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#### Madison County Wind Ordinance Passed on December 22nd TITLE V – PROPERTY AND LAND USE CHAPTER 54 – REPEAL OF ASSESSMENT OF WIND ENERGY CONVERSION PROPERTY

Pursuant to the power granted to the Madison County Board of Supervisors by Iowa Code Section 427B.26, Chapter 53 – Assessment of Wind Energy Conversion Property is hereby repealed and shall have no effect beyond those rights guaranteed by Iowa Code Section 427B.26.

#### Madison County Wind Ordinance Passed on December 22nd 50.40 COMMERCIAL WIND ENERGY CONVERSION SYSTEMS

#### PURPOSE & INTENT

The purpose of this ordinance is to establish minimum requirements and regulation of Applicant/Developer/Owner engaged in the construction, erection, placement, location, maintenance, modification, and operation of large scale industrial wind energy projects in Madison County. The intent of this ordinance is to ensure wind development sites are appropriately located to preserve and protect the following: the general welfare of the public; the character, image, and stability of Madison County's residential, tourism, recreational, agricultural, commercial, industrial, and other areas; the county's important and sensitive environmental and ecological assets and areas, open space, viewscapes, aesthetics, and wetlands. Accordingly, regulations are necessary to further the above goals and equally important, to minimize the potential adverse effects of this emerging high-impact land use on adjacent properties. All Commercial Wind Energy Conversion Systems (C-WECS), Industrial Wind Turbine (IWT), Turbines, turbine projects, project substations, and any upgrades to existing turbines or turbine projects including the Macksburg Project in Madison County and any C-WECS, IWTs, Turbines, or turbine projects, planned, permitted or not permitted, not erected, not placed, or uncompleted, including the Arbor Hill Project in Madison County, and any existing or future easements shall observe this Wind Energy Conversion Systems ordinance.

#### SECTION 1: DEFINITIONS

Aircraft Detection Lighting Systems (ADLS) a lighting system that provides reliable, continuous 360-degree radar surveillance of the airspace around sites to automatically activate obstruction lighting only when aircraft are detected at the defined outer perimeter.

Adverse Sound Character shall mean sound that causes building rattle, is impulsive, tonal, or has low- frequency bass rumble.

Ambient is defined as the background noise present at a given scene or a location.

ANSI is the American National Standards Institute

Audible the varying degrees of sound perception as reported by affidavit, including, but not limited to, just perceptible, audible, clearly audible, and objectionable.

**Board of Adjustment (BOA)** a board appointed by the Board of Supervisors. **Board of Supervisors (BOS)** a board elected by Madison County residents.

**Commercial Wind Energy Conversion System** (C-WECS) shall mean for the purposes of this ordinance, a turbine, owned and operated by an energy corporation or a commercial entity to generate electricity by converting the energy of the wind into electrical energy to be used on-site or distributed to the electrical grid. Any C-WECS having a Total Height greater than125 feet is considered a commercial turbine.

**Components** shall mean all the physical facilities including Turbines (the tower, nacelle, hub, motor, and blades), turbine foundations, transformers, crane pads, feeder lines, and any accessory buildings, and equipment. It shall also include any substations that are constructed in conjunction with a C-WECS Project.

**Confinement Feeding Operation Building** shall have the same meaning as found in Iowa Code §459.102(15).

C-WECS Construction Permit a required permit to construct, erect, build, place, install a Commercial Wind Energy Conversion System in Madison County. Commercial Wind Energy Conversion System Testing Facility a structure and equipment such as a meteorological tower for the collection of wind data and other meteorological data and transmission to a collection source. It shall not be deemed to be a communication tower. Experimental or a standard testing C-WECS, IWT, of any number or size for a testing facility is not allowed in Madison County.

C-WECS Project A commercial/industrial electrical generating project designed as an integrated system, more than one commercial turbine installed at the same time as a project that operates by converting the energy of wind into electrical energy to be used on-site or distributed to the electrical grid.

dB(A) the A-weighted sound level in decibels.

dB(C) the C-weighted sound level in decibels.

**Decibel** (d)B the principal unit measurement for sound pressure level; the intensity of a sound wave equal to 20 times the logarithm to the base 10 of the ratio of the sound pressure of the measured sound to the sound pressure of a standard sound (20 microPascals); abbreviated "dB"

**Excessive Noise** sound that is determined by ordinance to be too loud or unnecessary or creates a noise disturbance.

equipment that converts the energy of blowing wind into electrical energy using airfoils, blades, or similar devices to capture the wind. SECTION 2: PERMIT APPLICATION AND REVIEW

Legal Notices

#### A. General

Before any construction activities related to a C-WECS can begin in Madison County, a C-WECS Construction Permit must be issued by the County. For purposes of this ordinance, the installation of MET Towers and access roads associated with a C-WECS shall not be deemed construction activities and shall not require a C-WECS Construction Permit; provided that any such tower or road must be installed in compliance with all other applicable county Ordinances and regulations.

Entities seeking easements in Madison County must have a well-publicized public meeting, following the Notice of Filing section 2 D of this ordinance, stating their intent prior to obtaining easements within Madison County. A landowner in multiple counties is prohibited from signing an easement in Madison County prior to all regulations in this ordinance being met.

An Easement Agreement is to be filed with the Madison County Recorder within 5 business days of signing. Failure to do so will render each late Easement Agreement null and void. The Madison County Assessor or Recorder shall keep a list of all properties, property owners, and easement holders with completed Easement Agreements within each project for public viewing.

No C-WECS Testing Facility or C-WECS or IWT, for testing or experimental purposes, shall be permitted/allowed to be built or placed in Madison County. All existing or future Wind Easement Agreements in Madison County shall adhere to all regulations in this Commercial Wind Energy Conversion System Ordinance. **B. Application** 

The Madison County Zoning Administrator's office will supply a written application form to be used by any person seeking a C-WECS Construction Permit. Each Project shall require a separate application and associated application fees. The Application shall contain:

- a) The name, address, EIN of the Applicant/Developer, as well as the proposed owners or operators of the Project, including the contact information (name, address, telephone, and email) of their authorized representatives. The Application shall designate the entity who will be the Permit Holder of the C-WECS Construction Permit.
- b) A list of the names and addresses of all property owners (a) located within the Project Area, and (b) located within 1.5 miles of any turbine regardless if beyond the county border. Applicant/Developer/Owner will also provide two (2) sets of mailing labels containing the names and addresses of the above property owners. Said list shall be verified by the Madison County Zoning Administrator.
- c) A Development Plan (Plan) for the Project shall contain aerial photographs of the entire proposed Project Area, showing the approximate proposed location of the Turbines, private access roads, Feeder Lines, Substations and all other Components of the Project, including any new transmission lines or expansion of existing transmission lines. The Plan shall show Property Lines and Setback Distances under Section 3 below, as well as all public roads and public drainage district facilities (i.e. ditches and underground tiles) in the Project Area. The Plan shall also identify any other turbines, C-WECS, communication antennae, communication towers, and airports (including private airstrips and heliports) located within five (5) miles of the Project Area: and all lakes, permanent water courses and Public Conservation Areas within three (3) miles of the Project Area boundaries. The topographical conditions in the project area shall be supplied. In providing the above information, the Plan shall use a GPS coordinate system that is compatible with the County's geographical information and data systems. The Plan shall also include a mailing address for the owner of each communication antennae and tower identified
- d) Project details shall include the name of the Project and the anticipated number, make, model, type, generating capacity, tower height, and rotor diameter of the Turbines. The final number, type, generating capacity, tower height, rotor diameter, must be provided in the Final Development Plan.
- e) An unredacted Health & Safety Instructions Manual for make, model, and type of turbine from the manufacturer of said turbine permitting, must be presented to the county to have on file and must be made available to the public at time of application. No other generalized statement, document, or manual is acceptable. This Health & Safety Instructions manual must be specific to the make, model, and type of Turbine permitted and contain the Evacuation and Danger Zone measurement for the specific turbine permitting. The Applicant/Developer/Owner must comply with all requirements of turbine safety therein.
- f) Documentation of Applicant/Developer/Owner's legal control over the private property necessary for the Project, signed by the property owner. Such legal control must be vested in the Permit Holder of the C-WECS Construction Permit at the time of its issuance.
- g) A description of the public roads anticipated to be used during all phases of construction, as well as for access to material storage sites, staging areas, and laydown yards. As set forth in Section 5 below, before construction commences on a Project, all public road and public drainage district crossings must be provided to the County Engineer and approved

notice of receipt. The Madison County Zoning Administrator shall have thirty (30) days to review a completed Application and provide comments to the Applicant/ Developer/Owner.

#### **D. Notice of Filing**

No later than ten (10) days after filing the Application, the Applicant/Developer/ Owner shall provide a notice of the filing in substantially the following form: <u>PUBLIC NOTICE</u>

Notice is hereby given that Name of Applicant/Developer/Owner has filed an Application with Madison County to build/construct a commercial wind energy project to be located in Township Names and Section Numbers. The commercial wind energy project is projected to have \_\_\_\_\_\_ individual turbines that will be

\_\_\_\_\_\_ feet high and each Turbine will have the rated capacity of \_\_\_\_\_\_ Mega Watts. The Application is currently being reviewed by Madison County. There will be a separate notice of the public hearing on the commercial wind project. The Notice of Filing shall be:

- a) Published by the Madison County Zoning Administrator once for two consecutive weeks in the official newspaper of the county
- b) Mailed by the Madison County Zoning Administrator to each landowner identified in the Application pursuant to paragraph 2 B above, and to each City located within 1.5 miles of the Project Area; and to each public and private airport and heliport; and mailed to the owners of the Public Conservation Areas and all communication and other antenna and towers identified in the Application.

All costs of mailing and publication shall be paid by Applicant/Developer/Owner to the county care of the Madison County Zoning Administrator. **E. Public Hearing** 

#### E. Public Hearing

Upon completion of the County's review of the Application which is performed by the Madison County Zoning Administrator, the County shall set a public hearing to be held for preliminary review of the project no later than thirty (30) days after the County review period. The Madison County Zoning Board will then meet to provide recommendations and a decision to forward to the BOA. Representatives of the permit Applicant/Developer/Owner who are familiar with all aspects of the project must be present at the public hearing.

#### F. Notice of Public Hearing

Notice of the time and place of a public hearing shall be published and mailed by the Madison County Zoning Administrator in the same manner as the Notice of Filing in section 2 D above. The costs of such publications and mailings shall be paid by the Applicant/Developer/Owner to the Madison County Zoning Administrator.

#### G. Final Submission

No later than sixty (60) days following approval of the Madison County Zoning Commission's preliminary review and public hearing, Applicant/Developer/Owner shall submit a Final Development Plan (FDP) to the Madison County Zoning Administrator showing the final location of all Turbines and other Components comprising the Project (using a GPS coordinate system.) The FDP shall establish the Project's compliance with this Ordinance. Upon receipt of FDP the Madison County Zoning Administrator shall give Public Notice that the FDP has been received and publish it online for public review.

#### H. Approval by the Board of Adjustment

Within thirty (30) days following the submission of the FDP by the Applicant/ Developer/Owner, the BOA shall hold a public hearing pursuant to its rules of procedure. During the review the FDP will be reviewed for completeness and accuracy to the preliminary submittal and compliance with this Ordinance and with the Madison County Comprehensive Plan; and, if same is in compliance, approve the application. Once the BOA approves the application it returns to the Madison County Board of Supervisors for final consideration and approval; the Madison County Board of Supervisors may also choose to hold a public forum to allow more public input prior to their approval. The Madison County Supervisors reserve the right to protect the safety and general welfare of Madison County Supervisors, their decision shall direct the Madison County Zoning Administrator to issue C-WECS Construction Permits.

