REGULATIONS FOR THE SITING AND OPERATION OF WIND, SOLAR, AND BATTERY ENERGY SYSTEMS

DES MOINES COUNTY, IOWA

ORDINANCE NO. 64

Adopted January 13, 2026

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ARTICLE I: GENERAL PROVISIONS

A. **Purpose**. The purpose of this Ordinance is to establish a set of minimum standards for the siting, placement, construction, installation, operation, maintenance, and decommissioning of utility-scale Wind, Solar, and Battery Energy Systems, in order to protect the public health, safety and community welfare of the residents of Des Moines County.

B. **Jurisdiction**. This Ordinance and all regulations contained therein shall apply to all unincorporated land within Des Moines County, Iowa.

C. **Administrator.** The Board of Supervisors shall appoint an administrator to implement and administer the provisions of this Ordinance, and shall herein be referred to as the Administrator.

D. **Applicability and Exemptions.** The regulations contained within this ordinance shall apply only to Commercial Wind Energy Systems (C-WES), Commercial Solar Energy Systems (C-SES), and Commercial Battery Energy Storage Systems (C-BESS), all as herein defined. They shall not apply to Personal Wind Energy Systems (P-WES), Personal Solar Energy Systems (P-SES), or Personal Battery Energy Storage Systems (P-BESS), all as herein defined, and no permits, public hearings, or other official action by the County shall be required before their establishment.

1. The regulations contained within this Ordinance shall not apply to the continued operations of any C-WES, C-SES, or C-BESS that was lawfully established before the adoption of this Ordinance or any amendment thereto. However, they shall apply to the physical expansion of any such System to encompass additional properties after the date of such adoption or amendment.

2. The regulations contained within this ordinance shall apply to any property on which a lease agreement was established with the Developer of a C-WES, C-SES or C-BESS before the adoption of this Ordinance or any amendments thereto, but construction had not yet commenced on that property by the date of such adoption or amendment.

E. **Relation to Other Ordinances and Regulations.**

1. Whenever this Ordinance imposes a greater restriction than is imposed or required by another local ordinance, or by state or federal laws, then the provisions of this Ordinance shall prevail, except in instances where a stricter regulation is explicitly prohibited by state or federal law.

2. Whenever another local ordinance, state or federal law, imposes a greater restriction than is imposed by this Ordinance, then those stricter standards shall prevail.

3. Any C-WES, C-SES or C-BESS located within the jurisdiction of the *Des Moines County Airport Approach Zone Regulations (Ordinance No. 58)* shall comply with all applicable height and location requirements imposed by that ordinance.

4. Any C-WES, C-SES and/or C-BESS located within the jurisdiction of the *Des Moines County Floodplain Management Ordinance (Ordinance No. 25)* shall comply with all applicable requirements imposed by that ordinance.

5. In accordance with Chapter 414.23 of *Iowa Code*, if an incorporated municipality has established a zoning ordinance with a jurisdiction over unincorporated land within two (2) miles of its corporate limits, all land within that two (2)-mile area shall be subject to any and all applicable zoning requirements for a Wind, Solar or Battery Energy System imposed by that municipality, in addition to the requirements of this Ordinance.

F. **Financial Risk and Responsibility.** All costs associated with the planning, permitting, construction, installation, operation, maintenance, repair, cleanup, modification or decommissioning of a C-WES, C-SES and/or C-BESS shall be entirely the responsibility of the Developer, Owner and/or Operator, and no such costs shall be passed on to Des Moines County, its taxpayers, or individual landowners in the C-WES, C-SES and/or C-BESS project area. In addition, the Developer, Owner and/or Operator shall be entirely responsible for the cost of any legal actions (including defense and settlement costs) associated with the aforementioned activities regarding a C-WES, C-SES and/or C-BESS.

G. **Enforcement and Penalties.** Any violation of the provisions of this Ordinance or failure to comply with any of its requirements shall constitute a county infraction, as defined by Chapter 331.307 of the *Iowa Code*. Each day that the violation persists shall constitute a separate repeat offense.

1. In accordance with Chapter 331.307 of the *Iowa Code*, any person or firm that violates this Ordinance or fails to comply with any of its requirements shall upon conviction thereof be fined not more than seven-hundred fifty (750) dollars for the first offense, and not more than one thousand (1,000) dollars for each repeat offense.

2. Nothing herein contained shall prevent Des Moines County from taking such other lawful action as is necessary to prevent or remedy any violation.

H. **Severability**. Should any section or provision of this Ordinance be declared by the Courts to be invalid or unconstitutional, such decision shall not affect the validity of the Ordinance as a whole, or any part thereof, other than the part so declared to be invalid or unconstitutional.

ARTICLE II. DEFINITIONS

A. **Word Usage**. The specific terms listed in this Article shall be defined as follows whenever those terms are used within the text of this Ordinance.

B. **Terms Defined**.

ABANDONMENT. The state in which any portion of a Wind or Solar Energy System, and/or Battery Energy Storage System, has ceased to produce or store energy for at least one-hundred twenty (120) consecutive days.

ADMINISTRATOR. Shall refer to the administrator of this Ordinance, as appointed by the Des Moines County Board of Supervisors. It may also refer to any person(s) authorized to act on their behalf as a designee.

AGRI-VOLTAIC SYSTEM. The physical integration of a Solar Energy System with agricultural operations, so that the underlying soil can remain in active use during the operational lifespan of the Solar Energy System. Such operations may include growing crops such as grain, legumes, fruits or vegetables, livestock grazing on grass or other vegetation, and/or the placement of solar panels on a greenhouse.

AIRCRAFT DETECTION LIGHTING SYSTEM (ADLS). A sensor-based system that monitors the airspace around a Wind Energy System, allowing for the obstruction lights to be activated only when an aircraft is detected in the vicinity.

BATTERY ENERGY STORAGE SYSTEM (BESS). One or more devices intended for storing energy for later use, either on the subject property or elsewhere. This term shall include all accessory equipment necessary for energy storage, including but not limited to: inverters, transformers, cooling equipment, switching gear, metering equipment, transmission tie-lines, other power interconnection facilities, and/or substations.

> ***COMMERCIAL BATTERY ENERGY STORAGE SYSTEM (C-BESS)***. A utility-scale Battery Energy Storage system where the stored energy is either distributed to the electrical power grid for use by the public at-large, or used by one (1) or more large commercial or industrial operations nearby. Such devices may be installed as part of a Commercial Wind or Solar Energy System, or developed separately as a standalone project, using energy generated elsewhere.
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> ***PERSONAL BATTERY ENERGY STORAGE SYSTEM (P-BESS)***. A Battery Energy Storage System where the majority of the energy produced is consumed directly on-site, or on an adjoining property, though excess energy may be sold and distributed to an electric utility provider serving the general public. Such a system is used to serve the energy needs of a private residence, business or agricultural operation, and may be used to store energy produced by a Personal Wind or Solar Energy System.

