

**AMENDMENT No.3 TO ORDINANCE No. 29
“THE MONROE COUNTY UNIFIED DEVELOPMENT CODE”**

BE IT ENACTED by the Board of Supervisors of Monroe County, Iowa:

SECTION 1. PURPOSE The purpose of this amendment to Ordinance No. 29 – The Monroe County Unified Development Code is to amend Exhibit 3.4 Use Matrix Chart, page 3.19; to amend Chapter 4, Section 4.2 Continuation of Non-Conformities and 4.8 Abandonment and Discontinuance of Non-Conforming Rights; to amend Chapter 5, Supplementary Conditions for Specific Uses, Section 5.19 Telecommunication Towers and Antennas, 5.19D 3, 7,8 & 9 Applicable Conditions and add New Sections 5.22 Personal Wind Energy System(s) (PWES); 5.23 Commercial Wind Energy System(s) (CWES) and 5.24 Definitions for Wind Energy Systems; and amend Chapter 10 Definitions, Section 10.2 to include Wind Energy System (Wind Turbines)

SECTION 2. The code of Ordinance of Monroe County, Iowa shall include the following Amendment to Ordinance No. 29:

Proposed Amendment to Ordinance No. 29 – Monroe County Unified Development Code

TABLE OF CONTENTS is hereby amended as follows:

3. Zoning Districts/Maps/Uses

Exhibit 3.4 Use Matrix Page 3.19

4. Non-Conforming Situations

4.2 Continuation of Non-Conformities Page 4.1

4.8 Abandonment and Discontinuance of Non-Conforming Rights Page 4.3

5. Supplementary Conditions for Specific Uses

5.19 Telecommunication Towers and Antennas Page 5.13

5.22 Personal Wind Energy System(s) Page 5.16

5.23 Commercial Wind Energy System(s) Page 5.19

5.24 Definitions for Wind Energy Systems Page 5.25

10. Definitions

10.2 Definitions Page 10.1

Proposed Code Amendments

Exhibit 3.4 Use Matrix: is hereby amended as follows:

The use matrix is hereby amended to add a Use Category for Wind Energy System as follows:

Use Category	Definition (Excerpt) See Section 10 for complete description	Specific Use Type							
			A-1	A-2	R-1	C	I-1	I-2	RS
Wind Energy System	Rated Capacity of 100 kW or less	Personal	P	P	P	P	-	-	P
	Rated Capacity of more than 100 kW	Commercial	C	C	-	P	P	P	-

Insert this text in Exhibit 3.4 Use Matrix Chart Under Telecommunication (page 3.19)

Chapter 4: Non-Conforming Situations is hereby amended as follows:

Section 4.2 is hereby amended as follows: A lawful situation made non-conforming by the adoption of this Code or prior ordinance of the County may continue to operate only as long as such use fulfills all of the requirements of this Chapter. A use made non-conforming by this Code may continue under the terms of the existing development approval, provided that any subsequent approvals must conform to the terms of this code. The casual, intermittent, temporary, or illegal use of a structure, land, or structure and land in combination shall not be sufficient to establish the existence of a nonconforming use, and the existence of a nonconforming use on part of a lot or tract shall not be construed to have established a nonconforming use on the entire lot or tract. All non-conforming uses shall remain legal and lawful at all times and be able to show adequate documentation of the same.

Section 4.8 A is hereby amended as follows: A. General. Except for agricultural activities located in the Agricultural Districts, whenever a non-conforming structure or use has been discontinued for a continuous period of one (1) year or longer, neither this structure or use nor any other non-conforming structure or use shall be re-established and shall be deemed to be abandoned, and any further use of the property shall be in conformance with the provisions of this Code. Evidence of intent to abandon the non-conforming structure or use is not required.

Chapter 5: Supplementary Conditions for Specific Uses is hereby amended as follows:

Section 5.19 D 3 is hereby amended as follows: Applicant must show that all applicable health, nuisance, noise, fire, building, and safety code requirements are met to include but not limited to: a. Environmental Impact Study (NEPA): Provide an environmental impact study (EIS) prepared by a qualified consultant for the project. b. Archaeology Study (SHPO): Provide an Archaeological study prepared by a Professional Archeologist for the project.

Section 5.19 D 7 is hereby amended as follows: The setback on all sides of the telecommunication tower(s) shall be equal to or greater than the height of the tower and shall be measured from the base of the tower to the outside perimeter of the parcel that the tower is located on.

Section 5.19 D 8 is hereby amended as follows: All towers shall be located a minimum distance of no less than one thousand three hundred twenty feet (1,320 ft) or ¼ mile (one-fourth) from any existing inhabited residence, school, hospital, church, public library, public building or structure other than those associated with the tower facility

Section 5.19 D 9 is hereby amended as follows: The base of any telecommunications tower and/or equipment buildings shall be screened from view with an opaque solid screen fence a minimum of six (6) feet in height, or evergreen plantings around an unscreened fence. The evergreens shall reach a height of six (6) feet within three (3) years and shall be planted on five (5) foot centers. The fence and/or plantings shall be maintained and kept in good quality condition at all times.