#### I. Modifications

The location of Components may be modified from the FDP when necessary to address exigencies encountered during construction, subject to the following limitations:

- a) Any such modification shall remain subject to all setbacks and other
- requirements set forth in this Ordinance and the Ancillary Agreements; and b) The location of Turbines and Project substations can only be modified from the
- FIDE Notation of the back and Project substations can only be modified informate FDP with approval of the Madison County Zoning Administrator if the proposed relocation is 300 feet or less; or, for such modifications exceeding 300 feet, with the approval of the BOA and BOS. Approval of a Turbine or Project substation modification by the Madison County Zoning Administrator or the BOA and BOS shall be deemed an approved amendment to the FDP and also automatically amend the C-WECS Construction Permit; and
- c) Within 30 days from the completion of the Project, the Permit Holder shall revise the FDP to show the exact "as-built" coordinates for all Components, including any modifications. [Failure to timely provide such coordinates shall be a material violation of this Ordinance.]

#### SECTION 3. SITING AND DESIGN STANDARDS

All C-WECS shall comply with the following minimum regulations and design

#### FAA the Federal Aviation Administration

Feeder Line shall mean any above or below-ground line that carries electrical power from one or more turbines.

**High-Impact** shall mean, but not limited to, a large, great, considerable, extended; impact, effect, influence, repercussion, impression, shall include, but not limited to, a region of Madison County, adversely affects residents, adjacent properties, property values, wildlife, environment, and or ecosystem. Shall also include safety, general welfare, and quality of life. A cumulative effect would be considered high-impact.

**Infrasound Low-Frequency Noise** (ILFN) this includes "infrasound" (0-20 Hz) combined with "low-frequency" sound (20-200 Hz) when referring to noise emissions on the lowest range of the sound spectrum.

 $\label{eq:linear} \mbox{Industrial Wind Turbine} \ (\mbox{IWT}) \ shall \ mean \ the \ physical \ turbine, \ tower, \ nacelle, \ hub, \ motor, \ blades, \ and \ foundation.$ 

Lmax (LAMax or LCMax) the maximum dB(A) or dB(C) sound level measured using the "fast" response # setting of the sound meter (equivalent to 0.125 second exponential averaging time)

**Mega Watt** (MW) a unit of power equal to one million watts, especially as a measure of the output of a power station.

Meteorological Tower (MET) shall mean a tower which is erected primarily to measure wind speed and directions, plus other atmospheric/weather data relevant to siting and operating a C-WECS. Meteorological towers do not include towers and equipment used by airports, the lowa Department of Transportation or other applications to monitor weather conditions

Noise for the purpose of this Ordinance, a sound that causes disturbance that exceeds 40 dB(A) (LMax) fast or 60 dB(C) (LMax) fast.

Non-Participating Landowner is a landowner who has not signed a binding easement with the Applicant/Developer/Owner of the C-WECS project

**NRO-mode 5** (Noise Reduction Operating modes) Considered to be a "throttle option" to control noise production. In NRO mode-5, the noise is reduced about 5 dBA to minimize potential noise production non-compliance.

**Occupied, Non-residential Building** shall mean any building (other than a residence) that is regularly occupied by humans, and that is open to the public, sells goods or services, or a public, religious, or other non-profit institution

Occupied Residence shall mean a building designed for, and actually occupied on a permanent basis as a residential dwelling

Participating Landowner a landowner who has signed a binding easement with the Applicant/Developer/Owner of the C-WECS project

**Project Area** shall mean the geographic area encompassing all Components of a C-WECS Project

**Property Line** shall mean the legal boundary between separately-owned real estate parcels, and privately-owned parcels and publicly-owned land or public right-of-way

Public Conservation Areas shall mean land owned by County, State, or Federal agencies and managed for conservation/preservation purposes, including but not limited to Wildlife Management Areas, Conservation Areas, Parks, Preserves, Covered Bridges, Wildlife Refuges, and Waterfowl Production Areas. For purposes of this regulation, Public Conservation Areas also include land owned by non-profit conservation organizations and other privately-owned lands upon which permanent conservation easements have been granted to public agencies or non-profit conservation organizations. Public Conservation Areas do not include land enrolled in the Conservation Reserve Program (CRP)

Rotor Diameter shall mean the diameter of the circle created by the Turbine's moving rotor blades

Shadow Flicker shall mean alternating changes in light intensity caused by the moving blades of a C-WECS, IWT, casting shadows on the ground and stationary objects, such as, but not limited to, a window of a dwelling, within a building or residence, yards or property

**Strobe Effect** the effect resulting from flashing of reflected light, which can be visible from some distance, from the surface finish of turbine blades

Supervisory Control and Data Acquisition (SCADA) is a system of software and hardware elements that allows industrial organizations to: Control industrial processes locally or at remote locations, monitor, gather, and process real-time data, directly interact with devices such as sensors, valves, pumps, motors, and more through human-machine interface (HMI) software, record events into a log file **Tip Height** the height of the turbine with a blade at the highest vertical point. **Total Height** shall mean the highest point above ground level reached by a rotor tip or any other part of a Turbine

**Tower** shall mean the vertical structure that supports the electrical generator, rotor blades, or meteorological equipment. Reinforced concrete towers shall not be permitted in Madison County.

Turbine shall mean C-WECS, IWT, and/or any piece of electrical generating

for compliance with the County's Road Use and Public Drainage System Protection Agreements.

- A permit fee paid according to the schedule of fees approved by the county board of supervisors. The permit fee is nonrefundable under any circumstance.
- Any FAA, FCC, or other state or federal permits or approvals that are necessary for the Project. Applicant/Developer/Owner shall submit a copy of the actual permit application, or proof that the permit has been filed with the appropriate agency, along with proof of approval or permit.
- j) Evidence in the form of a report prepared by a qualified unrelated thirdparty acceptable to the BOA & BOS, but not chosen or recommended by the Applicant/Developer/Owner, that the Project will not interfere with any existing commercial and/or public safety communication systems including radio, telephone, internet, GPS, microwave, Doppler, cellular/ wireless or television signals.
- k) A report prepared by a qualified third-party using the most current modeling software available establishing that no Occupied Residence will experience more than thirty (30) hours per year, or more than thirty (30) minutes per day, of Shadow Flicker at the nearest external wall based on a "real world" or "adjusted case" assessment modeling. The report must show the locations and estimated amount of shadow flicker to be experienced at all Occupied Residences as a result of the individual Turbines in the Project. No amount of Shadow Flicker may fall on or in a Non-Participating Landowner's property. Shadow Flicker received on a Non-Participating Landowner's Property requires that individual turbine install the Optional Shadow Flicker System resulting in Zero Shadow Flicker on a Non-Participating Landowner's Property. The Optional Shadow Flicker System will stop the C-WECS blades rotating during times when shadow flicker crosses a Non-Participating Landowner's property. The owner or resident of an Occupied Residence may waive the shadow flicker limits established above, which waiver must be in a written instrument signed by all owners, residents, and included with the Application.
- A Site Impact Area Assessment prepared by a qualified third-party using the most current evaluation process for a 10 mile radius of the project border. This report will include the County's Comprehensive Plan's guided recommendations such as Cumulative Effect, 70+ CSR restrictions, Image, Character, Viewshed and Landscape considerations, etc.
- m) A Growth Assessment prepared by a qualified third-party using the most current evaluation process for a 10 mile radius of the project border and the nearest community.
- n) Madison County Soil and Water Conservation District (MCSWCD) shall be contacted prior to beginning development and the developer shall work closely with that office in the planning, construction, and development to ensure all required permits are in place, identify any easement area, and to conserve natural resources.
- o) Applicant/Developer/Owner shall be notified they are required to set up an Escrow account with the Madison County Treasurer in the amount of \$25,000 for Complaint fees when the C-WECS Construction Permit is approved. The developer will maintain that level of funding for the duration of the project life until all components are removed by replenishing the escrow account on a monthly basis.
- p) A Property Value Guarantee. Applicant/Developer/Owner shall offer a property value guarantee to Non-Participating property owners within the project and 2 miles of the project boundary. Such guarantee shall be based on non-turbine and with-turbine appraised values by a third-party assessor familiar with the region and credible qualifications that will make the Non-Participating property owners whole financially, with the difference in the event the property owner cannot find an interested party to purchase said property at market value within six (6) months of actively marketing their property, the Applicant/Developer/Owner shall be responsible to purchase the property at the non-turbine project market value due to proximity to the C-WECS project adversely affecting the residential property values.
- q) A Decommissioning Plan pursuant to Section 4 below.
- r) Such additional information as the County may request due to the unique circumstances with the Project. Applicant/Developer/Owners are encouraged to have ongoing discussions with the Madison County Zoning Administrator and Engineer during preparation of the Application. Notes on said discussions shall be taken and made available to the public.

#### C. County Review

Applications shall be filed with the Madison County Zoning Administrator. Upon receipt of Application the Madison County Zoning Administrator shall give public

standards set forth by Madison County. The design standards and bulk regulations listed for all zoning districts shall be suspended for all C-WECS projects and the following regulations shall apply instead. All C-WECS projects shall be in compliance with all applicable local, state, and federal regulatory standards and applicable electric codes.

#### A. Setbacks

All C-WECS, IWTs, Turbines, turbine projects, project substations, and any upgrades to existing Turbines or turbine projects, including the Macksburg Project in Madison County, and any Turbines or turbine projects, planned, permitted or not permitted, not erected, not placed, or uncompleted, including the Arbor Hill Project in Madison County, shall observe the following setbacks: [Note - all measurements shall be from the center point of the Tower (or from the nearest above-ground non-fence structure at a substation site) to what is noted below]

	Protected Area	Set Back Requirement
	<ul> <li>Adjacent Property Lines</li> </ul>	1.5 mile from a Non-Participating
g		Landowner's Property Line. 2100 feet from
е		a Participating Landowner's Property Line.
	<ul> <li>Occupied Residence</li> </ul>	1.5 mile from a Non-Participating
		Landowner's Property Line. 2100 feet from
		a Participating Landowner's Occupied
		Residence Property Line.
	<ul> <li>Occupied, Non-residential</li> </ul>	1.25 mile from Property Line.
g	Building	
	<ul> <li>Confinement Feeding Operation</li> </ul>	1500 feet from property line
	Building	
	<ul> <li>Public Road Right-of-Way</li> </ul>	0.5 miles from nearest edge
	<u>Open Ditch</u>	1500 feet from nearest edge
	<ul> <li>Public Conservation Areas,</li> </ul>	1.5 miles from Property Line.
	sites on the National Historical	
d	Registry, Covered Bridges	
,	<ul> <li>Private-Owned Documented</li> </ul>	1.5 miles from Property Line.
	Conservation Areas	
	<u>Cemetery</u>	1 mile from Property Line.
	<u>City Limits</u>	1.5 miles from the Corporate Limits.
k	<ul> <li>Public &amp; private airports &amp;</li> </ul>	8 miles radius from all existing
<del>)</del> ,	heliports	or proposed runways, of any public or
		private airstrips 8 miles from all existing or
		proposed approaches no less than 1 mile
е		width. 5 miles radius of any heliport

#### Any additional setbacks as required by FAA

#### B. Environmentally Sensitive Areas

The setback distance from sensitive natural resource areas, wildlife management areas, prairies, wetlands, forested areas, and other significant public agency owned or managed natural resource area property or documented privately-owned conservation easement protected natural areas, shall be 1.5 miles from the Property Line. Landowners' submitted information shall be evaluated for their natural resource area by the Madison County Supervisors and their discretionary entities. C-WECS shall not be placed at locations where any species of fish, wildlife, or plants protected under the Federal Endangered Species Act have been documented. C-WECS shall not be placed near documented bat hibernation, breeding or nursery, colonies, and in migration corridors, or between known colonies and feeding areas. Migratory bird or other aerial or land based wildlife corridor shall not be disturbed and no C-WECS shall not be placed in a migratory bird or other aerial or land-based wildlife corridor. C-WECS shall not be placed within 5 miles of where bald eagles have been documented. No "Take" permits will be honored or accepted.