BOARD OF SUPERVISORS. Shall refer to the Board of Supervisors of Des Moines County, Iowa.

CEMETERY. Shall refer to any burial site recognized by the Des Moines County Assessor as tax-exempt land, which is physically separate from any taxable private land that it adjoins.

CIVIC BUILDING. A building that is regularly used for large public gatherings or services, or the housing of unrelated individuals in a group setting, including schools, daycare facilities, churches and other houses of worship, government offices, hospitals, nursing homes, group

homes, and homeless shelters. This term shall not apply to any accessory buildings (garages, sheds, or utility buildings) that are not used for human habitation.

***COUNTY ENGINEER*.** Shall refer to the County Engineer of Des Moines County, Iowa.

***DECOMMISSIONING*.** The complete removal of all components of a Wind or Solar Energy System, and/or a Battery Energy System, or a portion thereof, following the permanent ceasing of operations. This may be undertaken as part of a planned termination at the end of its operational lifespan, or in response to damage or abandonment.

***DEVELOPER*.** The person(s) and/or entit(ies) pursuing the development of a Wind or Solar Energy System, and/or a Battery Energy Storage System, who are responsible for submitting a Siting Permit application and all required attachments necessary for the review and approval thereof by the County.

***GUY-WIRES*.** Tensioned cables used to stabilize a structure that is of insufficient weight to support itself under the pressure of wind, heavy rain, or similar influences. Such wires are fastened to the structure on one end, and to a nearby point on the ground on the other.

***ICE THROW*.** The shedding of ice from a wind turbine blade while the turbine is in operation.

***MAXIMUM HORIZONTAL TILT*.** The point during the course of a daily rotation (if any) at which the panels of a solar array are the closest to being entirely parallel to the ground surface.

***MAXIMUM VERTICAL TILT*.** The point during the course of a daily rotation (if any) at which the panels of a solar array are the closest to being at a ninety (90)-degree angle to the ground surface.

***METEOROLOGICAL EVALUATION TOWER*.** A tall, narrow, lightweight structure, installed on a temporary basis, supported by guy-wires, and containing specialized equipment used for assessing wind characteristics at the prospective location of a Commercial Wind Energy System.

***OCCUPIED DWELLING*.** A building that contains one or more dwelling units intended for residential use – whether occupied by the homeowner or unrelated individuals paying rent, and which is occupied for year-round or seasonal/temporary use by one or more households, or actively marketed for sale or rent at the time a Wind or Solar Energy System, and/or a Battery Energy Storage System is proposed to be built in the nearby vicinity. It shall not apply to any such building which is vacant year-round and not being actively marketed for sale or rent at the time the System is proposed. It shall also not apply to any accessory buildings such as detached garages that are not used for human habitation.

***OPERATIONAL LIFESPAN*.** The period in which a C-WES, C-SES, and/or C-BESS, or any portion thereof, is functionally operating as designed to produce, transmit or store energy. This period extends from the completion of initial construction to its eventual decommissioning.

***OPERATIONS*.** The day-to-day functions of a Wind or Solar Energy System, and/or Battery Energy Storage System as it works to produce, transmit, or store energy.

***OPERATOR*.** The person(s) or entit(ies) responsible for the day-to-day operation and maintenance of a Wind or Energy System, and/or a Battery Energy Storage System, including any third-party subcontractors. This term shall apply to all subsequent operators of the System, if such responsibility is transferred at any point during its operational lifespan.

OVERSIZE/OVERWEIGHT LOAD. Any instance where the transport of vehicles and/or cargo involves objects that exceed the maximum weight and/or size dimensions (width, length, and/or height) established by the Iowa Department of Transportation, Des Moines County Secondary Roads, and/or any other entity with jurisdiction over the operations and maintenance of public roadways.

OWNER, C-WES, C-SES, and/or C-BESS. The person(s) and/or entit(ies) that own the structures and equipment comprising a Wind or Solar Energy System, and/or a Battery Energy Storage System, regardless of whether or not they also own the land upon which it is situated. This term shall apply to all subsequent owners of the System, if ownership is transferred at any point during its operational lifespan.

PARTICIPATING PROPERTY. Shall refer to any parcel of land that is subject to a voluntary lease, easement, waiver, or other contract with the Owner and/or Operator of a Commercial Wind or Solar Energy System, and/or a Battery Energy Storage System, concerning the development, construction or operation of that System.

> ***NON-PARTICIPATING PROPERTY.*** Any parcel of land other than a 'participating property', as herein defined.

PUBLIC CONSERVATION AREA. Any area of land that is directly owned or managed by Des Moines County Conservation, the Iowa Department of Natural Resources, or the U.S. Fish and Wildlife Service, for the purpose of wildlife conservation.

REPOWERING. The process of upgrading or replacing any of the existing components of a Wind or Solar Energy System, and/or a Battery Energy System, at any point during its operational lifespan. Such activities may be undertaken to increase the energy efficiency or output of the System, or to replace previously damaged or malfunctioning wind turbines, solar arrays and/or battery equipment. This does not include routine maintenance activities for previously installed wind turbines, solar arrays or battery equipment.

SHADOW FLICKER. An effect generated by the sun shining through the rotating blades of a wind turbine, which casts a moving shadow that projects onto buildings, objects and surfaces.

SITING PERMIT. A written certificate that, once approved by the County, authorizes the Developer to proceed with the construction or expansion of a Wind or Solar Energy System, and/or a Battery Energy Storage System.

SOLAR ARRAY. An installation comprised of multiple solar panels grouped together and wired into a single circuit, to be attached either to a ground-mounted post or column, or to the roof of a building or structure. Ground-mounted arrays are typically tilted at an angle from the flat ground surface, which may be adjustable to follow the position of the sun throughout the course of a single day.

> ***CLUSTER OF SOLAR ARRAYS.*** Shall refer to any grouping of adjacent solar arrays that is not separated from any other grouping of arrays by a roadway, other public right-of-way, utility easement, or greater than fifty (50) feet of open space.

SOLAR ENERGY SYSTEM (SES). A system of infrastructure used for the conversion of solar energy from the sun into electricity, which includes a series of panels designed to collect energy from the rays of the sun, along with any supporting electrical equipment and transmission lines necessary for the operation thereof, as well as any associated Battery Energy Storage Systems.

> ***COMMERCIAL SOLAR ENERGY SYSTEM (C-SES).*** A Solar Energy System where the energy

produced is either distributed to the electrical power grid for use by the public at-large, or used by one (1) or more large commercial or industrial operations nearby. Such a system is designed to produce at least five (5) megawatts of energy, using clusters of solar arrays situated on private agricultural land, with one or more landowners leasing the land to a company that owns and maintains the solar equipment.