New Section 5.22: Personal Wind Energy System(s) (PWES) is added as follows:

5.22 PERSONAL WIND ENERGY SYSTEM(S) (PWES): Effective: Dec. 21, 2010

DEFINITION: A Personal Wind Energy System (PWES) is defined as a wind energy system, which has a rated capacity of 100 kW or less; shall be limited to one for each property; and is used exclusively to supply electrical power for on-site use for no more than one (1) dwelling and the associated accessory structure(s), except that excess electrical power generated by the PWES and not needed for on-site use may be used by the utility company.

SPECIAL EXEMPTION: Small wind energy systems of less than 20 kW **and** are mounted on a structure other than a free standing tower are eligible for a special exemption and are not subject to the rules and regulations set forth in the Unified Development Code.

- A. Applicability:** All PWES shall be authorized subject to the requirements established in Section 2.2A (Zoning Placement Permits) and the requirements of this section, the Monroe County Unified Development Code and any other applicable codes, regulations and policies adopted by the County, State or Federal Government.
- B. Purpose:** The purpose of this section is to preserve and protect public health, safety and welfare without significantly increasing the cost or decreasing the efficiency of a PWES by establishing general guidelines and regulations for the siting of all PWES proposed after the effective date of the adoption of this code and located within the un-incorporated area of Monroe County.
- C. Construction:** No PWES or Turbine shall be constructed, erected, converted, installed, reconstructed, enlarged, located, relocated, structurally altered or otherwise developed including the placement of additional buildings and appurtenances without obtaining a zoning placement permit and being in full compliance with the terms of this section and the Monroe County Unified Development Code and any other applicable codes, regulations and policies adopted by the County, State or Federal Government.
- D. Permitted Locations:** Personal Wind Energy Systems (PWES) shall be permitted in an Agricultural, Residential and Commercial Zoning Districts. PWES shall be prohibited in an Industrial Zoning District.

- E. Application Requirements:** The applicant for placement and construction of a PWES shall file an application with the Zoning Administrator accompanied by the filing fee as set forth in the “Resolution Establishing Zoning Fees”. The application shall include the following information and documents:
- 1. Applicant Information:** Name, address and telephone number of the applicant.
 - 2. Application Authority:** Evidence that the applicant is the owner of the property or written approval of the property owner authorizing the applicant to make the application for the PWES.
 - 3. Legal Description:** Complete legal description and address of the project.
 - 4. Detailed Description of the Project:** A description of the project including specific information on the type, size, height, rated power output, performance, safety, and noise characteristics of PWES and the diameter and material of the rotor.
 - 5. Site Plan:** A site plan drawn to scale; prepared and stamped by a qualified, licensed professional engineer with the following items clearly outlined:
 - a.** Property lines and physical dimensions of the property;
 - b.** Location and height of the proposed PWES;
 - c.** Location of all existing structures including accessory structures;
 - d.** The right-of-way of any public road that is contiguous with the property;
 - e.** Any overhead utility lines;
 - f.** Wind system specifications, including manufacturer and model, rotor diameter, tower height, tower type (freestanding or guyed);
 - g.** Tower foundation blueprints or drawings;
 - h.** Tower blueprint or drawing;
 - 6. Analysis:** An engineering analysis of the tower showing compliance with the applicable regulations and certified by a qualified licensed professional engineer. This analysis is frequently supplied by the manufacturer.
 - 7. FAA Notification:** A copy of written notification to the Federal Aviation Administration (FAA) and their approval of the project.
 - 8. Utility Notification:** Utility interconnection data and a copy of a written notification to the utility of the proposed interconnection.
 - 9. Flood Plain:** All applications shall be accompanied by a detailed report which shall address the potential for wind erosion, water erosion, sedimentation and flooding, and which shall propose mitigation measures for such impacts if located within a flood plain area.
 - 10. Additional Information:** Any other additional information as required by the Zoning Administrator to assist in the approval process.
- F. Applicable General Requirements:** Any applicant for Personal Wind Energy System(s) (PWES) must show that all of the following applicable requirements are met:
- 1. Placement:** No more than one (1) PWES shall be installed on any lot that is used for residential purposes or that is located in a residential zoning district. Also, a PWES shall be located entirely in the rear yard in a residential zoning district.
 - 2. Set Backs:** The base of the structure of the PWES (as measured from the base of the pole) shall be set back from all property lines and road easements a minimum distance equal to the height of the tower including rotor and/or blades when at their highest point. All other structures shall comply with the applicable setbacks as set forth by the applicable zoning district.
 - 3. Color and Finish:** PWES shall remain painted or finished as applied originally by the manufacturer, but shall be a non-reflective color.
 - 4. Tower Configuration:** All wind turbines, which are part of a PWES, shall be installed with a tubular monopole type tower.
 - 5. Maximum Height:** There is no maximum height limit.
 - 6. Lighting:** PWES sites shall not be artificially lit, except to the extent required by the Federal Aviation Administration (FAA) or other applicable authority. Lighting intensity and frequency of strobe shall adhere to but not exceed requirements established by the FAA permits and regulations.
 - 7. Signage:** All signs, other than the manufacturer’s or installer’s identification, appropriate warning signs, or owner identification on a wind generator, tower building, or other structure(s) associated with a PWES shall be prohibited.
 - 8. Electrical Wires:** All electrical wires associated with a PWES, other than wires necessary to connect the wind generator to the tower wiring, the tower wiring to the disconnect junction box, and the grounding wires shall be located underground.
 - 9. Minimum Ground Clearance:** The ground clearance for rotors or blades shall be no less than fifteen feet (15’) or one-third (1/3) the height of the tower, whichever is greater.
 - 10. Signal (Electromagnetic) Interference:** The PWES applicant shall not cause vibration perceptible beyond the property on which it is located. The PWES shall also minimize and mitigate any interference with communication facilities, such as radio, cell tower systems, television, microwave, navigational etc. The owner of the PWES shall take necessary corrective action to eliminate this interference, including relocation or removal of the PWES, subject to the approval of the appropriate approving authority. The permit may be revoked if electromagnetic interference from the PWES becomes evident and not resolved.
 - 11. Emergency Communications:** No PWES shall be constructed in a manner which will interfere with emergency communication transmissions of the County. The applicant shall provide documentation from the County Sheriff to verify that said wind turbine will not create such interference. Any cost incurred in the process of certifying that the Personal Wind Turbine