#### C. Setback Waivers.

#### No setback waivers are allowed except as noted below:

Private Airstrips – can be reduced to a setback of a One (1) mile radius, provided a waiver shall not alter any other non-waived set-back requirement. To effectuate such a waiver, the Applicant/Developer/Owner must provide the Madison County Zoning Administrator with a recordable instrument signed by all owner(s) (or the controlling governmental entity) of the affected Protected Area that specifically identifies the nature and the extent of the waiver. All waivers must be approved by the BOA and BOS for compliance with this Ordinance; and upon such approval, shall be recorded in the office of the Madison County Recorder.

#### D. Height Limits

No C-WECS, Industrial Wind Turbines (IWTs) shall exceed 500 feet. No Variances or conditional use or special use permits will be allowed for height limits set in this ordinance.

# Legal Notices Cont.

#### E. Generating Capacity Limits

A limit of 2.3 MW of generating capacity per unit, C-WECS, IWT. F. Color and Finish

Wind turbines shall be painted a non-reflective color. Finishes shall be matte or non-reflective. Exceptions may be made for meteorological towers, where concerns exist relative to aerial spray applicators.

#### G. Tower configuration

All wind turbines, which are part of the C-WECS project, shall be installed with a tubular, monopole type tower. Reinforced concrete towers shall not be permitted in Madison County. Alternate designs may be considered if the county supervisors determine them to be an improvement and more desirable. Meteorological towers may also be guyed or lattice towers.

#### H. Lighting.

C-WECS sites shall not be artificially lighted, except to the extent required by the FAA or other applicable authority. Lighting, including lighting intensity and frequency of strobe, shall adhere to but not exceed requirements established by Federal Aviation Administration permits and regulations. Red pulsating or flashing lights should be avoided except as noted below.

- a) Aircraft Detection Lighting System (ADLS) technology is required for all C-WECS, IWTs in Madison County. Aircraft Detection Lighting Systems (ADLS) is a passive radar sensing system used to turn on obstruction lighting (red flashing lights) only when aircraft are detected at the defined outer perimeter.
- b) All wind turbines that exceed an overall height of 200 feet above ground level or exceeds any obstruction standard contained in Title 14 Code of Federal Regulations Part 77, "Safe, Efficient Use, and Preservation of the Navigable Airspace," are to be marked and/or lighted with FAAapproved paint markings or lighting fixtures to ensure that they are visible to pilots at night.
- c) Installed ADLS systems must be in compliance with Title 14 Code of Federal Regulations Part 77
- d) Exceptions may be made for meteorological towers, where concerns exist relative to aerial spray applicators, with county supervisor approval.
- e) Substations and other related buildings for a wind project shall be lighted with minimum security lighting. The Madison County Board of Supervisors will consider complaints about lighting and require lighting adjustments.

#### I. Signage

All signage on site shall comply with the Madison County Zoning Ordinance. The manufacturer's or owner's company name and/or logo may be placed upon the compartment containing the electrical generator of the C-WECS. Signs indicating the 9-1-1 address of each C-WECS, or grouping of multiple C-WECS, shall be placed at each device site and/or the entry points of access roads per the Madison County Uniform Rural Address System Ordinance and require the signage fee. Wind turbines shall not be used for displaying any advertising except for reasonable identification of the manufacturer or owner/operator of the C-WECS sites.

#### J. Feeder Lines

All communications and feeder lines, equal to or less than 34.5kV in capacity, installed as part of a C-WECS project shall meet or exceed the current national electrical code (NEC). All feeder lines must be underground. Burial depth shall be at least ten (10) feet and cause no known environmental, land use, or safety issues.

#### K. Waste Disposal

Solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts, blades removed, as well as used oils and lubricants, shall be removed from the site and disposed of in accordance with all applicable local, state and federal regulations. Nothing shall be disposed of within the county, including on private or public lands, or at private or public waste management sites/dumps/landfills. Waste must be delivered and disposed of with proof of completion, within thirty (30) days of blade removal, removal of component(s), removal of oil, etc. If the Applicant/Developer/Owner fails to dispose of the blade(s), components, oil, and other such waste, within thirty (30) days, the county may seek any relief at law or equity to abate the nuisance and may also issue a municipal civil infraction citation. Each violation shall result in a \$1000.00 fine. Each day of non-compliance shall be a separate offense. If within sixty (60) days the waste disposal has not been completed the C-WECS will be determined to be discontinued use and removal will commence immediately at Applicant/Developer/Owner cost.

#### L. Minimum Ground Clearance

The blade tip of any wind turbine shall, at its lowest point, have ground clearance of no less than seventy-five (75) feet. Macksburg wind project is included in this ordinance for minimum ground clearance.

#### **M. Signal Interference**

Electromagnetic Interference (EMI) also called Radio-Frequency Interference (RFI). The Applicant/Developer/Owner shall minimize and mitigate any interference with electromagnetic communications, such as radio, internet, telephone, cellular, wireless, broadband, Doppler, or television signals, caused by any C-WECS, IWTs.

- N. Federal Aviation Administration
- All C-WECS shall comply with FAA standards and permits.
- O. Electrical Codes and Standards

If a complaint is submitted, the Applicant/Developer/Owner must cooperate by providing all SCADA data for the 24-hour period surrounding the complaints time and date. The Applicant/Developer/Owner must also agree, as part of the permit, that they will cooperate with the acoustician conducting the test, including operating the wind turbines in the mode(s) the acoustician wishes to test, including on/off tests that may also require testing of wind turbines not near the complainant's property.

Performing Acoustician and Applicant/Developer/Owner shall use the validation/ complaint measurement procedure: ANSI S12.9 Part 3 (R2013) "Short Term Measurements with an Observer Present. The S12.9 Part 3 "On/Off" test protocol must be followed. Once a complaint is filed, all wind turbines within 3 miles must be operated in NRO-Mode 5 at night. That mode shall be continued until resolution of the complaint by independent acoustician evaluation (as above described). Should the Applicant/Developer/Owner elect to appeal any finding that they are not in compliance, the NRO-Mode 5 nighttime will be continued until the appeal is resolved.

If post-construction measurements exceed appliance noise limits and compliance, the Applicant/Developer/Owner will comply within thirty (30) days, if not compliant within thirty (30) days the owner will cease operation of said C-WECS, IWTs, until compliant.

#### S. Shadow Flicker

A report prepared by a qualified third-party using the most current modeling software available establishing that no Occupied Residence will experience more than thirty (30) hours per year, or more than thirty (30) minutes per day, of Shadow Flicker at the nearest external wall based on a "real world" or "adjusted case" assessment modeling. The report must show the locations and estimated amount of shadow flicker to be experienced at all Occupied Residences as a result of the individual Turbines in the Project.

No amount of Shadow Flicker may fall on or in a Non-Participating Landowner's property. Shadow Flicker received on a Non-Participating Landowner's Property requires that the offending turbine(s) be installed with the Optional Shadow Flicker System resulting in Zero Shadow Flicker on a Non-Participating Landowner's Property. The Optional Shadow Flicker System will stop the C-WECS blades rotating during times when shadow flicker crosses a Non-Participating Landowner's property.

The owner or resident of an Occupied Residence may waive the shadow flicker limits established above, which waiver must be in a written instrument signed by all owners, residents, and included with the Application.

#### T. Vibrations

C-WECS, IWTs, shall not create vibrations that are detectable by human(s) on Non-Participating Landowner's properties. Documentation of increased sediment in water wells shall be considered evidence of vibration.

#### U. Safety

- All wiring between wind turbines and the C-WECS project substation shall be underground at a minimum depth of ten (10) feet
- b) Wind turbine towers shall not be climbable up to fifteen feet above ground level
- c) Access doors to all equipment on each site shall be locked unless being serviced
- d) Appropriate warning signage shall be placed on wind turbine towers, electrical equipment, and C-WECS entrances
- e) Manufacturer's engineer or other qualified engineer shall certify that the wind turbine, foundation and tower design of the C-WECS is within accepted professional standards, given local soil and climate conditions
- f) Each C-WECS shall be equipped with both a manual and automatic braking device capable of stopping the C-WECS operation in high winds within 80% of design limits of the braking system
- g) 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.
- h) An unredacted Health & Safety Instructions Manual for make, model, and type of turbine from the manufacturer of said turbine permitting, must be presented to the county to have on file and must be made available to the public at time of application. No other generalized statement, document, or manual is acceptable. This Health & Safety Instructions manual must be specific to the make, model, and type of Turbine permitted and contain the Evacuation and Danger Zone measurement for the specific turbine permitting. The Applicant/Developer/Owner must comply with all requirements of turbine safety therein.
- All spent lubricants and cooling fluids shall be properly and safely removed in within thirty (30) days from the site of the C-WECS. These shall not be disposed of at any county landfill, dump or waste management site, nor on any private or public property.
- j) Signs displaying emergency contact information in case of fire must be

#### posted. V. Voltage

The Applicant/Developer/Owner shall be responsible for compensation to residents of property including livestock, health, or other damage by stray voltage caused by a C-WECS. Applicant/Developer/Owner shall demonstrate C-WECS prohibits any detectable stray voltage, surge voltage, and power from entering Applicant/Developer/Owner can demonstrate compliance with the requirements of this ordinance and Discontinued/Decommissioning section 4.

#### SECTION 4: DISCONTINUATION / DECOMMISSIONING

A C-WECS, IWT, or any component thereof shall be considered a "discontinued use," if the individual C-WEC, IWT has not functioned in a continuous six (6) month period or has not generated 2000 hours of electricity within one continuous year. Once declared to be a discontinued use, the Components, C-WECS, IWT shall be promptly dismantled and removed from the property in accordance with the Decommissioning regulations of this ordinance. Each Project shall have a Decommissioning Plan approved by the BOA, sent to the Madison County Board of Supervisors for final consideration and approval. Such Plan shall contain:

- A description of the Project Components, and a sequence and description of the activities required to remove same in compliance with this section.
- b) A report prepared by a qualified third-party (to be approved by the Board in advance) setting forth the procedures and estimated net cost associated with the removal of the Components and returning all public roads, including hard surface roads, to the same or better condition as before decommissioning. All C-WECS and accessory facilities shall be removed completely, including but not limited to concrete, steel, cables, wires, conduit, below ground level within one hundred eighty (180) days of the discontinuation of use at the complete financial cost of the Owner/Entity. Nothing shall be disposed of within the county, including on private or public lands, or at private or public waste management sites/dumps/ landfills.
- c) A Cash Escrow Account shall be opened by the Applicant/Developer/ Owner with the Madison County Treasurer for decommissioning costs, prior to construction and upon the approval of the C-WECS Construction Permit. Cash, in Escrow, the amount per C-WECS, IWT will be evidenced in the form of two separate quotes for complete & full removal of all above and below ground components of a C-WECS, returning the property to its pre-turbine condition, prepared by qualified third-parties acceptable to the Madison County Board of Supervisors. The total of Cash/Escrow per Turbine shall be the average of two independent demolition/removal quotes. Cash/Escrow must be paid to the Madison County Treasurer upon approval of permits and before construction begins. Cash/Escrow must be reviewed yearly to accommodate rate of inflation. Additional monies may need to be added by the Applicant/Developer/Owner due to rate of inflation and changing expenses related to components disposal and ground reclamation condition. If escrow account needs additional monies the Applicant/Developer/Owner has fourteen (14) business days after receiving notice to comply or the C-WECS will be determined to be discontinued use and removal will commence immediately.
- d) An update to this decommissioning plan shall be submitted to the Madison County Zoning Administrator every three (3) years.
- e) The county reserves the right to require additional information or components to the plan as the county deems necessary to ensure that an adequate proposal is in place to decommission the C-WECS project in its entirety and that adequate funds are available in the cash/escrow account.