PERSONAL SOLAR ENERGY SYSTEM (P-SES). A Solar Energy System where the majority of the energy produced is consumed directly on-site, or on an adjoining property, though excess energy generated by the System may be sold and distributed to an electric utility provider serving the general public. Such a system is designed to produce less than five (5) megawatts of energy, and includes either solar panels mounted on the rooftops of buildings, or a cluster of ground-mounted arrays, which are used to serve the energy needs of a private residence, business or agricultural operation.

SOLAR PANEL. A photovoltaic device designed to collect energy from the rays of the sun for conversion into electricity, which may either be part of a freestanding utility structure placed directly on the ground surface, or attached to the roof of a separate building or structure.

STRUCTURE. Anything constructed or erected with a permanent location on the ground, including dwellings, civic buildings, retail stores, offices, factories, utility stations, wind turbines, freestanding solar arrays, garages, sheds, barns, livestock pens, grain bins, and bulk liquid or gas storage tanks.

WIND ENERGY SYSTEM (WES). A system of infrastructure used for the conversion of wind energy into electricity, which includes one (1) or more wind turbines as well as any supporting electrical equipment and transmission lines necessary for the operation thereof, as well as any associated Battery Energy Storage Systems.

COMMERCIAL WIND ENERGY SYSTEM (C-WES). A Wind Energy System where the energy produced is either distributed to the electrical power grid for use by the public at-large, or used by one (1) or more large commercial or industrial operations nearby. Such a system is designed to produce at least one (1) megawatt of energy, and involves one (1) or more wind turbines of over one hundred (100) feet in height, situated on private agricultural land, with one or more landowners leasing the land to a company which owns and maintains the wind energy equipment.

PERSONAL WIND ENERGY SYSTEM (P-WES). A Wind Energy System where the majority of the energy produced is consumed directly on-site, or on an adjoining property, though excess energy generated by the System may be sold and distributed to an electric utility provider serving the general public. Such a system is designed to produce less than one (1) megawatt of energy, and includes an individual wind turbine of less than one hundred (100 feet in height that is owned and maintained by the landowner, which is used to serve the energy needs of a private residence, business, or agricultural operation.

WIND TURBINE. A structure used to collect kinetic energy from wind and convert it into electricity, which is comprised of a monopole tower, along with a series of rotary operated blades and a nacelle (generator) attached to the top of the tower.

ARTICLE III: WIND ENERGY SYSTEMS – SITING AND DESIGN STANDARDS

A. **Purpose.** The standards within this Article shall apply to all Commercial Wind Energy Systems developed under the authority of this Ordinance. For regulations pertaining specifically to Meteorological Conversion Towers, see Article VIII.

B. Setback from Structures, Places and Property Lines.

1. All setback distance measurements shall be taken in reference to the point at which the base of the wind turbine tower will be closest to the applicable structure, place or property line, along a flat horizontal plane between the two points, to adjust for any significant changes in topography and land surface elevation.

   a) The requirements in this Section shall apply to all applicable structures, places, and properties in the vicinity of the C-WES, regardless of whether they are located within an incorporated municipality or an adjoining county.

   b) In each instance, the 'height of the turbine' shall constitute the vertical distance between the ground elevation at the base of the tower and the tip of the blade when positioned at its highest point during a rotation.

   c) The requirements in this Section shall apply only to a C-WES at the time of construction, and shall not apply to any new structures that are voluntarily built near the C-WES by a non-participating property owner after it has assumed operations.

2. The minimum setback distance from a wind turbine to any of the following structures, places and properties shall be as shown in the table below, with measurements taken from the base of the tower at ground level (not including any stairways or other projections off of the main tower structure):

Structure / Place / Property	Minimum Setback	
	On Participating Properties	On Non-Participating Properties
Occupied dwellings and civic buildings	2 times the height of the turbine	1,800 feet or 3 times the height of the turbine (whichever is greater)
All other structures (including detached garages, sheds, livestock confinement buildings, and other wind turbines)	Equal to the height of the turbine plus 10 percent of that height	2 times the height of the turbine
Electric substations	2 times the height of the turbine	
Above-ground electric lines	Equal to the height of the turbine plus 10 percent of that height	
The right-of-way line for any roadway (public or private), railroad, or levee system	Equal to the height of the turbine plus 10 percent of that height	

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Structure / Place / Property (cont'd)	Minimum Setback – At Any Location
The boundary line of any non-participating property	Equal to the height of the turbine plus 10 percent of that height
The property line of a cemetery	1,800 feet or 3 times the height of the turbine (whichever is greater)
The property line of a public conservation area	1,800 feet or 3 times the height of the turbine (whichever is greater)

3. No portion of any C-WES shall be constructed within any public right-of-way, utility or pipeline easement, or access easement, unless written permission has been obtained by the intended beneficiar(ies) of that right-of-way or easement and provided to the Board of Supervisors before the final Public Hearing.

4. For any roadway that is to be newly constructed or widened as part of a project listed in the State or County Five-Year Program, the minimum setback from a roadway right-of-way in Section B(2) of this Article shall apply to the planned location of the right-of-way line at the conclusion of the applicable project.

C. Height Restrictions.

1. The maximum height of a wind turbine shall be six-hundred and fifty (650) feet, measured from the ground elevation at the base of the tower to the tip of the blade when positioned at its highest point during a rotation.

2. The minimum vertical distance between ground level and the tip of a wind turbine blade at its lowest point during a rotation shall be seventy-five (75) feet.

3. If any portion of a C-WES is located within the jurisdiction of the *Des Moines County Airport Approach Zone Regulations (Ordinance No. 58)*, then all structures within that area shall comply with the applicable height restrictions of that ordinance.

D. Design and Appearance.

1. All wind turbines shall be designed with the configuration of a tubular, monopole type tower, able to be physically supported in place without the assistance of guy-wires or other similar reinforcements.

2. All turbines shall be designed to avoid reflective glare from sunlight or other lighting used to illuminate them.

3. All turbines shall be painted a neutral color such as white or light gray, and finishes shall be matte and non-reflective. Blades may be a darker color (such as black), to facilitate de-icing or reduce wildlife collisions.

4. All turbines shall remain painted or finished the same as was originally applied by the manufacturer, unless otherwise approved by the Board of Supervisors.

E. Electric Lines. Electric lines used to transfer energy from a turbine to the nearest BESS or substation shall be placed underground, apart from those within a public road right-of-way or an existing overhead electric easement.

F. Lighting and Reflection.

1. Any lighting that is installed on the premises of a C-WES shall be shielded and downcast to the extent that the light does not project directly onto any adjoining properties. Exceptions shall be made only when such lighting is necessary to comply with requirements of the Federal Aviation Administration (FAA), or any other state or federal agency (such as those pertaining to the lighting of a substation).

2. Each C-WES shall be equipped with an Aircraft Detection Lighting System (ADLS), subject to the approval of the FAA.

3. No occupied dwelling or civic building on a non-participating property shall experience more than thirty (30) hours per year of shadow flicker on the external wall nearest to a turbine.