Generator and associated equipment will not interfere with emergency communication transmissions shall be at the applicant's expense.

- 12. Federal Aviation Administration (FAA):** All PWES shall comply with FAA regulations, standards and permits, including but not limited to any necessary approvals for installation close to airports.
- 13. Electrical Codes and Standards:** All PWES and accessory equipment and facilities shall comply with the National and State Electrical Code(s) and other applicable standards. All applications shall be accompanied by a line drawing of the electrical components in sufficient detail to allow for a determination that the manner of installation conforms to the National Electrical Code. This information is frequently supplied by the manufacturer.
- 14. Utility Notification:** No PWES shall be installed until evidence has been 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.
- 15. Utility Interconnection:** PWES systems that connect to the electric utility shall comply with the Iowa Utilities Board (IUB) adopted rules for interconnection standards.
- 16. Compliance with Noise Regulations Required:** A PWES permit shall not be granted unless the applicant demonstrates that the proposed project complies with all noise ordinances and/or regulations.
- 17. Noise Standards:** Audible noise due to PWES site(s) operations shall not exceed fifty (50) dBA for any period of time as measured from the property line. The level, however, may be exceeded during short-term events such as utility outages and/or severe wind storms.
 - a.** In the event audible noise due to PWES operations contains a steady pure tone, such as a whine, screech, hum or repetitive impulsive sounds, the standards for audible noise set forth in this section shall be reduced by five (5) dBA.
 - b.** Any noise level falling between two whole decibels shall be the lower of the two.
- 18. Avoidance and Mitigation of Damages to Public Infrastructure:** Applicants shall identify all roads to be used for the purpose of transporting PWES(s), substation parts, concrete etc., and/or equipment for construction, operation or maintenance of the PWES(s) and obtain applicable weight and size permits from the appropriate authorities prior to construction.
- 19. Inspection:** At least every twenty-four (24) months, every PWES shall be inspected by a certified structural engineer who is regularly involved in the maintenance, inspection and/or erection of Wind Turbines. A copy of such inspection record shall be provided to the Zoning Administrator.
- 20. Safety:** The following safety measures shall apply to all PWES.
 - a.** All ground mounted electrical and control equipment shall be labeled or secured to prevent unauthorized access.
 - b.** The tower shall be designed and installed to provide step bolts or a ladder readily accessible to the public at least a minimum height of eight (8) feet above the ground.
- 21. Abandonment:** A PWES shall be considered an abandoned use if the system is out of service or otherwise unused for a continuous one (1) year period.
 - a.** If the PWES is considered abandoned the zoning administrator may issue a Notice of Abandonment to the owner of the personal wind energy system(s). The owner shall have the right to respond to the Notice of Abandonment within thirty (30) days from the date of the notice. The Zoning Administrator shall withdraw the Notice of Abandonment and notify the owner that the notice has been withdrawn if the owner provides information that demonstrates the personal wind energy system has not been abandoned.
 - b.** If the PWES is determined to be abandoned, the owner of the personal wind energy system shall remove the PWES, supporting equipment and all accessory buildings at the owner's sole expense within three (3) months of receipt of Notice of Abandonment. If the owner fails to remove the PWES, supporting equipment and all accessory buildings to the approval of the Zoning Administrator or the Zoning Administrator's designee, the County may do so and assess the cost against the property for collection in the same manner as a property tax, pursuant to Section 331.384 of the Code of Iowa.