#### SECTION 5: ANCILLARY AGREEMENTS/PROCEDURES Issuance of a C-WECS Construction Permit is strictly conditioned on the

Applicant/Developer/Owner executing and providing the following: **A. Roads** 

Prior to construction Applicant/Developer/Owner shall identify all roads to be used for the purpose of transporting C-WECS, substation parts, concrete, components and/or equipment for construction, operation or maintenance of the C-WECS and obtain applicable weight and size permits from the impacted road authority(ies) prior to construction.

- a) Prior to construction Applicant/Developer/Owner shall conduct a preconstruction survey, in coordination with the impacted local road authority(ies) to determine existing road conditions. The survey shall include photographs and a written agreement to document the condition of the public facility. All roads, including county owned hard surface road(s) are to be graded and inspected by the County Engineer, well documented with photos and detailed information of pre-construction condition.
- b) The Applicant/Developer/Owner shall be responsible for ongoing road maintenance and dust control measures identified by the county engineer during all phases of construction. Restoring or paying damages as agreed to by the applicable road authority(ies) sufficient to restore the road(s) including county owned hard surface road(s) and bridges to preconstruction conditions to the extent caused by the construction of the C-WECS. Financial security in a manner approved by the Madison County Attorney's Office shall be submitted covering one hundred thirty percent (130%) the estimated costs of all required improvements. The Applicant/ Developer/Owner shall enter into a road use agreement with Madison County prior to the start of construction.
- c) The Applicant/Developer/Owner shall comply with all IDOT road and safety requirements; signage shall not be removed nor road path or layout changed without permission from the zoning administrator and county roads

#### B. Drainage System

All C-WECS components and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards.

#### P. Substations and Accessory Buildings

Structures related to a C-WECS shall be subject to the dimensional and locational standards of structures in the zoning district. Where structures are visible from adjacent properties, the Madison County Zoning Commission shall require & approve vegetative or manmade screening to minimize visual off-site impact. The BOS reserves the right to review and require changes to the screening to further minimize the off-site impact.

## Q. Noise.

Definitions:

**40 dBA** – means 40 decibels (measure of sound intensity or "strength") as measured using an A-weighted filter ("centered" around 1000 Hz – thus when used discriminates against low frequencies; primarily measures in the 500-10K Hz range). In general, it is more useful to describe audible noise.

**60 dBC** – means 60 decibels (measure of sound intensity or "strength") as measured using a C weighted filter (centered as zero) between 250 and 1000 Hz; unlike A-weighting, C-weighting does not discriminate against low frequencies and measures uniformly over the frequency range of 30-10K Hz). Measuring at 20 Hz (defined boundary between infrasound and low-frequency noise, using the A-weighted filter undermeasures sound intensity by 50.5 dB while C-weighted filtering undermeasures by only 6.2 dB. As C-WECS, and IWTs: 1) have the highest sound intensities in the ILFN range, 2) which produce some of the most adverse effects and 3) are being placed having larger energy-producing ratings that contain proportionally higher ILFN content, it is essential that characterization of lower-frequency noise content be quantified and regulated.

**ILFN** Refers to Infrasound Low-Frequency Noise. This includes "infrasound" (0-20 Hz) combined with "low-frequency" sound (20-200 Hz) when referring to noise emissions on the lowest range of the sound spectrum.

**Lmax** - means "maximal sound level" and is a descriptor of the highest sound level measure during a single noise event in which the sound level changes value as time goes on. It is not the same as the Lpk or peak sound level (which does not use A or C weighting, nor is a time-constant applied).

(fast) – means a value measured by a specific type of sound level (dB) meter. "Fast" reflect the type of meter (fast, slow or impulse) and corresponds to a 125 msec time constant (precise collection interval (in msec) used by meter). Such sound meters are standardized, are readily available and, like A and C weighting, are "standard" on acoustical measuring equipment. Whereas, for the most part, rural Madison County is a quiet rural residential area that has background night noise levels that are below 25 dBA, therefore, a night-time noise emission level at non-participating properties for any facility permitted for industrial wind turbines shall not exceed 40 dBA Lmax (fast response) AND shall not exceed 60 dBC Lmax (fast response). Both of these regulatory limits will be observed at the

Property Line for all Non-Participating Landowners which could be affected by wind project noise.

Noise shall not exceed 40 dBA Lmax (fast) as the desired maximal (day or night) noise limit to protect from adverse effects of audible (closer-originating) noise.

Noise shall not exceed 60 dBC Lmax (fast) as the desired maximal (day or night) noise limit to protect from adverse effects of infrasound, low-frequency noise (ILFN) that contributes to sleep disturbance, among other effects and can travel much farther than audible sound. Wind turbine noise, at any time of the day or night, cannot exceed the above specified limits at any point along a non-participating Property Line (not the nearest residence) to be in compliance. Both limit regulations are essential to more fully protect exposed residents.

#### **R. Noise Complaints Resolution**

Any decision on Regulations, Complaints or Compliance Tests will be conducted by a qualified acoustician selected by and approved (in public meeting) by the County Supervisors. Such decision will provide public access to the acoustician's prior training and experience and review of their competence (if requested) through independent review. The acoustician shall be without any economic nor "collaborative" relationship with any utility/energy company, utility/energy affiliates, utility/energy subsidiaries, utility/energy lobby groups, utility/energy associations/guilds, or the Applicant/Developer/Owner. The Applicant/Developer/ Owner has no control over the selection of the acoustical consultant. Any testing cost that is required for dBA analysis shall be paid out of an escrow account established by a \$25,000 fee paid by the Applicant/Developer/Owner when the application is permitted. The Applicant/Developer/Owner will maintain that level of funding for the duration of the project life until all components are removed by replenishing the escrow account on a monthly basis.

ground.

#### W. Height and Number Limitations

- a) The Total Height of any C-WEC, IWT, Turbine in Madison County shall not exceed 500 feet.
- b) No Project shall have more than 51 total Turbines. Projects shall not be split in order to avoid this restriction.
- c) At no time shall the total number of permitted and installed C-WECS in Madison County exceed 51 turbines.

#### X. Operational, Maintenance, and Issue Resolution

Each C-WECS and MET tower location must be kept and maintained in good repair and condition at all times. If a C-WECS is not maintained in operational and reasonable condition or poses a potential safety hazard, the Applicant/Developer/ Owner shall take expeditious action to correct the situation, including C-WECS removal. The Applicant/Developer/Owner shall keep a maintenance log on each C-WECS and must provide the complete log to the county within thirty (30) days of request.

#### Y. Repair Policy Documentation

Applicant/Developer/Owner must provide a detailed policy and process book for the repair, replacement, and removal of malfunctioning, defective, worn, or noncompliant C-WECS. Sections of the process book should consider any ordinance requirements or C-WECS performance deficiency.

#### Z. Complaint Resolution

It is the intent of this ordinance to provide a mechanism to address and resolve complaints. Complaints of noncompliance with the requirements of this ordinance shall be resolved in the following manner:

- a) Complaints shall be submitted to the Madison County Board of Supervisors in writing from the affected property owner, or written designee, including name, address, contact information, and specific complaint. The written complaint shall include the specific section of the ordinance which is believed to be violated. The Supervisor shall cause the complaint to be added to the agenda of the next Madison County Board of Supervisors' meeting in accordance with the procedure for setting the agenda.
- b) The Supervisor shall submit to the Applicant/Developer/Owner of record notice of all written complaints to the county within three (3) days of receipt of any complaint. Upon receipt of complaint the Applicant/Developer/ Owner shall operate the Turbine(s) subject to the complaints in the NRO-Mode 5 until complaint is investigated/reviewed by the Madison County Board of Supervisors and a decision is made. Complaints received by the county and the date of any Madison County Board of Supervisors' meeting where complaints may be considered shall be communicated to the Applicant/Developer/Owner at least 10 days prior. The notice shall state that the Madison County Board of Supervisors may determine that the C-WECS is in violation of its permit and is therefore a nuisance and may be ordered out of service until the Applicant/Developer/Owner can demonstrate compliance with the requirements of this ordinance.
- c) Upon review, if the Madison County Board of Supervisors, by an affirmative vote of the majority of the members present, deems a complaint sufficient to warrant an investigation, the Madison County Board of Supervisors shall notify the Applicant/Developer/Owner of the C-WECS that an investigation has been requested by the Madison County Board of Supervisors.
- d) Applicant/Developer/Owner shall be required as a condition of the operation to fund an escrow account for investigation of complaints for, but not limited to, Shadow Flicker, Adverse Sound Character, stray voltage, noise, and signal interference in the amount of \$25,000.00 to be used at the discretion of the county Madison County Board of Supervisors. When the escrow account balance is below \$10,000.00 the county shall notify the Applicant/Developer/Owner and the Applicant/Developer/Owner shall replenish the account to the amount of \$25,000.00 within fourteen (14) days of notification.
- e) If C-WECS is found in violation of this ordinance, the Applicant/Developer/ Owner shall take immediate action to bring the C-WECS into compliance. If the Applicant/Developer/Owner fails to bring the operation into compliance within thirty (30) days, the county may seek any relief at law or equity to abate the nuisance and may also issue a municipal civil infraction citation. Each violation shall result in a \$1000.00 fine per turbine subject to the complaint. Each day of non-compliance shall be a separate offense.
- f) Any C-WECS found by the Madison County Board of Supervisors to be in violation of this ordinance set forth herein shall be considered a nuisance and the C-WECS operations shall cease until such time as the C-WECS

The Applicant/Developer/Owner shall be responsible for immediate repair of damage to public drainage systems to the extent caused by the construction, operation or maintenance of the C-WECS.

Prior to construction of the C-WECS project, all existing drainage tile must be inspected by means of robotic camera and the imagery submitted to the Madison County Zoning Administrator to establish a baseline condition of tile. Any damaged or inoperable tile shall be repaired prior to construction of C-WECS project and such repairs shall be documented and a report submitted to the landowner and the Madison County Zoning Commission office, indicating the location, nature and satisfactory completion of such repairs. Supports shall be constructed to preserve any drainage field tile and/or drainage system. While the C-WECS is in operation, all drain tile shall be inspected every three (3) years in the fashion noted above and all video footage and a report of any damage or failure shall be submitted to the Madison County Zoning Administrator. Any tile failure shall be corrected within sixty (60) days of discovery and such repairs shall be documented and a report submitted to the landowner and county indicating the location, nature and satisfactory completion of such repairs. The county reserves the right to have the building inspector or other agent of the county present at the time of repair. While the C-WECS is in operation, as well as during decommissioning, if any repair is not completed within sixty (60) days of the reported damage/failure, the project shall be fined \$1000.00 per infraction per day, and shall be retroactive to the date of the initial report of damage/failure until final completion date.

#### C. An Emergency Response Plan

Provided by Applicant/Developer/Owner and approved by the BOA. Said Plan shall contain response procedures to be followed in the event of a fire, collapse, personal injury, or other emergency at a Project. The Plan shall contain 24 hour emergency contact information for the Project.

## D. An unredacted Health & Safety Instructions Manual for make, model, and type of turbines in the project from the manufacturer(s)

This must be presented to the county to have on file and must be made available to the public at time of application. No other generalized statement, document, or manual is acceptable. This Health & Safety Instructions manual must be specific to the make, model, and type of Turbine permitted and contain the Evacuation and Danger Zone measurement for the specific turbine permitting. The Applicant/ Developer/Owner must comply with all requirements of turbine safety therein.