G. Noise Volume and Signal Interference.

1. The volume of noise generated by any component of a C-WES shall not exceed fifty (50) A-weighted decibels (dBA) when measured from an occupied dwelling or civic building on a non-participating property. Such measurements shall be taken from outside the building, at the point along the outer wall that is closest to the C-WES.

   a) This requirement shall not apply during a severe storm or power outage, if electrical disturbances cause a temporary increase in noise during the course of the storm or outage.

2. Each C-WES shall be operated in a manner that does not interfere with any electromagnetic communications, including radio, telephone, Internet, broadband, Doppler radar and television signals, to the extent that this compromises the usability or accuracy of such communications.

   a) If any such interference is encountered, then the Owner, and/or Operator shall minimize and mitigate any such interference, to ensure the same level of service as before construction of the C-WES.

H. Access and Security Fencing. All components of a C-WES shall be sufficiently secured to prevent any safety hazards to the general public.

1. Any wind turbine that is climbable within fifteen (15) feet of the base at ground level shall be fully surrounded with fencing, and an entrance that is locked at all times outside the occurrence of operations and maintenance activities.

2. Any access points at the base of a wind turbine shall be locked at all times outside the occurrence of operations and maintenance activities.

3. All locked entry points shall be accompanied by signage which prohibits trespassing, warns of any applicable risk of high voltage or other safety hazard, and provides the facility's address and GPS coordinates, along with contact information for the Owner and/or Operator in case of emergency.

4. Whenever located within two-hundred (200) feet of the right-of-way for a public

roadway, all security fencing for a C-WES shall have a minimum porosity of seventy-five (75) percent, to permit the free movement of blowing snow, and thereby prevent the formation of snow drifts on nearby roadways.

a) The Board of Supervisors may waive the seventy-five (75) percent porosity requirement, if the Developer submits an engineering study which confirms that a fence of the specified porosity will not result in an increase in snow drifts on the adjoining roadway.

I. Signs.

1. No signs shall be installed on the premises of a C-WES if they are visible from a public street, apart from Owner or manufacturer identification signs and any applicable warning signs outlined in Section H(3) of this Article.

2. No wind turbine or other structure associated with a C-WES shall be used to advertise or promote any product or service.

J. Fire Prevention and Waste Disposal.

1. Each turbine in a C-WES shall be equipped with lightning protection technology, designed to prevent lightning strikes from damaging the equipment or triggering a fire. Such technology shall comply with IEC 61400-24 of the International Electrotechnical Commission.

2. Each turbine in a C-WES shall be equipped with an on-site fire suppression system that is capable of detecting and extinguishing a fire of any size on the turbine, and preventing it from spreading onto the surrounding property.

a) All operations and maintenance personnel shall be provided with safety protocols for working in and around the components of the fire suppression system, and such protocols shall be outlined in the submitted Operations and Maintenance Plan (See Article VII, Section C(8)).

3. Solid and hazardous waste, including but not limited to crates, packaging materials, damaged or worn parts, and used oils and lubricants shall be removed from the C-WES site in the manner and timing established by all applicable local, state and federal regulations.

K. Design Standards and Technological Risk. All components of a C-WES shall comply with the standards of IEC 61400 of the International Electrotechnical Commission, and shall not utilize any novel or experimental elements that have not been reliably tested and implemented for C-WES projects of a comparable size elsewhere.

1. To confirm whether a proposed C-WES would meet this requirement, a technological risk evaluation shall be conducted by a licensed third party professional chosen by the Board of Supervisors, at the Developer's expense. A report detailing the results of this evaluation shall be provided to the County and made available to the general public.

2. This requirement shall apply to the materials that comprise each of the following:

a) The major components of each wind turbine, including the tower, blade,

nacelle, and subgrade foundation

b) All accessory equipment for storing or transferring energy, including inverters, transformers, cooling equipment, switching gear, metering equipment and transmission tie lines

c) Lightning protection systems, fire suppression systems, and Aircraft Detection Lighting Systems

L. **Agricultural Aviation Costs**. The Owner and/or Operator of a C-WES shall reimburse all non-participating property owners for any and all excess costs incurred from agricultural aviation service providers as a result of the presence of the C-WES. Such costs may result from increased time necessary to complete aerial applications, as well as increased insurance costs for pilots operating in the vicinity of wind turbines.

M. **Waivers.** The requirements for Sections B, F(1), F(3) and G(1) of this Article may be waived if written permission has been obtained from one or more individual property owners, and the waiver shall apply only to those specific propert(ies), and not to any adjoining public roadways.

1. In no instance shall any such waiver from a property owner have the effect of limiting the setback, lighting or reflection requirements that apply to an adjoining public roadway.

ARTICLE IV: SOLAR ENERGY SYSTEMS – SITING AND DESIGN STANDARDS

A. **Purpose**. The standards within this Article shall apply to all Commercial Solar Energy Systems developed under the authority of this Ordinance.

B. **Setback from Structures, Places and Property Lines**.

1. All setback distance measurements shall be taken in reference to the point at which the solar array will be closest to the applicable structure, utility line, or property line, along a flat horizontal plane between the two points, to adjust for any significant changes in topography and land surface elevation.

   a) The requirements in this Section shall apply to all applicable structures, places and properties in the vicinity of the C-SES, regardless of whether they are located within an incorporated municipality or an adjoining county.

   b) The requirements in this Section shall apply only to a C-SES at the time of construction, and shall not apply to any new structures that are voluntarily built near the C-SES by a non-participating property owner after it has assumed operations.

2. The minimum setback distance from a solar array to any of the following structures, places and properties shall be as shown in the table below, with measurements taken from the closest point of the solar array when the panels are positioned at maximum horizontal tilt:

Structure / Place / Property	Minimum Setback	
	On Participating Properties	On Non-Participating Properties
Occupied dwellings and civic buildings	150 feet	300 feet
All other structures (including detached garages, sheds and livestock confinement buildings.	75 feet	150 feet
Electric substations	150 feet	
Above-ground electric lines	75 feet	
The right-of-way line for any roadway (public or private), railroad, or levee system	75 feet	
The boundary line of any non-participating property	75 feet	
The property line of a cemetery	300 feet	
The property line of a public conservation area	300 feet	

3. No portion of any C-SES shall be constructed within any public right-of-way, utility or pipeline easement, or access easement, unless written permission has been obtained by the intended beneficiar(ies) of that right-of-way or easement and provided to the Board of Supervisors before the final Public Hearing.

4. For any roadway that is to be newly constructed or widened as part of a project listed in the State or County Five-Year Program, the minimum setback from a roadway right-of-way in Section B(2) of this Article shall apply to the planned location of the right-of-way line at the conclusion of the applicable project.