New Section 5.23: Commercial Wind Energy System(s) is added as follows:

5.23 COMMERCIAL WIND ENERGY SYSTEM(S) CWES: effective: Effective: Dec. 21, 2010

DEFINITION: A Commercial Wind Energy System (CWES) is defined as one or more wind energy system(s) of greater capacity than 100 kW and/or whose primary function is to generate power for offsite consumption. CWES shall include but are not limited to Commercial Wind Turbine generators, operations and maintenance buildings, meteorological towers, electrical collector systems, communications, roads and substations. And where CWES is written it is assumed to be inclusive of (MET) Meteorological Towers, where applicable.

- A. Applicability:** All Commercial Wind Energy Systems shall be authorized subject to the requirements established in Section 2.2A (Zoning Placement Permits) and Section 2.3.E

(Conditional Use Permits) as applicable AND the requirements of this section, the Monroe County Unified Development Code and any other applicable codes, regulations and policies adopted by the County, State or Federal Government.

- B. Purpose:** The purpose of this section is to preserve and protect public health, safety and welfare by establishing general guidelines and regulations for the siting of all Commercial Wind Energy Systems (CWES) proposed after the effective date of the adoption of this code and located within the unincorporated areas of Monroe County.
- C. Construction:** No CWES or Wind Turbine shall be constructed, erected, converted, installed, reconstructed, enlarged, located, relocated, structurally altered or otherwise developed including the placement of additional buildings and appurtenances without obtaining a zoning placement permit and being in full compliance with the terms of this section and the Monroe County Unified Development Code and any other applicable codes, regulations and policies adopted by the County, State or Federal Government.
- D. Permitted Locations:** CWES may be permitted as a Conditional Use in the A-1 and A-2 Agricultural Districts. CWES's shall be permitted in a Commercial District and Industrial Zoning Districts. CWES shall not be permitted in a residential area.
- E. Application Requirements:** The applicant for placement and construction of a CWES shall file an application with the Zoning Administrator accompanied by the filing fee as set forth in the "Resolution Establishing Zoning Fees". The application shall include the following information and documents:
1. **Applicant Information:** Name, address and telephone number of the applicant.
 2. **Application Authority:** Evidence that the applicant is the owner of the property or written approval of the property owner authorizing the applicant to make the application for the CWES.
 3. **Legal Description:** Complete legal description and address of the project.
 4. **Detailed Description of the Project:** A description of the project including specific information on the number, type, size, height, rated power output, performance, safety, and noise characteristics of each CWES and the diameter and material of each rotor.
 5. **Turbine Drawings:** Detailed drawings of each wind turbine CWES model including the tower and foundation.
 6. **Site Plan:** A site plan drawn to scale; prepared and stamped by a Licensed Professional Engineer with the following items clearly outlined.
 - a. Physical dimensions of the parcel boundaries;
 - b. Number, location and height of each CWES(s);
 - c. Location of all proposed and existing structures including accessory structures;
 - d. Elevation drawings depicting the design of proposed CWES(s);
 - e. Location of all electrical lines and facilities and the interconnection points with the electrical grid;
 - f. Computer Simulation or Drawings: One or more detailed computer or photographic simulation drawings showing the site fully developed with all proposed CWES(s) and accessory structure(s);
 - g. Existing topography, proposed plan for grading and removal of natural vegetation, proposed plan for site restoration after construction is completed and landscape plan;
 - h. Plan for access (ingress and egress) to the proposed site identifying the following factors; the road surface material, width and length of access road and dust control procedures. Access may be permitted by direct access or by easement.
 - i. Map showing all inhabited structures to include residence(s), school(s) hospital(s), church(s) public library(s) and public building(s) within two thousand five hundred feet (2,500') of the proposed CWES(s). The map shall also show all public roads, railroads, communication and electrical lines within one and one half (1 ½) times the height of the CWES;
 - j. Wind Access Agreements: Evidence that the applicant has negotiated with adjacent landowners and has obtained written agreements with all landowners that could potentially interfere with the applicant's access to the wind;
- F. Noise Report:** A noise report that shall at a minimum include the following items:
1. A description and map of the project's noise producing features, including the range of noise levels expected and the tonal frequency characteristics expected, and the basis of the expectation;
 2. A survey and report prepared by a qualified engineer, that analyzes the pre-existing routine ambient noise (including seasonal variation), including but not limited to: separate measurements of low frequency and A-weighted noise levels across a range of wind speeds (including near cut-in), turbulence measurements, distance from the turbines, location of sensitive receptors relative to wind direction; and analyses at affected sensitive receptors located within two thousand five hundred feet (2,500') of the proposed project site. Potential sensitive receptors at relatively less windy or quieter locations than the project should be emphasized;
 3. A description and map showing the potential noise impacts and the cumulative noise impacts;
 4. Summary of Project Developer's proposed Noise Complaint Resolution Program;
 5. Manufacturers' Noise design and field testing data (both audible (dBA) and low frequency (deep base vibration) for all proposed structures;
 6. A report that outlines issues and considerations for individuals that use hearing aids;
- G. Environmental Impact Study (NEPA):** Provide an environmental impact study (EIS) prepared by a qualified consultant for the project.
- H. Archaeology Study (SHPO):** Provide an Archaeological study prepared by a Professional Archeologist for the project.
- I. Soil's Report:** A geotechnical report that shall at a minimum include the following;