## SECTION 6: TRANSFERABILILTY OF A C-WECS CONSTRUCTION PERMIT

- a) No construction activities on a Project may begin until a C-WECS Construction Permit has been issued, except as permitted in Section 2 A.
- b) Any material violation of any provision of this Ordinance that remains uncured after thirty (30) days written notice from the County to the Permit Holder shall be grounds for revocation of the C-WECS Construction Permit.
- c) If construction on the Project has not begun within 18 months from the date of issuance of the C-WECS Construction Permit, the C-WECS Construction Permit shall be automatically revoked without further action by the County. In such event, no work on the Project may take place unless and until a new C-WECS Construction Permit is issued following the original complete application process, meaning going through the application process providing all required information, Madison County Zoning Commission public hearing, recommendations and decision, a public hearing by the BOA and approval/denial and finally to the Madison County Board of Supervisors, and any portion of the Project, such as MET tower, driveways or roads, etc., then completed shall be deemed a discontinued use.
- d) Only the holder of the C-WECS Construction Permit (Permit Holder) shall own the Project, and such holder shall be the entity responsible for observing all requirements of this Ordinance. The Permit Holder shall be responsible to maintain all Components of the C-WECS in good repair, and in compliance with this Ordinance and the Ancillary Agreements listed in Section 5 above.
- e) No C-WECS Construction Permit shall be transferred or assigned, voluntarily or involuntarily, without the written approval of the Madison County Board of Supervisors, which consent may be withheld unless and until the said Board is satisfied that a proposed transferee has the financial and operational responsibility to assume all obligations required of the Permit Holder under this Ordinance and the Ancillary Agreements listed in Section 5 above. Requests for approval of a C-WECS Construction Permit transfer shall be directed to the Madison County Zoning Administrator at which time the Madison County Zoning Administrator will present it to the Madison County Board of Supervisors.

## Legal Notices Cont.

#### SECTION 7: MISCELLANEOUS

**Condemnation Waiver** Issuance of a C-WECS construction permit shall be conditioned on the permit holder's enforceable promise, supported by the consideration of the issuance of the C-WECS construction permit, that the permit holder shall never use, or seek to use, eminent domain to acquire any real property interests to construct or operate the project, or to construct new or expand existing, transmission lines. Legal fees

In any action brought by the County against the Permit Holder of a C-WECS Construction Permit to enforce the provisions of this Ordinance, the County shall be entitled to recover its reasonable attorney fees and court costs as may be awarded by the court.

#### SECTION 8: LIABILITY INSURANCE

The Applicant/Developer/Owner of the C-WECS project shall maintain a current and general liability policy covering bodily injury and property damage with limits of at least five (5) million dollars per occurrence and twenty (20) million dollars in the aggregate. The Applicant/Developer/Owner of the C-WECS project shall maintain this policy for the lifetime of the C-WECS project and submit a copy of the same to the Madison County Zoning Administrator at each renewal. Madison County and its officials shall be named as additional insureds.

#### SECTION 9: SEVERABILITY CLAUSE

If any of the provisions of this Ordinance are for any reason illegal or void, then the lawful provisions of this Ordinance, which are separable from said unlawful provisions shall be and remain in full force and effect, the same as if the Ordinance contained no illegal or void provisions.

## SECTION 10: REPEALER

All ordinances or parts of ordinances in conflict with the provisions of this Ordinance are hereby repealed.

#### SECTION 11: LEGAL AUTHORITY

Madison County reserves the right to exercise Iowa Code 331.301 at any time to protect and preserve the rights, privileges, and property of the county or of its residents, and to preserve and improve the peace, safety, general welfare, and convenience of its residents. As updated information, concern, and plausible evidence are established, Madison County reserves the right to amend or repeal regulations to protect the residents of Madison County. All C-WECS, IWTs, Turbines, turbine projects, project substations, and any upgrades to existing Turbines or turbine projects, including the Macksburg Project in Madison County, and all C-WECS, IWTs, Turbines, or turbine projects, planned, permitted or not permitted, not erected, not placed, or uncompleted, including the Arbor Hill Project in Madison County, any existing or future easements, shall observe this Commercial Wind Energy Conversion Systems Ordinance.

#### SECTION 12: DATE OF EFFECT

This Ordinance shall become effective upon its passage by the Madison County Board of Supervisors in accordance to our county ordinances and published as required by Iowa Code §331.302(8)

#### Madison County Solar Ordinance Passed on December 22nd

## 50.42 SOLAR ENERGY SYSTEMS

#### **Purpose and Intent**

The purpose of this ordinance is to establish minimum requirements and regulation of Applicant/Developer/Owner engaged in the construction, erection, placement, location, maintenance, modification, and operation of Large Utility Scale Solar Energy Systems (LUS-SES) in Madison County. The intent of this ordinance is to ensure solar development sites are appropriately located to preserve and protect the following: the general welfare of the public; the character, image, and stability of Madison County's residential, tourism, recreational, agricultural, commercial, industrial, and other areas; the county's important and sensitive environmental and ecological assets and areas, open space, viewscapes, aesthetics, and wetlands. Accordingly, regulations are necessary to further the above goals and equally important, to minimize the potential high-impact adverse effect of this emerging land use on adjacent properties. All Large Utility Scale Solar Energy Systems projects permitted or not permitted, planned, not erected, not placed or uncompleted and any existing future easements for LUS-SES projects shall follow this Solar Energy Systems ordinance.

#### SECTION 1: DEFINITIONS

Adverse Sound Character sound that causes building rattle, is impulsive, tonal, or has low-frequency bass rumble

Board of Adjustment (BOA) a board appointed by the Madison County Board of Supervisors

Board of Supervisors (BOS) a board elected by Madison County residents Confinement Feeding Operation Building shall have the same meaning as found in Iowa Code §459.102(15)

- dB(A) the A-weighted sound level in decibels
- dB(C) the C-weighted sound level in decibels

Decibel (dB) the principal unit measurement for sound pressure level; the intensity of a sound wave equal to 20 times the logarithm to the base 10 of the ratio of the sound pressure of the measured sound to the sound pressure of a standard sound (20 microPascals); abbreviated "dB"

Excessive Noise sound that is determined by ordinance to be too loud or unnecessary or creates a noise disturbance

A Solar Easement Agreement is to be filed with the Madison County Recorder within 5 business days of the date of signing. Failure to do so will render each Solar Easement Agreement null and void. The Madison County Assessor or Recorder shall keep a list of all properties, property owners, and easement holders with completed Easement Agreements within each project for public viewing. No LUS-SES Testing Facility or LUS-SES for testing or experimental purposes, shall be permitted/allowed to be built or placed in Madison County.

### B. Application

The Madison County Zoning Administrator's office will supply a written Application form to be used by any person/entity seeking a LUS-SES Construction Permit. Each Project shall require a separate application and associated application fees. The Application shall contain:

- a) The name, address, EIN of the Applicant/Developer/Owner, as well as any proposed operators of the Project, including the contact information (name, address, telephone, and email) of their authorized representatives. The Application shall designate the entity who will be the Permit Holder of the LUS-SES Construction Permit.
- b) A list of the names and addresses of all property Owners (a) located within the Project Area, and (b) located within 1 mile of any LUS-SES regardless if beyond the county border. Applicant/Developer/Owner will also provide two (2) sets of mailing labels containing the names and addresses of the above property owners. Said list shall be verified by the Madison County Zoning Administrator.
- c) A Development Plan (Plan) for the Project shall contain aerial photographs of the entire proposed Project Area, showing the approximate proposed location of the LUS-SES, private access roads, Feeder Lines, Substations, and all other Components of the LUS-SES Project, including any new transmission lines, or any expansion of existing transmission lines. The Plan shall show Property Lines and Setback Distances under Section 3 below, as well as all public roads and public drainage district facilities (i.e. ditches, and underground tiles) in the defined Project Area. The Plan shall also identify any other LUS-SES, communication antennae or towers, and airports (including private airstrips and heliports) located within five (5) miles of the Project Area; and all lakes, permanent water courses and Public Conservation Areas within three (3) miles of the Project Area boundaries. The plan shall show topographical conditions and existing vegetation (list type and percent of coverage: e.g. cropland/plowed fields, grassland, wooded areas, etc.) In providing the above information, the Plan shall use a GPS coordinate system that is compatible with the county's geographical and topographical information and data systems.
- d) Project details, including the name of the Project, and the anticipated number, type, generating capacity, height, and diameter of the solar array. The final number, type, generating capacity, height, and diameter must be provided in the Final Development Plan (FDP)
- e) The Applicant/Developer/Owner shall provide standard manufacturer's specifications and recommended installation methods for all major equipment, including solar panels, mounting systems and foundations for poles and racks. Specifications for the actual equipment to be used in the LUS-SES shall be required before a LUS-SES Construction permit is issued. The Plan shall also include a mailing address for the owner of each communication antennae or towers.
- f) Planned location of underground or overhead electric lines connecting the LUS-SES to a building, substation or other electric load.
- g) New electrical equipment other than at the existing building or substation that is to be the connection point for the solar farm.
- h) An unredacted Health & Safety Instructions Manual for make, model, and type of solar panel array from the manufacturer of said solar panels permitting. This manual must be presented to the county to have on file and must be made available to the public at time of application. No other generalized statement, document, or manual is acceptable. The Health & Safety Instructions manual must be specific to the make, model, and type of solar panels permitted and contain the safety information of the solar panels permitting. The Applicant/Developer/Owner must comply with all requirements of Solar Safety therein.
- i) Documentation of Applicant/Developer/Owner's legal control over the private property necessary for the Project, signed by the property owner. Such legal control must be vested in the Permit Holder of the LUS-SES Construction Permit at the time of its issuance.
- j) A description of the public roads anticipated to be used during all phases of construction, as well as for access to material storage sites and staging areas. As set forth in Section 9 below, before construction commences on a Project, all public road and public drainage district crossings must be provided to the County Engineer and approved for compliance with the Madison County Road Use and Public Drainage System Protection Aareements.
- k) A permit fee paid according to the schedule of fees approved by the Board of Supervisors. and pursuant to Section 8 below. The permit fee is nonrefundable under any circumstance.
- I) Any FAA, FCC, or other state or federal permits or approvals that are necessary for the Project. Applicant/Developer/Owner shall submit a copy of the actual permit application or proof that the permit has been filed with

than thirty (30) days after the County review period. The Madison County Zoning Commission will have a pubic hearing, provide recommendations and a decision to forward to the BOA. Representatives of the permit Applicant/ Developer/Owner who are familiar with all aspects of the LUS-SES Project must be present at the public hearing.

#### F. Notice of Public Hearing

Notice of the time and place of the a public hearing shall be published and mailed by the Madison County Zoning Administrator in the same manner as the Notice of Filing in section 2 D above. The costs of such publications and mailings shall be paid by the Applicant/Developer/Owner to the Madison County Zoning Administrator.

#### G. Final Submission

No later than sixty (60) days following approval of the Madison County Zoning Commission's preliminary review and public hearing, Applicant/Developer/ Owner shall submit a Final Development Plan (FDP) to the Madison County Zoning Administrator showing the final location of all LUS-SES and other Components comprising the Project (using a GPS coordinate system.) The FDP shall establish the Project's compliance with this Ordinance. Upon receipt of FDP the Madison County Zoning Administrator shall give Public Notice that the FDP has been received and publish it online for public review.

#### H. Approval by Board of Adjustment (BOA)

Within thirty (30) days following the submission of the FDP by the Applicant/ Developer/Owner, the BOA shall hold a public hearing pursuant to its rules of procedure. During the review the FDP will be reviewed for completeness and accuracy to the preliminary submittal and compliance with this Solar Energy System Ordinance; and if same is in compliance, recommend to approve the application. Once the BOA approves the application it returns to the Madison County Board of Supervisors for final consideration and approval; the Madison County Board of Supervisors may also choose to hold a public forum to allow more public input prior to their approval. The Madison County Board of Supervisors reserve the right to protect the safety and general welfare of the Madison County Residents using the Iowa Code 331.301. If the BOS approves, they shall direct the Madison County Zoning Administrator to issue the LUS-SES Construction Permit.