C. **Height Restrictions**. All measurements shall be taken from the highest point on a panel when it is positioned at maximum vertical tilt.

1. The height of any solar array within a C-SES shall not exceed fifteen (15) feet.

2. The maximum height of a solar array may be increased whenever necessary to accommodate Agri-voltaic Systems, or to comply with the minimum floodplain development standards of Ordinance No. 25.

   a) In such instances, the minimum setback shall be increased by two (2) feet for every foot at which the height exceeds fifteen (15) feet, but under no circumstances shall the height of any array exceed twenty-five (25) feet.

3. If any portion of a C-SES is located within the jurisdiction of the *Des Moines County Airport Approach Zone Regulations (Ordinance No. 58)*, then all structures within that area shall comply with the applicable height restrictions of that ordinance.

D. **Maintenance of Soil Health.** To ensure that the underlying soil on the properties comprising a C-SES will remain viable for productive farming operations following its decommissioning, the following standards shall be complied with during and after the construction of a C-SES.

1. Top soils shall not be removed from the C-SES project area during development, except in any instance where necessary to remediate chemicals or hazardous substances that remain from a previous development on the property.

2. Apart from paved or gravel driveways necessary to transport vehicles and equipment around the C-SES during regular maintenance work, all areas of soil that underly and surround clusters of solar arrays shall be planted and maintained in perennial vegetation, to prevent erosion, manage stormwater runoff, and maintain overall soil health.

   a) Seed mixes and maintenance practices for vegetation shall be consistent with recommendations made by qualified natural resource professionals (such as those at the Iowa Department of Natural Resources, Natural Resources Conservation Service (NRCS), and the Des Moines County Soil and Water Conservation District.

   b) Seeds should include a mix of grasses and wildflowers, ideally native to the Southeast Iowa region, which will result in a short-stature prairie surrounding the clusters of solar arrays.

   c) Alternatively, the soil surrounding solar arrays may be used for Agri-voltaic Systems, such as the growing of crops or livestock grazing.

3. During the course of operations for a C-SES, all chemicals or solvents used to clean solar panels shall minimize the use of volatile organic compounds, and the

Operator shall use recyclable or biodegradable products to the greatest extent possible.

4. Once a C-SES has commenced operations, surface-level soil samples shall be taken at regular intervals (no less than once every ten (10) years), to test for the presence of any of the eight (8) metals identified by the Resource Conservation and Recovery Act (RCRA), including arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver.

5. A baseline soil sample shall be taken before the initial construction of the C-SES, to be used as a reference for future samples taken during the course of its operation. A report detailing the results of the baseline sample shall be provided to the Board of Supervisors before the approval of a Siting Permit.

    a) If contamination from any of the eight (8) RCRA metals is identified in any subsequent samples, and the amount exceeds that which was observed in the baseline sample, the C-SES Owner and/or Operator shall provide the Board of Supervisors with an action plan to address the issue. This plan shall specify what efforts will be undertaken to remove the existing contamination, and to prevent further contamination from occurring in the future.

6. A final soil sample shall be taken following the conclusion of decommissioning for the C-SES at the end of its operational lifespan. A report detailing the results of this sample shall be provided to the Board of Supervisors, along with an action plan to address contamination, if any was identified.

7. For all soil samples referenced in Sections D(4) through D(6) of this Article, the following shall apply:

    a) Samples shall be taken at a rate of at least one sample for every one hundred (100) acres of land, evenly distributed throughout the C-SES.

    b) Soil sampling shall be conducted in accordance with SW-846 ('Test Methods for Evaluating Solid Waste: Physical/Chemical Methods Compendium'), from the U.S. Environmental Protection Agency (EPA).

    c) Such sampling shall be performed by a licensed third party professional chosen by the Board of Supervisors, at the Developer's expense, and the results shall be provided to the Board upon completion.

E. **Screening**. If a proposed C-SES will include any solar arrays within six hundred (600) feet of an occupied dwelling, civic building, and/or cemetery on a non-participating property, the developer shall install a landscape buffer between the C-SES and the applicable propert(ies).

1. Each landscape buffer shall be comprised of trees and/or shrubs, which when fully grown will result in a solid visual barrier of no less than fifteen (15) feet in height, for any portion of the solar array within six hundred (600) feet of the dwelling, civic building or cemetery.

2. This requirement may be waived if it can be demonstrated that the solar arrays would not be visible from within six hundred (600) feet of the applicable dwelling, civic building or cemetery, as a result of the natural terrain, or the presence of

existing buildings or vegetation.

F. Lighting and Reflection.

1. Any lighting that is installed on the premises of a C-SES shall be shielded and downcast to the extent that the light does not project directly onto any adjoining properties. Exceptions shall be made only when such lighting is necessary to comply with requirements of the Federal Aviation Administration, or any other state or federal agency (such as those pertaining to the lighting of a substation).

2. A C-SES shall be designed and positioned in such a manner as to prevent reflective glare toward any nearby occupied dwellings, civic buildings, roadways, or airport runways.

3. A C-SES shall be designed in accordance with the standards of the adopted Wildlife Monitoring and Mitigation Plan, to prevent wildlife collisions due to reflection from solar panels (see Article XI, Section B).

G. Noise Volume. The volume of noise generated by any component of a C-SES shall not exceed fifty (50) A-weighted decibels (dBA) when measured from an occupied dwelling or civic building on a non-participating property. Such measurements shall be taken from outside the building, at the point along the outer wall that is closest to the C-SES.

1. This requirement shall not apply during a severe storm or power outage, if electrical disturbances cause a temporary increase in noise during the course of the storm or outage.

H. Access and Security Fencing. All components of a C-SES shall be sufficiently secured to prevent any safety hazards to the general public.

1. A C-SES shall be fully surrounded with fencing that meets the minimum height and design standards of the National Electrical Code (NEC), and an entrance that is locked at all times outside the occurrence of maintenance activities.

2. All locked entry points shall be accompanied by signage which prohibits trespassing, warns of any applicable risk of high voltage or other safety hazard, and provides the facility's address and GPS coordinates, along with contact information for the Owner and/or Operator in case of emergency.

3. Whenever located within two-hundred (200) feet of the right-of-way for a public roadway, all security fencing for a C-SES shall have a minimum porosity of seventy-five (75) percent, to permit the free movement of blowing snow, and thereby prevent the formation of snow drifts on the nearby roadways.

   a) The Board of Supervisors may waive the seventy-five (75) percent porosity requirement, if the Developer submits an engineering study that confirms that a fence of the specified porosity will not result in an increase in snow drifts on the adjoining roadway.

I. Signs.

1. No signs shall be installed on the premises of a C-SES if they are visible from a

public street, apart from Owner or manufacturer identification signs and any applicable warning signs outlined in Section H(2) of this Article.

2. No solar array or other structure associated with a C-SES shall be used to advertise or promote any product or service.