1. Soils engineering and engineering geological characteristics of the site based on, on-site sampling and testing;
 2. Foundation design criteria for all proposed structures;
 3. Slope stability analysis;
 4. Grading criteria for ground preparation, cuts and fills and soil compaction.
- J. Ice Throw Calculations:** A report from a Licensed Professional Engineer that calculates the maximum distance that ice from the turbine blade could be thrown. The basis of the calculation and all assumptions must be disclosed and the incidence of reported ice throws and the conditions reported at the time of the ice throw.
- K. Blade Throw Calculations:** A report from a Licensed Professional Engineer that calculates the maximum distance that pieces of the turbine blades could be thrown. The basis of the calculation and all assumptions must be disclosed. Include the incidence of reported blade throws within the U.S. and the conditions at the time of the blade throw.
- L. Catastrophic Tower Failure:** A report from the CWES (turbine) manufacturer stating:
1. The wind speed and conditions that the turbine is designed to withstand (including all assumptions);
 2. The incidence of catastrophic failures experienced by the manufacturer and others within the U.S. within the past ten (10) years, and the conditions reported at the time of failure;
- M. Air Navigation:** An analysis to reduce air navigation “clutter” on airport radar facilities.
- N. FAA Notification:** A copy of written notification to the Federal Aviation Administration (FAA) and their approval of the project.
- O. Utility Notification:** Utility interconnection data and a copy of a written notification to the utility of the proposed interconnection.
- P. Flood Plain:** All applications shall be accompanied by a detailed report which shall address the potential for wind erosion, water erosion, sedimentation and flooding, and which shall propose mitigation measures for such impacts if located within a flood plain area.
- Q. Additional Information:** Any other additional information as required by the Zoning Administrator or final approving body.
- R. Applicable General Requirements:** Any applicant for CWES must show that all of the following applicable requirements are met:
1. **Set Backs:** The following set-backs and separation requirements shall apply to all CWES(s) and Meteorological Towers. (In regards to the CWES and MET Tower; set-backs shall be measured from the base of the pole). All other structures shall comply with the applicable setbacks as set forth by the applicable zoning district.
 2. **Inhabited Structures.** Each CWES shall be set back from the nearest existing inhabited residence, school, hospital, church, public library or public building, a distance no less than two thousand five hundred feet (2500’);
 3. **Public Roads and Railroads.** Each CWES shall be set back from the nearest public road(s) and/or railroad(s) a distance no less than one and one-half (1½) times the total height of the tower and rotor, determined at the nearest boundary of the underlying right-of-way for such public road or railroad;
 4. **Communication and Electrical lines.** Each CWES shall be set-back from the nearest above-ground electric power line, telephone line or other types of communication line(s) a distance no less than 1.1 times the total height of the tower and rotor, determined from the existing overhead power line, telephone line or communication line(s);
 5. **Property Lines.** Each CWES shall be set-back from the nearest property line a distance no less than 1.1 times the total height of the tower and rotor, unless appropriate recorded easements are secured from the adjacent property owners, or other acceptable mitigation is approved by the appropriate approval authority;
- S. Color and Finish:** CWES shall remain painted or finished as applied originally by the manufacturer, but shall be a non-reflective color.
- T. Tower Configuration:** All wind turbines, which are part of a CWES, shall be installed with a tubular monopole type tower.
- U. Maximum Height:** There is no maximum height restriction.
- V. Lighting:** CWES sites shall not be artificially lit, except to the extent required by the Federal Aviation Administration (FAA) or other applicable authority. Lighting intensity and frequency of strobe shall adhere to but not exceed requirements established by the FAA permits and regulations.
- W. Signage:** All signs, other than the manufacturer’s or installer’s identification, appropriate warning signs, or owner identification on a wind generator, tower building, or other structure(s) associated with a CWES shall be prohibited.
- X. Feeder Lines:** All electrical wires associated with a wind energy system, other than wires necessary to connect the wind generator to the tower wiring, the tower wiring to the disconnect junction box, and the grounding wires shall be located underground.
- Y. Waste Disposal:** Solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, as well as used oils and lubricants, shall be removed from the site in a time period as established by the Monroe County Sanitarian and disposed of in accordance with all applicable local, state and federal regulations.
- Z. Minimum Ground Clearance:** The ground clearance for rotors or blades shall be no less than twenty five (25) feet or one-third (1/3) the height of the tower whichever is greater.
- AA. Signal (Electromagnetic) Interference:** The applicant shall minimize and mitigate any interference with communication facilities, such as radio, cell tower systems, and telephone or television signals caused by any CWES. The owner of the CWES shall take necessary corrective