### I. Modifications

The location of Components may be modified from the FDP when necessary to address exigencies encountered during construction, subject to the following limitations:

- a) Any such modification shall remain subject to all setbacks and other requirements set forth in this Solar Energy System Ordinance and Ancillary Agreements: and
- b) The location of LUS-SES and Project Substations can only be modified from the FDP with approval of the Madison County Zoning Administrator if the proposed relocation is 300 feet or less or for such modifications exceeding 300 feet, with the approval of the BOA and BOS. Approval of a LUS-SES or Project Substation modification by the Madison County Zoning Administrator or the BOA and BOS shall be deemed an approved amendment to the FDP and also automatically amend the LUS-SES Construction Permit; and
- c) Within thirty (30) day from the completion of the LUS-SES Project, the Permit Holder shall revise the FDP to show the exact "as built" coordinates for all Components, including any modifications. [Failure to timely provide such coordinates shall be a material violation of this Solar Energy System Ordinance.]

#### SECTION 3: SITING AND DESIGN STANDARDS

All LUS-SES shall comply with the following minimum regulations and design standards set forth by Madison County. The design standards and bulk regulations listed for all zoning districts shall be suspended for all LUS-SES projects and the following regulations shall apply instead. All LUS-SES projects shall be in compliance with all applicable local, state and federal regulatory standards and applicable electric codes.

#### A. Setbacks

All LUS-SES, project substations, and any upgrades to existing solar energy systems shall observe the following setbacks; [Note- All measurements shall be from the border of the LUS-SES Project to what is noted below] Setback Requirement

#### Protected Area

- Adjacent Property Lines
- Occupied Residence

- Occupied, Non-residential Building
- <u>Confinement Feeding Operation Building</u> Public Road Right-of-Way
- Open Ditch
- Public Conservation Areas, sites on the National Historical Registry, Private Owned Documented Conservation Areas,
  - **Covered Bridges**
- <u>Cemetery</u> <u>City Limits</u>
- Public and Private Airports, Heliports

0.5 miles from property line 1500 feet from property line 0.5 miles from city limits

5 miles from property line

500 feet from property line

0.5 miles from property line

1500 feet from property line

500 feet from property line

500 feet from nearest edge

500 feet from nearest edge

of Non-Participating

Landowner

#### **FAA** the Federal Aviation Administration

Feeder Line shall mean any above or below-ground line that carries electrical power from one or more solar panels

Final Development Plan (FDP) shall mean a final plan of the Large Utility Solar Energy System project required during the application for the LUS-SES Construction Permit process.

High-Impact shall mean, but not limited to, a utility, large, great, considerable, extended; impact, effect, influence, repercussion, impression, shall include, but not limited to, a region of Madison County, adversely affects residents, adjacent properties, property values, wildlife, environment, and or ecosystem. Shall also include safety, general welfare, and quality of life. A cumulative effect would be considered a high-impact.

Large Utility Scale Solar Energy System (LUS-SES) also known as solar power plants and solar farms, means an alternative energy facility that consists of ground-mounted or free standing solar collection devices, solar energy related equipment, and other associated infrastructure with the primary intention of generating electricity or otherwise converting energy to a different form of energy to be used on-site or distributed to the electrical grid or other off-site use. For purposes of this ordinance it shall mean a LUS-SES project that generates electricity from photovoltaics (PV) or concentrated solar power (CSP) at more than one (1) megawatt (MW) of electricity to place on the electrical grid and is not used at the host site. The generated electricity will then be distributed to residential, commercial, and industrial ratepayers connected to the grid

Lmax (LAMax or LCMax) the maximum dB(A) or dB(C) sound level measured using the "fast" response # setting of the sound meter (equivalent to 0.125 second exponential averaging time)

LUS-SES Construction Permit a permit issued by Madison County. This permit is required before construction of a LUS- SES is allowed in Madison County Madison County Soil and Water Conservation District (MCSWCD) a county

department which provides assessment, planning, design, and cost share assistance to reduce soil loss, improve soil health, reduce runoff and protect water quality on private land

Noise for the purpose of this Ordinance, a sound that causes disturbance that exceeds 40 dB(A) (LMax) or 60 dB(C) (LMax)

Non-Participating Landowner is a landowner who has not signed a binding easement with the Applicant/Developer/Owner of the LUS-SES project

Occupied, Non-residential Building shall mean any building (other than a residence) that is regularly occupied by humans, and that is open to the public, sells goods or services, or a public, religious, or other non-profit institution Occupied Residence shall mean a building designed for, and actually occupied

on a permanent basis as a residential dwelling

Participating Landowner a landowner who has signed a binding easement with the Applicant/Developer/Owner of the LUS-SES project

Project Area shall mean the geographic area encompassing all Components of a LUS-SES Project

Property Line shall mean the legal boundary between separately-owned real estate parcels, and privately-owned parcels and publicly-owned land or public right-of-way

Public Conservation Areas shall mean land owned by County, State, or Federal agencies and managed for conservation/preservation purposes, including but not limited to Wildlife Management Areas, Conservation Areas, Parks, Preserves, Covered Bridges, Wildlife Refuges, and Waterfowl Production Areas. For purposes of this regulation, Public Conservation Areas also include land owned by non-profit conservation organizations and other privately-owned lands upon which permanent conservation easements have been granted to public agencies or non-profit conservation organizations. Public Conservation Areas do not include land enrolled in the Conservation Reserve Program (CRP). No LUS-SES project is allowed on CRP land.

#### SECTION 2: PERMIT APPLICATION AND REVIEW

#### A. General

No person, commercial entity, or other organization shall construct a LUS-SES in Madison County without first applying and receiving a LUS-SES Solar Energy Construction Permit. A LUS-SES may be permitted once the Madison County Zoning Commission reviews the application and it goes before the BOA for their input and review and subsequent approval/denial, then to the Madison County Board of Supervisors for a final review.

Entities seeking Solar Energy System easements in Madison County must have a well-publicized public meeting following the Notice of Filing section 2 D of this ordinance, stating their intent prior to obtaining easements in Madison County. A landowner in multiple counties is prohibited from signing an easement in Madison County prior to all regulations in this ordinance being met

the appropriate agency, as well as a permit or proof of approval.

- m) Evidence in the form of a report prepared by a qualified third-party acceptable to the Madison County Board of Supervisors that the LUS-SES Project will not interfere with any existing commercial and/ or public safety communication systems including radio, telephone, cellular, internet, GPS, microwave, Doppler, or television signals.
- n) A report prepared by a qualified third-party, approved by the Madison County Board of Supervisors, using the most current modeling software available establishing that no Occupied Residence, Road Right of Way, Road traffic, Airport or traffic, shall receive restrictive/obstructive Sun Glare or reflection for any amount of time.
- o) A Site Impact Area Assessment prepared by a qualified third-party, approved by Madison County Board of Supervisors, using the most current evaluation process for a 5 mile radius of the LUS-SES Project border. This report will include the County's Comprehensive Plan guided recommendations such as Cumulative Effect, 70+ CSR restrictions, Image, Character, Viewshed and Landscape considerations, etc.
- p) A Growth Assessment prepared by a qualified third-party, approved by the Madison County Board of Supervisors, using the most current evaluation process for a 5 mile radius of the project border and the nearest community.
- q) Madison County Soil and Water Conservation District (MCSWCD) shall be contacted prior to beginning development and the developer shall work closely with that office in the planning, construction, and development to ensure all required permits are in place, identify any easement area, and to conserve natural resources.
- r) Applicant/Developer/Owner shall be required to set up an Escrow Account with the Madison County Treasurer in the amount of \$10,000 for Complaint fees when the application is submitted. The Applicant/Developer/Owner will maintain that level of funding for the duration of the project life until all equipment is removed by replenishing the Escrow Account on a monthly basis
- s) A Decommissioning Plan pursuant to Section 4 below.
- t) Such additional information as the County may request due to the unique circumstances with the LUS-SES Project. Applicant/Developer/ Owners are encouraged to have ongoing discussions with the Madison County Zoning Administrator and Engineer during preparation of the Application. Notes on said discussions shall be taken and made available to the public.

#### C. County Review

Applications shall be filed with the Madison County Zoning Administrator. Upon receipt of Application the Madison County Zoning Administrator shall give public notice of receipt. The Madison County Zoning Administrator shall have thirty (30) days to review a completed Application and provide comments to Applicant/Developer/Owner.

#### D. Notice of Filing

No later than ten (10) days after filing the Application, the Applicant/Developer/ Owner shall provide a notice of the filing in substantially the following form: PUBLIC NOTICE

Notice is hereby given that (name of Applicant/Developer/Owner ) has filed an Application with Madison County to build/construct, a Large Utility Scale Solar Energy System (LUS-SES) project to be located in (Township Names and Section Numbers.)

The LUS-SES project is projected to have \_ \_\_ acres of Solar Panel Arrays. feet above ground and will have the These Solar Panel Arrays will be \_\_\_\_\_ Mega Watt. The Application is currently being rated capacity of reviewed by Madison County. There will be a separate notice of Public Hearing on the LUS-SES Project.

The Notice of Filing shall be:

- a) Published by the Madison County Zoning Administrator once for two consecutive weeks in the official newspaper of the County.
- b) Mailed by the Madison County Zoning Administrator to each landowner identified in the Application pursuant to Section 2 B above, and to each City located within one (1) mile of the LUS-SES Project Area, and all airports and heliports, and to the owners of the Public Conservation Areas. and all communication and other antenna or towers identified in the Application.

All costs of mailing and publication shall be paid by Applicant/Developer/ Owner to the Madison County Zoning Administrator.

#### E. Public Hearing

Upon completion of the County's Review of the Application which is performed by the Madison County Zoning Administrator, the County shall set a public hearing to be held for preliminary review of the LUS-SES Project no later

#### **B. Environmentally Sensitive Areas**

The setback distance from sensitive natural resource areas, wildlife management areas, prairies, wetlands, forested areas, and other significant public agency owned or managed natural resource area property or documented privately-owned conservation easement protected natural areas, shall be 1 mile from the Property Line. Madison County Board of Supervisors and their discretionary entities and landowner's submitted information shall be evaluated for their natural resource area. LUS-SES Projects shall not be placed in locations where any species of fish, wildlife, or plants protected under the Federal Endangered Species Act have been documented. LUS-SES Projects shall not be placed near documented bat hibernation, breeding or nursery, colonies, and in migration corridors, or between known colonies and feeding areas. Migratory bird or other aerial or land-based wildlife migratory corridors shall not be disturbed and no LUS-SES projects shall be placed in a migratory bird or other aerial or land-based wildlife corridor. LUS-SES Projects shall not be placed where bald eagles have been documented. No "Take" permits will be allowed or honored.

- C. Setback Waivers
- Setback waivers are not allowed for LUS-SES Projects. D. Location
- Location of all LUS-SES projects are limited to Agricultural, Commercial, or Industrial districts, regions, or areas of Madison County.

#### E. Maximum Acres

The Maximum number of Acres of LUS-SES in Madison County is not to exceed 500 acres.

#### F. Minimum Lot/Acreage Size

No LUS-SES shall be erected, constructed, on any Lot/Acreage less than twenty (20) acres in size. The maximum lot coverage ratio for a LUS-SES project in PV solar panels shall be 10%.