J. **Fire Prevention and Waste Disposal.**

1. Solid and hazardous waste, including but not limited to crates, packaging materials, damaged or worn parts, and used oils and lubricants, shall be removed from the C-SES site in the manner and timing established by all applicable local, state, and federal regulations.

K. **Design Standards and Technological Risk.** All components of a C-SES shall comply with the standards of IEC 61215 and IEC 61730 of the International Electrotechnical Commission, and shall not utilize any novel or experimental elements that have not been reliably tested and implemented for C-WES projects of a comparable size elsewhere.

1. To confirm whether a proposed C-SES would meet this requirement, a technological risk evaluation shall be conducted by a licensed third party professional chosen by the Board of Supervisors, at the Developer's expense. A report detailing the results of this evaluation shall be provided to the County and made available to the general public.

2. This requirement shall apply to the materials that comprise each of the following:

a) The major components of the solar arrays, including solar panels, support posts or columns, and subgrade foundation

b) All accessory equipment for storing or transferring energy, including inverters, transformers, cooling equipment, switching gear, metering equipment and transmission tie-lines

L. **Waivers.** The requirements for Sections B, E, F and G of this Article may be waived if written permission has been obtained from one or more individual property owners, and the waiver shall apply only to those specific propert(ies).

1. In no instance shall any such waiver from a property owner have the effect of limiting the setback, lighting or reflection requirements that apply to an adjoining public roadway.

ARTICLE V: BATTERY ENERGY STORAGE SYSTEMS – SITING AND DESIGN STANDARDS

A. **Purpose**. The standards within this Article shall apply to all Commercial Battery Energy Storage Systems developed under the authority of this Ordinance.

B. **Setback from Structures, Places and Property Lines**.

1. All setback distance measurements shall be taken in reference to the point at which the battery equipment will be closest to the applicable structure, utility line, or boundary line, along a flat horizontal plane between the two points, to adjust for any significant changes in topography and land surface elevation.

   a) The requirements in this Section shall apply to all applicable structures, places and properties in the vicinity of the C-BESS, regardless of whether they are located within an incorporated municipality or an adjoining county.

   b) The requirements in this Section shall apply only to a C-BESS at the time of construction, and shall not apply to any new structures that are voluntarily built near the C-BESS by a non-participating property owner after it has assumed operations.

2. For any C-BESS that contains non-aqueous lithium-ion, sodium-ion, or sodium-sulfur battery equipment, the minimum setback distance from it to any of the following structures, places and properties shall be as shown in the table below:

Structure / Place / Property	Minimum Setback	
	On Participating Properties	On Non-Participating Properties
Occupied dwellings and civic buildings	500 feet	1,000 feet
All other structures (including detached garages, sheds and livestock confinement buildings	300 feet	500 feet
Above-ground electric lines	150 feet	
The right-of-way line for any roadway (public or private), railroad, or levee system	150 feet	
The boundary line of any non-participating property	250 feet	
The property line of a cemetery	1,000 feet	
The property line of a public conservation areas	1,000 feet	

(cont'd on next page)

3. For any C-BESS whose battery equipment does not fit the description from Section B(2) of this Article, the minimum setback distance from it to any of the following structures, places and properties shall be as shown in the table below:

Structure / Place / Property	Minimum Setback	
	On Participating Properties	On Non-Participating Properties
Occupied dwellings and civic buildings	250 feet	500 feet
All other structures (including detached garages, sheds and livestock confinement buildings.	150 feet	250 feet
Above-ground electric lines	75 feet	
The right-of-way line for any roadway (public or private), railroad, or levee system	75 feet	
The boundary line of any non-participating property	75 feet	
The property line of a cemetery	500 feet	
The property line of a public conservation area	500 feet	

4. No portion of any C-BESS shall be constructed within any public right-of-way, utility or pipeline easement, or access easement, unless written permission has been obtained by the intended beneficiar(ies) of that right-of-way or easement and provided to the Board of Supervisors before the final Public Hearing.

5. For any roadway that is to be newly constructed or widened as part of a project listed in the State or County Five-Year Program, the minimum setback from a roadway right-of-way in Sections B(2) and (3) of this Article shall apply to the planned location of the right-of-way line at the conclusion of the project.

6. In any instance where NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems) requires a different minimum setback than Sections B(2) and (3) of this Article, the C-BESS shall comply with whichever minimum setback is greater.

C. Lighting and Reflection. Any lighting that is installed on the premises of a C-BESS shall be shielded and downcast to the extent that the light does not project directly onto any adjoining properties. Exceptions shall be made only when such lighting is necessary to comply with requirements of the Federal Aviation Administration, or any other state or federal agency (such as those pertaining to the lighting of a substation).

D. Noise Volume.

1. The volume of noise generated by any component of a C-BESS shall not exceed fifty (50) A-weighted decibels (dBA) when measured from an occupied dwelling or civic building on a non-participating property. Such measurements shall be taken from outside the building, at the point along the outer wall that is closest to the

C-BESS.

a) The requirement shall not apply during a severe storm or power outage, if electrical disturbances cause a temporary increase in noise during the course of the storm or outage.

2. In any instance where a C-BESS will be located within one-thousand five hundred (1,500) feet of an occupied dwelling or civic building on a non-participating property, noise reduction barriers shall be installed around the perimeter of the C-BESS, including all inverters, transformers and cooling systems.

E. **Access and Security Fencing.** All components of a BESS shall be sufficiently secured to prevent any safety hazards to the general public.

1. A C-BESS shall be fully surrounded with fencing that meets the minimum height and design standards of the National Electrical Code (NEC), and an entrance that is locked at all times outside the occurrence of maintenance activities.

2. Whenever located within two-hundred (200) feet of the right-of-way for a public roadway, all security fencing for a C-BESS shall have a minimum porosity of seventy-five (75) percent, to permit the free movement of blowing snow, and thereby prevent the formation of snow drifts on the nearby roadways.

a) The Board of Supervisors may waive the seventy-five (75) percent porosity requirement, if the Developer submits an engineering study that confirms that a fence of the specified porosity will not result in an increase in snow drifts on the adjoining roadway.

F. **Signs**.

1. All locked entry points for a C-BESS shall have signage that contains the following information:

a) Warnings for high voltage and other applicable hazards, in compliance with ANSI Z535.

b) The type of battery technology and chemistry associated with the C-BESS.

c) The facility's address and GPS coordinates.

d) Twenty-four (24) hour emergency contact information for the Operator of the C-BESS.

e) Disconnect and emergency shut-off information for all battery equipment and substations comprising the C-BESS.

2. Warning signs for high voltage shall be placed at the base of all pad-mounted transformers and substations.

3. No structure associated with a C-BESS shall be used to advertise or promote any product or service.

G. **Fire Prevention and Waste Disposal.**

1. The Developer shall ensure that the C-BESS complies with all relevant standards of the National Fire Protection Association, including NFPA 1 (Fire Code), NFPA 70

(National Electrical Code), and NFPA 855 (Standard for the Installation of Stationary Energy Storage Systems).