action to eliminate this interference, including relocation or removal of the facilities, subject to the approval of the appropriate approving authority. The conditional use permit or placement permit may be revoked if electromagnetic interference from the CWES becomes evident and not resolved.

BB. Emergency Communications: No CWES shall be constructed in a manner which will interfere with emergency communication transmissions of the County. The applicant shall provide documentation from the County Sheriff to verify that said wind turbine will not create such interference. Any cost incurred in the process of certifying that the CWES and associated equipment will not interfere with emergency communication transmissions shall be at the applicant's expense.

CC. Federal Aviation Administration (FAA): All CWES shall comply with FAA standards and permits, including but not limited to any necessary approvals for installation close to airports.

DD. Electrical Codes and Standards: All CWES and accessory equipment and facilities shall comply with the National and State Electrical Code(s) and other applicable standards.

EE. Compliance with Noise Regulations Required: A CWES permit shall not be granted unless the applicant demonstrates that the proposed project complies with all noise regulations.

FF. Noise Study Required: Each applicant shall submit a Noise Study based on the requirements set out in the application section. The appropriate approving authority shall determine the adequacy of the Noise Study and if necessary, may require further submissions.

GG. Noise Complaint and Investigation Process Required: Each applicant shall submit a Noise Complaint and Investigation Process based on the requirements set out in the Application section. The Board of Adjustment or the Zoning Administrator, as applicable, shall determine the adequacy of the Noise Complaint and Investigation Process.

HH. Noise Standards: Audible noise due to CWES site(s) operations shall not exceed sixty (60) dBA for any period of time as measured from any dwelling, school, hospital, church or public library from the property line existing on the date of approval of any Conditional Use Permit or Zoning Placement Permit.

1. In the event audible noise due to CWES operations contains a steady pure tone, such as a whine, screech, hum or repetitive impulsive sounds, the standards for audible noise set forth in this section shall be reduced by five (5) dBA;
2. In the event the ambient noise level (exclusive of the development in question) exceeds the applicable standard given above, the applicable standard shall be adjusted so as to equal the ambient noise level. The ambient noise level shall be expressed in terms of the highest whole number sound pressure level in dBA which is succeeded for more than five (5) minutes per hour. Ambient noise levels shall be measured at the exterior of potentially affected existing residences, schools, hospitals, churches and public libraries. Ambient noise level measurement techniques shall employ all practical means of reducing the effect of wind generated noise at the microphone. Ambient noise level measurements may be performed when wind velocities at the proposed project site are sufficient to allow wind turbine operation, provided that the wind velocity does not exceed thirty (30) mph at the ambient noise measurement location;
3. Any noise level falling between two (2) whole decibels shall be the lower of the two(2);

II. Safety: All CWES shall comply with the following safety requirements:

1. All wiring between Wind Turbines and the CWES substation shall be underground. If the applicant can demonstrate the need for an overhead line and the acceptance of landowners for this line, such option may be approved conditionally by the Monroe County Board of Adjustment or Zoning Administrator, as applicable;
2. CWES and Meteorological Towers shall be designed so all climbing apparatus is located at least fifteen (15) feet above ground level, and are designed to prevent climbing within the first fifteen (15) feet;
3. All access doors to CWES and Meteorological Towers and electrical equipment shall be locked when not being serviced;
4. Appropriate warning signage shall be placed on all CWES towers, electrical equipment, and CWES(s) entrances;
5. For all CWES(s), the manufacturer's engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the CWES(s) is within accepted professional standards, given local soil and climate conditions;
6. For all guyed towers, visible and reflective objects, such as plastic sleeves, reflectors or tape, shall be placed on the guy wire anchor points and along the outer and innermost guy wires up to a height of eight (8) feet above the ground. Visible fencing shall be installed around anchor points of guy wires;