#### G. Generating Capacity

One (1) megawatt (MW) or more of generated electricity from the collection of energy from the sun; a LUS-SES project is one that generates electricity from photovoltaic (PV) or concentrated solar power (CSP) in excess of one (1) megawatt (MW) of electricity to place on the electrical grid and is not used at the host site, said generated electricity will then be distributed to residential, commercial, and industrial ratepayers connected to the grid.

#### H. Color and Finish

LUS-SES projects buildings and accessory structures shall utilize materials, textures and neutral colors customary with LUS-SES projects and that, to the extent which is prudent and feasible, will blend the project into the existing environment.

#### I. Foundations

A qualified engineer shall certify that the foundation and design of the solar panels are within accepted professional standards, given local soil and climate conditions.

#### J. Weed/Grass Control

Applicant/Developer/Owner must present an acceptable weed control plan for property inside and outside fenced area for entire property. Plan must include no less than 10% native plants and use a Natural Resources Conservation Service (NRCS) seeding plan. Site must be maintained to prevent fire hazards and be in compliance with Madison County Weed Regulations as well as State and Federal environmental regulations. No soil sterilant shall be permitted. No concrete or gravel type cover of property is allowed.

#### K. Lighting

A photometric plan shall be submitted for review as part of the submittal application. All free standing and wall mounted security light fixtures shall not exceed 30 feet in height. The lighting elements shall be shielded from view of adjacent property. Lighting of LUS-SES facility shall be limited to the minimum necessary, supplied with down light, and in no case shall any illumination from such lighting extend beyond the perimeter of the LUS-SES property and the footcandle measurement at the property line shall not exceed 0.5. Applicant/Developer/Owner is responsible for hiring a contractor to perform tests to confirm that lighting does not exceed 0.5 footcandles at property line during construction and completion of construction. The BOA & BOS has the right to perform assessment.

#### L. Signage

Appropriate warning signs shall be provided at the entrance to the facility and along the perimeter to the solar energy development project. The sign at the entrance to the facility shall include the facility's 9-1-1 address and a 24 hour emergency contact number.

# Legal Notices Cont.

#### M. Feeder Lines

All communications and feeder lines, equal to or less than 34.5kV in capacity, installed as part of a Solar Energy System project shall meet or exceed the current national electrical code (NEC). Burial depth shall be at least ten (10) feet and cause no known environmental, land use, or safety issues.

#### N. Waste Disposal

As applicable, the application must include plans for the spill prevention, clean-up, and disposal of fuels, oils, and hazardous waste. Waste disposal is not permitted at any private or public county landfill, nor on any private or public land. Solid and hazardous wastes, including but not limited to crates, packaging materials, damaged or worn parts (including solar panels), as well as used oils and lubricants, shall be removed from the site and disposed of in accordance with all applicable local, state, and federal regulations within thirty (30) days. Solar panels must be recycled when disposed of and proof of recycling must be presented within thirty (30) days of disposal. Failure to do so will result in a \$10,000 fine per project.

#### O. Minimum Ground Clearance

Shall be four (4) feet to allow for vegetation or ground cover. Maximum height for a utility scale solar panel shall be fourteen (14) feet.

#### P. Signal Interference

Electromagnetic Interference (EMI) also called Radio-Frequency Interference (RFI) The Applicant/Developer/Owner shall minimize and mitigate any interference with electromagnetic communications, such as, but not limited to, radio, internet, telephone, cellular, wireless broadband, Doppler, or television signals, caused by any LUS-SES.

#### Q. Federal Aviation Administration

Any LUS-SES located within five (5) miles of an airport or within approach zones of an airport or heliport shall complete and provide the results of the Solar Glare Hazard Analysis Tool (SGHAT) for the Airport Traffic Control Tower cab and final approach paths, consistent with the Interim Policy, FAA Review of LUS-SES projects on Federal Obligated Airports, or most recent version adopted by the FAA.

#### R. Electrical Codes and Standards

All electrical interconnections and distribution components must comply with all applicable codes and public utility requirements. All LUS-SES and accessory equipment and facilities shall comply with the National Electrical Code and other applicable standards. Power and communication lines running between banks of solar panels shall be buried underground except from point of interconnection to existing utility-owned above-ground electrical wires. Electrical lines shall be inspected by a state license electrician familiar with utility scale electric lines before burial.

#### S. Substations, Accessory Buildings, and Other Components

Structures related to a LUS-SES shall be subject to the dimensional and locational standards of structures in the zoning district. Where structures are visible from adjacent properties, the Madison County Zoning Commission shall require & approve vegetative or manmade screening to minimize visual off-site impact. The BOS reserves the right to review and require changes to the screening to further minimize the off-site impact.

#### T. Noise

No operating LUS-SES Project shall produce noise that exceeds any of the following limitations:

- a) Forty (40) dBA Lmax fast, as measured at the property line of any adjacent Occupied Residence or Occupied, Non-Residential Building in existence at the time the LUS-SES is constructed.
- b) Forty (40) dBA Lmax fast as measured at the property lines of the project boundary.
- c) In addition to the above limitations, a sound barrier of a solid decorative masonry wall or evergreen tree berm, with trees spaced not less than ten (10) feet apart shall be constructed to reduce noise levels surrounding all inverters, no more than ten (10) feet from all inverters and no less than 3 feet above the height of all inverters.

#### U. Noise Complaints Resolution

Noise complaints shall be made in writing to the Madison County Board of Supervisors. Noise Complaint Resolutions shall be handled in the same manner as Complaint Resolution in Section DD below. Any decision on Regulations, Complaints or Compliance Tests will be conducted by a qualified acoustician selected by and approved (in public meeting) by the Madison County Supervisors. Such decision will provide public access to the acoustician's prior training and experience and review of their competence (if requested) through independent review. The acoustician shall be without any economic nor "collaborative" relationship with any utility/energy affiliates, utility/energy subsidiaries, utility/energy lobby groups, utility/energy associations/guilds, or the Applicant/Developer/Owner. The Applicant/Developer/Owner that is required for dBA analysis shall be paid out of the complaint escrow account set up by Applicant/Developer/Owner.

#### V. Glare

No LUS-SES shall create/produce glare that would constitute a nuisance to occupant of neighboring properties or to persons traveling neighboring roads. Upon written notice from Madison County Board of Supervisors to the Applicant/Developer/Owner the LUS-SES that glare from the LUS-SES project is causing a nuisance to occupants of the neighboring property or to persons traveling neighboring roads, the Applicant/Developer/Owner of the LUS-SES shall have a reasonable time (not to exceed thirty (30) days) from the date of notice to remediate such glare.

project is in operation, as well as during decommissioning, if any repair is not completed within sixty (60) days of the reported damage/failure, the project shall be fined \$1000.00 per infraction per day, and shall be retroactive to the date of the initial report of damage/failure until final completion date.

b) LUS-SES projects shall be screened from any adjacent property that is occupied or used for a residence. The screen shall consist of shrubbery, trees, or other non-invasive plant species which provides a visual screen. At least fifty percent (50%) of the plants must be evergreen trees, which shall not be less than six (6) feet tall at the time of planting. In lieu of a planting screen, a decorative fence may be used, and shall be no less than the height of the solar panels at their highest point, or at eight (8) feet, whichever is greater.

#### AA. Operational, Maintenance, and Issue Resolution

Each LUS-SES and any accessory or component of the LUS-SES must be kept and maintained in good repair and condition at all times. If a LUS-SES and any related component is not maintained in operational and reasonable condition or poses a potential safety hazard, the Applicant/Developer/Owner shall take expeditious action to correct the situation including LUS-SES removal. The Applicant/Developer/Owner shall keep a maintenance log on each LUS-SES and must provide the complete log to the county within ten (10) days of request.

#### **BB.** Repair Policy Documentation

Applicant/Developer/Owner must provide a detailed policy and process book for the repair, replacement, and removal of malfunctioning, defective, worn, or non-compliant LUS-SES. Sections of the process book should include any ordinance requirement of the LUS-SES performance deficiency.

#### CC. Compliant Resolution

It is the intent of this ordinance to provide a mechanism to address and resolve complaints. Complaints of noncompliance with the requirements of this ordinance shall be resolved in the following manner:

- a) Complaints shall be submitted to the Madison County Board of Supervisors in writing from the affected property owner, or written designee, including name, address, contact information, and specific complaint. The written complaint shall include the specific section of the ordinance which is believed to be violated. The Supervisor shall cause the complaint to be added to the agenda of the next Madison County Board of Supervisors' meeting in accordance with the procedure for setting the agenda.
- b) The Supervisor shall submit to the Applicant/Developer/Owner of record notice of all written complaints to the county within thirty (30) days of receipt of any complaint. Complaints received by the county and the date of any Madison County Board of Supervisor's meeting where complaints may be considered shall be communicated to the Applicant/Developer/ Owner at least 10 days prior. The notice shall state that the Madison County Supervisor's Board may determine that the LUS-SES is in violation of its permit and is, therefore, a nuisance and may be ordered out of service until the Applicant/Developer/Owner can demonstrate compliance with the requirements of this ordinance.
- c) Upon review, if the Madison County Board of Supervisors, by an affirmative vote of the majority of the members present, deems a complaint sufficient to warrant an investigation, the Madison County Board of Supervisors shall provide notice to the Applicant/Developer/Owner of the LUS-SES that an investigation has been requested by the Madison County Board of Supervisors.
- d) Applicant/Developer/Owner shall be required as a condition of operation to fund an escrow account for investigation of complaints for, but not limited to, Adverse Sound Character, stray voltage, noise, and signal interference in the amount of \$10,000.00 to be used at the discretion of the Madison County Board of Supervisors. When the escrow account balance is below \$5,000.00 the county shall notify the Applicant/Developer/Owner and the Applicant/Developer/Owner shall replenish the account to the amount of \$10,000.00 within fourteen (14) business days of notification.
- e) If LUS-SES project is found in violation of this ordinance, the Applicant/ Developer/Owner shall take immediate action to bring the LUS-SES project into compliance. If the Applicant/Developer/Owner fails to bring the LUS-SES project into compliance within thirty (30) days, the county may seek any relief at law or equity to abate the nuisance and may also issue a municipal civil infraction citation, including revoking its permit. Each violation for which the Applicant/Developer/Owner are deemed responsible shall result in a \$500.00 fine. Each day of non-compliance shall be a separate offense.
- f) Any LUS-SES project found by the Madison County Board of Supervisors to be in violation of this ordinance as set forth herein shall be considered a nuisance and the LUS-SES operations shall cease until such time as the LUS-SES project Applicant/Developer/Owner can demonstrate compliance with the requirements of this ordinance and the discontinued use Section 4 below.

#### SECTION 4: DISCONTINUATION/DECOMMISSIONING

The LUS-SES project shall be considered a "discontinued use" if the individual LUS-SES project is not in use for a continuous six (6)-month period of time. A decommissioning plan signed by the Applicant/Developer/Owner shall be required for LUS-SES projects at the time of application to ensure that LUS-SES facilities are properly removed and final land reclamation is followed after an anticipated useful life, abandonment, discontinued use, or termination of the LUS-SES. Said decommissioning plan shall include evidence of proposed commitments with property owners to ensure proper final reclamation. Repairs to roads for damage caused by the LUS-SES, if any, shall be made within six (6) months from notice of abandonment, discontinued use, or termination issued by Madison County Board of Supervisors to complete decommissioning and land reclamation. All roads, above grade and subsurface improvements must be removed at the end of project.

## officials shall be named as additional insureds.

SECTION 8: FEES AND COSTS

No LUS-SES Construction Permit application shall be accepted until the filing fee is paid. Applicant/Developer/Owner is responsible for all costs involved in all aspects of a LUS-SES project.

