stated maybe or just defer the end to I.D.O.T.

34
35 Mr. Bluhm asked the audience if anyone desired to present testimony in Case 658-AT-09 and there was no
36 one.

37
38 Mr. Bluhm closed the witness register.

39
40 Mr. Courson asked Mr. Hall if the County would have a map for the Board to use as a resource which will
41 indicate any existing RLAs during review of the wind farms.

42
43 Mr. Hall stated that it is the wind farms responsibility to know where the RLAs are located and they are

1 already doing that research.

2
3 Mr. Thorsland stated that he likes simple and 7:1 is simple. He said that he often makes the assumption that
4 people will not stick their head in the wrong thing therefore he assumes that the wind farm developers will
5 not stick a tower at the end of someone's RLA. He said that he firmly believes that the wind farm
6 developers will drive down every road to see what it is in the area. He said that when staff and the Board
7 receives the application he would assume that both are smart enough to know if the proposed location of the
8 wind turbines is a safe location and if not indicate such. He said that in order to keep it very simple the
9 Ordinance must be specific on the separation distances.

10
11 Mr. Hall asked Mr. Thorsland if he is suggesting that Champaign County adopt a wind farm separation that
12 goes a distance based on a slope of 15:1 off the end of the runway to a height of 500 feet.

13
14 Mr. Thorsland stated no because we can only enforce up to 3,000 feet because that is what IDOT requires.
15 He said that the County could follow IDOT up to 3,000 feet, 15:1, and then 7:1 on the sides and then that
16 becomes a special issue to look for when the wind farm application is received. He said that this will make
17 sure that the wind farm and the Board does not allow the tower to get in to that area, not by the Ordinance
18 but by common sense.

19
20 Mr. Hall stated that IDOT will not allow a wind tower to get closer than 3,000 feet and he still does not
21 understand what height the 7:1 is going to on the side.

22
23 Mr. Thorsland stated that the FAA indicates that 500 feet becomes their territory therefore the 7:1 would go
24 out to some imaginary 500 foot separation where the Board will not put anything there anyway.

25
26 Mr. Hall stated that he would think that a simple 3,500 foot separation would include essentially everything
27 that Mr. Thorsland has described and actually be much easier to implement.

28
29 Ms. Capel stated that she wants to base it on the height of the tower.

30
31 Mr. Bluhm stated that a 400 foot tower would require a 2,800 foot separation.

32
33 Mr. Thorsland stated that the minimum on the end should be 3,000 feet.

34
35 Mr. Bluhm stated that the minimum on the end is controlled by IDOT He said that if the wind farm
36 developer believes that they will locate a wind tower 3,001 feet from a runway they will be informed during
37 the special use permit process that the Board will not approve such a location.

38
39 Mr. Thorsland stated that he believes that the 7:1 and the 3,000 feet separation works but if in the future a
40 wind farm developer comes to staff indicating that they have efficient 200 foot towers then they may not
41 need to be 3,500 feet from the end of the runway and a 7:1 slope to the side. He said that he believes that the
42 IDOT 3,000 feet requirement to the end of the runway should always stand and after that intelligence and
43 common sense should prevail.