JJ. Avoidance and Mitigation of Damages to Public Infrastructure:

1. **Roads:** Applicants shall identify all roads to be used for the purpose of transporting CWES(s), substation parts, concrete etc., and/or equipment for construction, operation or maintenance of the CWES(s) and obtain applicable weight and size permits from the appropriate authorities prior to construction;

2. **Existing Road Conditions:** Applicant shall conduct a site review, prior to construction, with the County Engineer or his designee to determine existing road conditions. The site review shall include photographs and a written agreement to document the condition of the road(s). The applicant will be held responsible for any road damages caused by construction. The applicant will also be responsible for the cost of the dust control application to the haul route if it is determined to be necessary by the Monroe County Engineer;
3. **Drainage System:** The applicant shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of the CWES;
4. **Required Financial Security:** The applicant shall be responsible for restoring or paying damages as agreed to by the County Engineer sufficient to restore the road(s) and bridge(s) to conditions prior to construction. Financial Security in a manner approved by the Monroe County Attorney shall be submitted covering one hundred thirty percent (130%) the costs of all required improvements;

KK.Inspection: At least every twenty-four (24) months, every CWES shall be inspected by a certified structural engineer who is regularly involved in the maintenance, inspection and/or erection of Wind Turbines at the expense of the owner of the CWES. A copy of such inspection record shall be provided to the Zoning Administrator.

LL.Discontinuation and De-Commissioning (Abandonment):

1. Each CWES shall have a De-Commissioning agreement signed by the landowner and owner of the CWES outlining the anticipated means and cost of removing the CWES, supporting equipment and all accessory buildings at the end of their serviceable life or upon becoming a discontinued or abandoned use. The cost estimates shall be made by a Licensed Professional Engineer. The agreement shall identify the financial resources that will be available to pay for the de-commissioning and removal of the CWES, supporting equipment and all accessory buildings. The approving authority may require a Letter of Credit or a payment and Performance Bond for the removal of CWES, buildings, abandoned power lines and equipment. The agreement shall identify that said agreement shall be binding on future property owner(s) and future owner(s) of the CWES. The agreement shall also include the legal description of the property on which the CWES(s) and all supporting equipment and accessory buildings shall be located;
2. A CWES shall be considered a discontinued or abandoned use after one (1) year without energy production, unless a plan is developed and submitted to the Zoning Administrator prior to the CWES remaining idle. The plan shall outline the steps and schedule for returning the CWES to service. Determination of the date of abandonment shall be made by the County Zoning Administrator. If the CWES is considered abandoned the zoning administrator may issue a Notice of Abandonment to the owner of the CWES. The owner shall have the right to respond to the Notice of Abandonment within thirty (30) days from the notice receipt date. The Zoning Administrator shall withdraw the Notice of Abandonment and notify the owner that the notice has been withdrawn if the owner provides information that demonstrates the CWES has not been abandoned.
3. Upon such abandonment, the CWES owner shall have an additional one hundred eighty (180) days within which to dismantle and remove the CWES, supporting equipment and all accessory buildings;
4. The owner of the CWES or the landowner shall take appropriate site reclamation steps to a below grade depth of four (4) feet. If the CWES, supporting equipment and all accessory buildings are not dismantled and removed to the approval of the Zoning Administrator or the Zoning Administrator's designee the County shall complete the removal and reclamation and assess the cost against the property for collection in the same manner as a property tax, pursuant to Section 331.384 of the Code of Iowa. Monroe County may require a Letter of Credit or a Payment and Performance Bond for the removal of towers, buildings, abandoned power lines and equipment.

New Section 5.24: Definitions for Wind Energy Systems: effective: Dec. 21, 2010 is added as follows:

5.24 DEFINITIONS FOR WIND ENERGY SYSTEMS: effective: Dec. 21, 2010

Due to the unique nature of the unfamiliar terms in Sections 5.22 and 5.23 we have chosen to insert the definitions as Section 5.24 and inserted where applicable in Chapter 10: Definitions.

AMBIENT NOISE LEVEL: Background noise level prior to installing the Wind Energy System (CWES or PWES).

COMMERCIAL WIND ENERGY SYSTEM (CWES): One or more wind energy system(s) of greater capacity than 100 kW and/or whose primary function is to generate power for offsite consumption. CWES shall include but are not limited to Commercial Wind Turbine generators, operations and maintenance buildings, meteorological towers, electrical collector systems, communications, roads and substations. And where CWES is written it is assumed to be inclusive of (MET) Meteorological Towers, where applicable.

FAA: Federal Aviation Administration.

FALL ZONE: The area, defined as the furthest distance from the tower base, in which a guyed tower will collapse in the event of a structural failure. This area is less than the total height of the structure.