2. Solid and hazardous waste, including but not limited to crates, packaging materials, damaged or worn parts, and used oils and lubricants shall be removed from the C-BESS site in the manner and timing established by all applicable local, state and federal regulations.

3. All areas of land within thirty (30) feet of the C-BESS shall be kept clear of combustible vegetation or other combustible materials or growth.

H. Environmental Considerations.

1. The Developer shall consult with the Iowa Department of Natural Resources and Des Moines County Soil and Water Conservation District, to obtain information regarding any sensitive environmental features within close proximity to the proposed C-BESS site (such as perennial streams, water bodies and wetlands).

2. If the aforementioned entities recommend a certain setback between the C-BESS and any such environmental features, no C-BESS shall be established within a shorter setback unless the Developer demonstrates that the C-BESS will include the following mitigation measures.

   a) Secondary containment systems capable of capturing electrolyte leaks or fire-suppressant water runoff.

   b) Retention systems for stormwater and firewater, sized for a one-hundred (100)-year twenty-four (24)-hour storm event, in addition to fire suppression volume.

3. For any containment and retention systems required by this Section, these shall undergo quarterly inspection and sampling during the first year of operations for the C-BESS, including testing for pH, any of the eight (8) RCRA metals, lithium, and any other contaminants of concern.

   a) The Owner and/or Operator shall provide the results of these inspections to the Des Moines County Conservation Board.

4. If the presence of contaminants exceeds any applicable regulatory thresholds, the Owner and/or Operator shall develop an action plan to mitigate the contamination, in consultation with the Conservation Board and/or Soil and Water Conservation District.

   a) Quarterly inspections of the applicable containment system(s) shall continue until the presence of contaminants is reduced below the regulatory thresholds, with the results of each inspection provided to the Conservation Board.

5. Once the initial inspection period has concluded, and any identified issues have been sufficiently mitigated, the C-BESS shall undergo periodic inspections and sampling, with no more than five (5) consecutive years transpiring between each subsequent inspection.

   a) The Owner and/or Operator shall provide the results of each inspection to

the Des Moines County Conservation Board.

b) If the presence of contaminants exceeds any applicable regulatory thresholds, for any of the subsequent inspections, the Owner and/or Operator shall follow the same procedures outlined in Section H(3) and H(4) of this Article.

6. The Owner and/or Operator shall be responsible for the immediate containment, remediation, and restoration of all affected areas in the event of a release of hazardous materials, in accordance with all applicable State and Federal environmental laws.

I. **Design Standards and Technological Risk.** All components of a C-BESS shall comply with the standards of NFPA 855 of the National Fire Protection Association, and shall not utilize any novel or experimental elements that have not been reliably tested and implemented for C-BESS projects elsewhere.

1. To confirm whether a proposed C-BESS would meet this requirement, a technological risk evaluation shall be conducted by a licensed third party professional chosen by the Board of Supervisors, at the Developer's expense. A report detailing the results of this evaluation shall be provided to the County and made available to the general public.

2. This requirement shall apply to the materials that comprise each of the following:

a) The battery equipment and the structures that contain them

b) All accessory equipment to be used for storing or transferring energy, including inverters, transformers, cooling equipment, switching gear, metering equipment and transmission tie-lines

J. **Waivers.** The requirements for Sections B and D this Article may be waived if written permission has been obtained from one or more individual property owners, and the waiver shall apply only to those specific propert(ies), and not to any adjoining public roadways.

1. In no instance shall any such waiver from a property owner have the effect of limiting the setback, lighting or reflection requirements that apply to an adjoining public roadway.

ARTICLE VI: SITING PERMIT – PRELIMINARY REVIEW

A. **Purpose.** Given the large size and extent of a C-WES, C-SES and/or C-BESS project, it is important to provide an early opportunity for the County, the Developer, and other local stakeholders to obtain information about the overall scope and impact of a proposed project, so that any necessary changes can be accommodated into the final design plans.

B. **Siting Permit Application.** The Developer shall apply for a Siting Permit to the Administrator, using forms supplied by the County, which shall include the following information:

1. The location of the proposed C-WES, C-SES, and/or C-BESS, and the size of its total physical extent.
2. The total number of participating properties associated with the proposed C-WES, C-SES and/or C-BESS.
3. The total number of structures comprising the proposed C-WES, C-SES and/or C-BESS, including all wind turbine(s), solar array(s), battery devices and other structures that will comprise the C-WES, C-SES and/or C-BESS.
4. The proposed height and size dimensions of the wind turbine(s), solar arrays, and other structures that will comprise the proposed C-WES, C-SES and/or C-BESS.
5. The primary use of the energy to be generated on-site, whether this will be for distribution to the electrical power grid for use by the general public, or for use by one (1) or more large commercial or industrial operations nearby.
6. The anticipated amount of energy to be generated and/or stored on-site.
7. The length of the anticipated timeframe for implementation of the project, including the permitting process, as well as the construction and placement of all structures and equipment that comprise the C-WES, C-SES, and/or C-BESS.
8. Contact information for all representatives of the Developer that will be involved in the permitting and review process.

C. **Required Documentation**. An application for a Siting Permit shall be accompanied by all of the following documentation, to be prepared and/or obtained entirely at the Developer's expense, and no formal action shall be taken by the County until all such documents have been submitted to the Administrator:

1. A draft Site Plan for the proposed C-WES, C-SES, and/or C-BESS, comprised of a map and any associated diagrams or illustrations, which contains all of the following information:
    a) The planned location of all structures that will comprise the proposed C-WES, C-SES and/or C-BESS, including wind turbines, solar arrays, battery devices and any accessory structures and equipment, including utility lines, whether above or below-ground.
    b) The location and setback measurement of all existing buildings, structures,

utilities and property lines within the minimum required setback distance for each proposed wind turbine tower, cluster of solar arrays, and/or battery device (as outlined in Section B of Articles III through V of this Ordinance), plus an additional two-hundred (200) feet. Distance measurements for structures on non-participating properties may be approximated using aerial photography.

c) Lines marking a radius around each proposed wind turbine tower, cluster of solar arrays, and/or battery device, with each equivalent to the minimum setback distance required for an occupied dwelling on a non-participating property.

d) The locations of all existing utility lines, sanitary systems, drainage tile networks, and any associated easements within or adjacent to the proposed C-WES, C-SES and/or C-BESS, regardless of whether they are currently being utilized.

e) The locations of all driveway entrances for obtaining access to the proposed C-WES, C-SES and/or C-BESS, as well as any other private entrances to the public roadway system within one thousand (1,000) feet of each, measured along the road right-of-way line.

f) The location, size and type of all bridges and culverts in the public roadway right-of-way adjacent to the proposed project site.

g) The location of all proposed security fencing, along with the distance between each fence and the right-of-way line for any public roadway(s) within two-hundred (200) feet.

h) The location and extent of any Special Flood Hazard Areas from the FEMA Flood Insurance Rate Maps, along with an explanation of all elevation, grading, filling and other floodproofing measures to be undertaken to obtain compliance with the *Des Moines County Floodplain Management Ordinance*.