- 1
2 Mr. Bluhm stated that the Board needs to discuss the side slope because the end separation is regulated by
3 IDOT.
4
- 5 Mr. Thorsland asked if there are specific provisions in the Ordinance for deferral to IDOT.
6
- 7 Mr. Hall stated that there are specific provisions in the Ordinance for compliance with FAA and IDOT
8 requirements.
9
- 10 Mr. Palmgren stated that he would agree with the 7:1 side slope and defer to IDOT requirements at the end
11 of the runway.
12
- 13 Mr. Bluhm asked the Board if they were comfortable with the 7:1 side slope.
14
- 15 Mr. Hall stated that the way that it is written on Attachment A. of the Supplemental Memorandum dated
16 January 14, 2010, would work because it closes at the end and at that point it would overlap with the IDOT
17 protection.
18
- 19 **The Board agreed.**
20
- 21 Mr. Bluhm asked Mr. Hall if Case 658-AT-09 should be re-advertised.
22
- 23 Mr. Hall stated that he has always been a little uncomfortable with adopting the slope approach without re-
24 advertising. He said that everyone on the Board understands that it is the same thing but when it comes to
25 wind farms there is enough area for disagreement that no new areas of disagreement should be created. He
26 said that he would feel more comfortable with the Board making a tentative selection at tonight's public
27 hearing and re-advertising the case in the Sunday News Gazette. He said that if the Board desires to
28 schedule a special meeting then the case can be before ELUC in February otherwise no special meetings will
29 be held and this case will continue for another month.
30
- 31 Mr. Bluhm asked Mr. Hall if he was attempting to get the whole package to ELUC at the same time.
32
- 33 Mr. Hall stated that he never intended to get the whole package to ELUC at the same time and always
34 intended for Part B to take longer.
35
- 36 Ms. Capel stated that as long as the January 1, 2010, date is inserted and no new applications are submitted
37 the Board could take some action tonight.
38
- 39 Mr. Hall stated that he would prefer that the Board continue this case so that Mr. Tock can review the
40 language before the Board makes an actual recommendation. He said that there is enough disagreement
41 already without adding more and he wants to make sure that everyone is on board with this so that there are
42 no chances of challenges in court. He said that he does not intend sending out notices to any RLA that he is
43 aware of because he did not do such for the wind farm amendment and he is not going to do it for this.

1
2 Mr. Hall stated that the Board could continue this case to the February 11, 2010, regular meeting in which
3 case it would be go before ELUC in March but everyday that the current regulations stay in place is an open
4 door for a new RLA application.

5
6 Mr. Bluhm asked Mr. Hall if the Board generally considers the application date of the amendment case.

7
8 Mr. Hall stated that if the Board takes action on Case 658-AT-09 tonight, with the recommendation of Mr.
9 Tock, and a new RLA application was received tomorrow morning that application would need to be
10 approved under the current rules. He said that no matter what the amendment indicates staff and the Board
11 must honor the rules that were in place when the application was made.

12
13 Ms. Capel stated that a special meeting should be scheduled.

14
15 Mr. Hall stated that if the Board is concerned about this possibility then it should schedule a special meeting.
16 He said that staff will send ELUC, prior to their February 4, 2010, meeting, a memorandum giving them a
17 heads up so that hopefully they will be prepared to deal with this case.

18
19 Mr. Palmgren asked Mr. Hall if the ZBA only forwards a recommendation for approval and ELUC goes
20 from there.

21
22 Mr. Hall stated yes.

23
24 **Ms. Capel moved, seconded by Mr. Palmgren to schedule a special meeting on February 1, 2010, at**
25 **6:30 p.m. in the Lyle Shields Meeting Room and to continue Case 658-AT-09 to that meeting. The**
26 **motion carried by voice vote.**

27
28 Mr. Bluhm informed the audience that Case 658-AT-09 has been continued to a special meeting on February
29 1st at 6:30 p.m. in the Lyle Shields Meeting Room. He said that if there is a conflict with the meeting room a
30 notice will be posted on the door as to the re-location of the special meeting.

31
32 Mr. Hall informed the audience that if they did not sign the witness register for Case 658-AT-09 to present
33 testimony but are interested in this case then he would appreciate an indication on the attendance record of
34 Case 658-AT-09 and they will be included in the next mailing.

35
36 Mr. Hall stated that each new re-advertisement includes new municipal and township notifications.

37
38 Mr. Bluhm stated that the Board will now hear Case 634-AT-08, Part B.

39
40 **7. Staff Report**

41
42 None

43

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43

- 8. **Other Business**
 - A. Cancellation of January 28, 2010, ZBA meeting

Ms. Capel moved, seconded by Mr. Palmgren to cancel the January 28, 2010, ZBA meeting. The motion carried by voice vote.

- 9. **Audience Participation with respect to matters other than cases pending before the Board**

None

- 10. **Adjournment**

The meeting adjourned at 9:27 p.m.

Respectfully submitted

Secretary of Zoning Board of Appeals