FEEDER LINE: Any power line that carries electrical power from one or more wind turbines or individual transformers associated with individual wind turbines to the point of interconnection with the electric power grid, in the case of interconnection with the high voltage transmission systems the point of interconnection shall be the substation serving the wind energy system.

HUB HEIGHT: The distance measured from ground level to the center of the turbine hub of a Wind Energy System (CWES or PWES).

METEOROLOGICAL TOWER: (Met Tower); Towers which are erected primarily to measure wind speed and directions plus other data relevant to siting wind energy system(s).

MONOPOLE TOWER: A tower consisting of a single pole, constructed without guy wires and ground anchors.

NEPA: The National Environmental Policy Act [42 U.S.C. 4321 et seq.] was signed into law on January 1, 1970. The Act establishes national environmental policy and goals for the protection, maintenance, and enhancement of the environment and it provides a process for implementing these goals within the federal agencies.

OFF-GRID: Not connected to a public utility.

ON-GRID: Connected to a public utility.

PERSONAL WIND ENERGY SYSTEM (PWES): A wind energy system, which has a rated capacity of 100 kW or less; shall be limited to one for each property; and is used exclusively to supply electrical power for on-site use for no more than one (1) dwelling and the associated accessory structure(s), except that excess electrical power generated by the PWES and not needed for on-site use may be used by the utility company.

ROTO DIAMETER: The diameter of the circle described by the moving rotor blades.

SHPO: State Historic Preservation Officer; The official designated by the Governor to administer the State's historic preservation program and the duties described in 36 CFR Part 61 including nominating properties to the National Register.

SUBSTATION(S): Any electrical facility designed to convert electricity produced by wind turbines to a voltage greater than 35,000 volts (35KV) for interconnection with high voltage transmission lines and shall be located outside of the road right of way.

TOTAL SYSTEM HEIGHT: The highest point from ground level to the tip of a wind generator blade (or any other part of the wind energy system) at its highest point.

TOWER: The vertical structures that support the electrical generator, rotor blades, or meteorological equipment of a wind generator.

TRANSMISSION LINE: Electrical power lines that carry voltage of at least 69,000 volts (69 KV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers.

WIND ENERGY SYSTEM: Electricity generating facility consisting of one or more Wind Turbines under common ownership or operating control, and may include substations, meteorological tower (MET Tower), cables/wires and other buildings accessory to such a facility, whose main purpose is to supply electricity to off-site customer(s) or to individual system owners/ property owners.

WIND ENERGY SYSTEM PLACEMENT PERMIT: Placement permit for a Commercial Wind Energy System(s) (CWES) and Personal Wind Energy System(s) (PWES) in accordance with the provisions of the Monroe County Unified Development Code.

WIND TURBINE: A wind energy conversion system which converts wind energy into electricity through the use of a wind turbine generator, and includes the turbine, blade, tower, base and pad transformer, and any and other related equipment.

WIND TURBINE GENERATOR: Component of a wind energy conversion system that transforms mechanical energy from the wind into electrical energy.

Chapter 10: Definitions is hereby amended as follows:

Definitions revised to include Wind Energy System (Wind Turbines) related definitions. See definitions as written in Chapter 5, Section 5.24.

SECTION 3. REPEALER CLAUSE. All Ordinances in conflict herewith are hereby repealed.

SECTION 4. SEVERABILITY CLAUSE. If any section, provision or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

SECTION 5. An official copy of Ordinance No. 29, including a certificate of the County Auditor as to its adoption and the effective date, and a copy of this amendment is on file in the Office of the County Auditor, 10 Benton Ave. East, Albia, Iowa, Monday through Friday, 8:00 a.m. to 4:00 p.m. and shall be kept available for public inspection.

SECTION 6. All provisions of this amendment to Ordinance No. 29 shall be in effect from and after its final passage, approval and publication as provided by law, Section 331.302 Code of Iowa.

Passed and approved by the Board of Supervisors the 21st day of December, 2010.

MONROE COUNTY, IOWA

Dennis J. Ryan

DENNIS J. RYAN, Chairman
Monroe County Board of Supervisors

ATTEST:

Jeannie Bettis

JEANNIE BETTIS, Monroe Co. Auditor

I, Jeannie Bettis, Monroe County Auditor, certify the foregoing Amendment to Ordinance No. 29 “The Monroe County Unified Development Code” was published December 23 and December 28, 2010.

JEANNIE BETTIS, Monroe Co. Auditor

Passage of Amendment to Ordinance No. 29
First Reading - *December 21, 2010*
Second Reading – *waived December 21, 2010*
Third Reading – *waived December 21, 2010*
Final Consideration & Passage – **December 21, 2010**

Proposed Amendment to Ordinance No. 29 – published December 9, 2010 and December 14 2010.