#### SECTION 9: ANCILLARY AGREEMENT/PROCEDURES

Issuance of a LUS-SES Construction Permit is strictly conditioned on the Applicant/Developer/Owner executing the following:

#### A. Roads

Prior to construction Applicant/Developer/Owner shall identify all roads to be used for the purpose of transporting LUS-SES project parts, substation parts, concrete, and/or equipment for construction, operation or maintenance of the LUS-SES project and obtain applicable weight and size permits from the impacted road authority(ies) prior to construction.

- a) Prior to construction, Applicant/Developer/Owner shall conduct a preconstruction survey, in coordination with the impacted local road authority(ies), to determine existing road conditions. The survey shall include photographs and a written agreement to document the condition of the public facility. All roads, including county owned hard surface road(s), are to be graded and inspected by the County Engineer, well documented with photos and detailed information of pre-construction condition.
- b) The Applicant/Developer/Owner shall be responsible for ongoing road maintenance and dust control measures identified by the county engineer during all phases of construction. Restoring or paying damages as agreed to by the applicable road authority(ies) sufficient to restore the road(s) including county owned hard surface road(s) and bridges to preconstruction conditions to the extent caused by the construction of the LUS-SES project. Financial security in a manner approved by the Madison County Attorney's Office shall be submitted covering one hundred thirty percent (130%) the estimated costs of all required improvements. The Applicant/Developer/Owner shall enter into a road use agreement with Madison County prior the start of construction. No changes to roads or road signage shall be done without approval of the BOA.
- c) The applicant/developer/owner shall comply with all IDOT road and safety requirements, and signage shall not be removed without permission from the zoning administrator

### SECTION 10: TRANSFERABILITY OF A LUS-SES CONSTRUCTION PERMIT

- a) No construction activities on a LUS-SES project may begin until a LUS-SES Construction Permit has been issued.
- b) Any material violation of any provision of this ordinance that remains uncured after thirty (30) days written notice from the County to the Permit Holder shall be grounds for denial and/or revocation of the LUS-SES Construction Permit.
- c) In accordance with the provisions of this Large Utility Scale Solar Energy System ordinance, a LUS-SES Construction Permit issued shall begin construction within 6 months from the date of issue. If construction on the LUS-SES project has not begun within 6 months from the date of issuance, the LUS-SES Construction Permit shall be automatically revoked without further action by the County. Construction of a LUS-SES project must be completed in 18 months or the LUS-SES Construction Permit is revoked. In the event the LUS-SES Construction Permit is revoked, no work on the LUS-SES project may take place unless and until a new LUS-SES Construction Permit is issued following the original complete application process in Section 2 of this LUS-SES ordinance.
- d) Only the holder of the LUS-SES Construction Permit (Permit Holder) shall own the LUS-SES project, and such holder shall be the entity responsible for observing all requirements of this Ordinance. The Permit Holder shall be responsible to maintain all Components of the LUS-SES project in good repair, and in compliance with this Ordinance and the Ancillary Agreements listed in Section 9 above. No LUS-SES Construction Permit shall be transferred or assigned, voluntarily or involuntarily, without the written approval of the Madison County Board of Supervisors, which consent may be withheld unless and until the Madison County Board of Supervisors are satisfied that a proposed transferee has the financial and operational responsibility to assume all obligations required of the Permit Holder under this Ordinance and the AncillaryAgreements listed in Section 9 above. Requests for approval of a LUS-SES Construction Permit transfer shall be directed to the Madison County Zoning Administrator at which time the Madison County Zoning Administrator shall present it to the Madison County Board of Supervisors

## SECTION 11: MISCELLANEOUS

Condemnation Waiver

Issuance of a LUS-SES construction permit shall be conditioned on the permit holder's enforceable promise, supported by the consideration of the issuance of the LUS-SES construction permit, that the permit holder shall never use, or seek to use, eminent domain to acquire any real property interests to construct or operate the project, or to construct new or expand existing, transmission lines. **Legal fees** 

In any action brought by the County against the Permit Holder of a LUS-SES Construction Permit to enforce the provisions of this Solar Ordinance, the County shall be entitled to recover its reasonable attorney fees and court costs as may be awarded by the court.

#### **U.** Vibrations

No LUS-SES shall create vibrations that are detectable by humans on Non-Participating Landowner's properties. Documentation of increased sediment in water wells shall be considered evidence of vibration.

#### V. Safety

- a) Security fencing shall be installed around all electrical equipment related to the LUS-SES Project including, but not limited to, transformers and transfer stations.
- b) Appropriate warning signage shall be placed at safe intervals at the entrance and perimeter of the large LUS-SES Project.
- c) A safety plan shall be in place and updated regularly with the fire department who holds jurisdiction of the location of the LUS-SES project.
- d) Applicant/Developer/Owner shall furnish an assurance in a form acceptable to the county that guarantees 100% of the PV panels and attendant electrical apparatus, wiring, metal support structures, etc., shall not enter the waste stream.
- Lock boxes and keys shall be provided at locked entrances for emergency personnel access.

#### W. Voltage

The Applicant/Developer/Owner shall be responsible for compensation to resident for any property, including livestock, health, or other damage caused by stray voltage from a LUS-SES. Applicant/Developer/Owner shall demonstrate LUS-SES prohibits stray voltage, surge voltage, and power from entering ground.

#### X. Height Limitations

Maximum height for a solar panel shall be fourteen (14) feet. The maximum height of a Power Switchyard shall not exceed the minimum height needed to tie into the electric transmission lines. The height of all other buildings and accessory structures shall comply with the maximum building height requirements of the applicable zoning district in which the LUS-SES is located. No LUS-SES equipment, and structures shall exceed thirty-five (35) feet in height unless approval from the BOA and BOS. The height of required lightning rods attached to the Power Switchyard or LUS-SES related equipment shall not be subject to the foregoing height limitations. The height of the lightning rods shall be limited to that height necessary to protect the Power Switchyard and LUS-SES equipment from lightning.

#### Y. Property Value Guarantee

Applicant/Developer/Owner shall offer a property value guarantee acceptable to the county that will make the LUS-SES project neighbors whole financially in the event the proximity to the LUS-SES project is harmful their residential property values. This shall be made available to all property owners within 1 mile of the project boundary.

#### Z. Visual Appearance and Maintenance

An appropriate maintenance plan, including property maintenance of the grounds, shall be presented to the Madison County Zoning Commission for review and recommendations for approval by the Madison County Board of Supervisors. LUS-SES project's buildings and accessory structures shall utilize materials, textures, and neutral colors customary with LUS-SES projects and that, to the extent which is prudent and feasible, will blend the project into the existing environment.

a) Prior to construction of the LUS-SES project, all existing drainage tile must be inspected by means of robotic camera and the imagery submitted to the Madison County Zoning Administrator to establish a baseline condition of tile. Any damaged or inoperable tile shall be repaired prior to construction of LUS-SES project and such repairs shall be documented and a report submitted to the landowner and the Madison County Zoning Commission office, indicating the location, nature and satisfactory completion of such repairs. Supports shall be constructed to preserve any drainage field tile and/or drainage system. While the LUS-SES is in operation, all drain tile shall be inspected every three (3) years in the fashion noted above and all video footage and a report of any damage or failure shall be submitted to the Madison County Zoning Administrator. Any tile failure shall be corrected within sixty (60) days of discovery and such repairs shall be documented and a report submitted to the landowner and county indicating the location, nature and satisfactory completion of such repairs. The county reserves the right to have the building inspector or other agent of the county present at the time of repair. While the LUS-SES

- a) Decommissioning of solar panels must occur in the event they are not in use, abandoned, discontinued use, for a continuous six (6) months. The last day of this six (6) month period shall be considered the termination date. The operating company and/or the landowner shall complete decommissioning of the LUS-SES within six (6) months of the termination date or the Madison County will perform decommissioning at the Applicant/ Developer/Owner's expense.
- b) The plan shall include provisions for removal of all above and/or below ground, transmission wiring, feeder lines, structures, concrete, gravel, all components of the LUS-SES, accessory buildings, power units, power switchyard, equipment, fencing, and roads, foundations, and the restoration of soil and vegetation.
- c) A Cash/Escrow Account shall be opened by the Applicant/Developer/ Owner with the Madison County Treasurer for decommissioning costs, prior to construction and upon the approval of the LUS-SES Construction Permit. The cash/escrow amount shall be evidenced in the form of two separate quotes for complete removal of all above and below ground components of a LUS-SES project, prepared by two qualified third-parties acceptable to the Madison County Board of Supervisors. The total amount of cash/escrow shall be the average amount of the two independent demolition/removal quotes. Cash/Escrow must be paid to the Madison County Treasurer upon approval of the LUS-SES Construction Permit. Cash/Escrow must be reviewed yearly to accommodate rate of inflation. Additional monies may need to be added due to the rate of inflation by the Applicant/Developer/Owner. If the escrow account needs additional monies the Applicant/Developer/Owner has fourteen (14) business days after receiving notice to comply or the LUS-SES will be determined to be discontinued use, and removal will commence immediately.
- d) An update to this decommissioning plan shall be submitted to the Madison County Zoning Administrator every three (3) years.
- e) The county reserves the right to require additional information or components to the plan as the county deems necessary to ensure that an adequate proposal is in place to decommission the LUS-SES project in its entirety and that adequate funds are available in the cash/escrow account.

#### SECTION 5: PUBLIC NUISANCE

Any LUS-SES project declared to be unsafe by Madison County Board of Supervisors by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, damage, abandonment, or non-compliance to ordinance is hereby declared a Public Nuisance and shall be abated by repair, rehabilitation, demolition, or removal in accordance with the procedure set forth in this ordinance.

#### SECTION 6: PERMIT VALIDITY

In accordance with the provisions of this Large Utility Scale Solar Energy System ordinance, a LUS-SES Construction Permit issued shall begin construction within 6 months from the date of issue. If construction on the LUS-SES project has not begun within 6 months from the date of issuance, the LUS-SES Construction Permit shall be automatically revoked without further action by the County. Construction of a LUS-SES project must be completed in 18 months or the LUS-SES Construction Permit is revoked. In the event the LUS-SES Construction Permit is revoked, no work on the LUS-SES project may take place unless and until a new LUS-SES Construction Permit is issued following the original complete application process in Section 2 of this LUS-SES ordinance. **SECTION 7: LIABILITY INSURANCE** 

The Applicant/Developer/Owner of the LUS-SES project shall maintain a current and general liability policy covering bodily injury and property damage with limits of at least 5 million dollars per occurrence and 20 million dollars in the aggregate. The Applicant/Developer/Owner of the LUS-SES project shall maintain this policy for the lifetime of the LUS-SES project and submit a copy of the same to the Madison County Zoning Administrator at each renewal. Madison County and its

## SECTION 12: SEVERABILITY CLAUSE

If any section, clause, or provision of this ordinance is declared illegal, or otherwise invalid by a court of competent jurisdiction, said declaration shall not affect the validity of the remainder of the ordinance as a whole or any part thereof, other than the part so declared to be illegal or otherwise invalid.

#### SECTION 13: REPEALER

All ordinances or parts of ordinances in conflict with the provisions of this Solar Energy System Ordinance are hereby repealed.

#### SECTION 14: LEGAL AUTHORITY

Madison County Supervisors reserve the right to exercise Iowa Code 331.301 at any time to protect and preserve the rights, privileges, and property of the county or of its residents, and to preserve and improve the peace, safety, general welfare, comfort, and convenience of its residents. As updated information, concern, and plausible evidence are established, Madison County Supervisors reserve the right to amend or repeal regulations to protect the residents of Madison County. All LUS-SES projects, project substations, and LUS-SES components shall observe this Solar Energy Systems Ordinance.

#### SECTION 15: DATE OF EFFECT

This Ordinance shall become effective upon its passage by the Madison County Board of Supervisors in accordance to our county ordinances and published as required by Iowa Code 331.302(8)

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