2. A report from a licensed engineer containing the following information:

a) A description of the individual components of the proposed C-WES, C-SES and/or C-BESS, in terms of functional design characteristics, appearance, and dimensions.

b) Photographs and/or elevation drawings providing a visual depiction of the components of the proposed C-WES, C-SES and/or C-BESS.

c) Documentation to establish that the components of the proposed C-WES, C-SES and/or C-BESS will have sufficient structural integrity for the proposed use and location, and comply with all applicable industry standards in terms of safety and performance.

d) Calculations for the amount of energy to be generated and/or stored by the proposed C-WES, C-SES and/or C-BESS, in terms of both total capacity and average amount. This shall include both the total aggregate energy generated by the System, and the amount generated and/or stored by each individual turbine, cluster of solar arrays, and/or battery device.

3. A description of the procedures to be used for monitoring ice accumulation on wind turbine blades, and the mitigation measures to be used for preventing ice throw (for Commercial Wind Energy Systems only).

4. Documentation confirming that the developer has obtained legal permission from all participating property owners for the development of a C-WES, C-SES and/or C-BESS on any portion of their land, including any previously recorded leases, easements, or similar agreements.

5. A summary of the terms and conditions that all participating property owners have agreed to as part of their individual contracts with the developer. This shall outline the responsibilities of each party throughout the operational lifespan of the proposed C-WES, C-SES and/or C-BESS, including project development, operations and maintenance, emergency response and decommissioning.

6. Any signed waivers for the minimum setback requirements in Articles III through V of this Ordinance.

7. Documentation confirming that the Developer has initiated the process of obtaining an interconnection agreement to distribute energy from the C-WES, C-SES and/or C-BESS into the power grid at-large.

8. A list of any other necessary permits from other permitting agencies at the Federal, State or Local level that will apply to the proposed project, along with documentation outlining the application status and anticipated timeframe for obtaining any such permits.

9. A description of the process by which the Developer, or a contractor acting on their behalf, will recruit employees for the construction of the proposed C-WES, C-SES and/or BESS. This should specify whether or not this will include local recruitment efforts in Des Moines County and the surrounding region.

10. For each of the following documents, the Developer shall provide either a draft copy of the document (if available), or details on the status of developing the document, and an anticipated timeframe for its completion:

    a) Sound Analysis and Report (see Article VII, Section C(3).

    b) Road Use Agreement (see Article X).

    c) Operations and Maintenance Plan (see Article VII, Section C(8)).

    d) Wildlife Monitoring and Mitigation Plan (see Article XI).

    e) Emergency Response Plan (see Article XII).

    f) Decommissioning Plan (see Article XIII).

    g) Line of Sight Analysis and Report (for Commercial Wind Energy Systems only – see Article, VII, Section D(1)).

    h) Stormwater Management Plan (for Commercial Solar Energy Systems only – see Article VII, Section E(1)).

    i) Soil Maintenance Plan, and results of the baseline soil sample addressed in Article IV, Section D(5) of this Ordinance (for Commercial Solar Energy

Systems only – see Article VII, Section E(2)).

D. Fee Structure. All applications for Preliminary Review of a Siting Permit shall be accompanied by the payment of an administrative fee.

1. The fee structure for a Preliminary Review of a Siting Permit shall be set through resolution by the Board of Supervisors.

2. The fee rate shall be structured so that the amount is directly proportional to the amount of time spent by County staff and officials administering and overseeing the application review process.

3. The fee rate shall be structured so that it varies depending on the overall physical size and/or energy capacity of the specific C-WES, C-SES and/or C-BESS, as proposed.

4. Once established, the Board of Supervisors may modify said fee structure by resolution, as necessary.

E. Application Submitted – Notice to Property Owners.

1. Upon the submission of a complete Siting Permit application, the Administrator shall provide mailed notification to the owners and occupants of all properties within one (1) mile of each wind turbine, solar array and/or battery equipment installation. Said notice shall contain the following:

a) A statement that a Siting Permit application for a C-WES, C-SES and/or C-BESS has been submitted for land within one (1) mile of their property.

b) Basic information about the proposed project, including the type of System, its general location, and the overall size of the System.

c) A statement that a Public Hearing for preliminary review of the proposed C-WES, C-SES and/or C-BESS will be conducted within ninety (90) days, and the owner will be notified in advance, once that Hearing has been scheduled.

d) A request for the owner to provide any information that they feel may be relevant to the enforcement of this Ordinance, concerning the impact of the proposed project on nearby properties.

F. Application Review.

1. The Administrator shall review the submitted application materials, and confirm whether the proposed development complies with all applicable requirements of this Ordinance.

a) The Board of Supervisors may choose to utilize the services of a third-party consultant to review any of the technical documents and studies submitted along with an application for a Siting Permit. The Developer shall be responsible for all fees associated with such consultant activities.

2. If any aspect of the proposed development is determined to not comply with all applicable requirements, the Administrator shall notify the Developer of any such

issues, and provide an explanation of what changes are necessary.

3. The Developer shall coordinate with the Administrator to address any identified issues and make any necessary changes to the project plans or documentation.

4. Upon the submission of a complete Siting Permit application, the Administrator shall furnish copies of the submitted application to the representatives of the following County Departments for their review: Assessor, Auditor, Conservation, Emergency Management, E911/GIS, Health and Secondary Roads. These Departments shall be instructed to submit any comments in response within thirty (30) days.

5. Prior to the Public Hearing (as outlined in Section G of this Article), the Administrator shall submit a final report to the Board of Supervisors, providing a summary of the proposed development, and confirmation that it complies with all applicable requirements and conditions.

    a) This report shall also include a summary of any comments submitted by the aforementioned County Departments and nearby property owners.

G. **Public Hearing and Consent to Proceed.** Within ninety (90) days of the submission of a complete Siting Permit application with all required documentation, the Board of Supervisors shall hold a public hearing regarding the proposed C-WES, C-SES and/or C-BESS. The Board may grant an extension for an additional ninety (90) days, if necessary to allow the developer to make any changes to ensure compliance.

1. The Administrator shall provide mailed notification to the owners and occupants of all properties within one (1) mile of each wind turbine, solar array and/or battery equipment installation and shall be published in a newspaper of general circulation within the community no fewer than four (4) or greater than twenty (20) days prior to the hearing.

2. If a non-participating property owner submits a comment before or during the public hearing, which claims that the proposed C-WES, C-SES and/or C-BESS will not comply with the minimum requirements of this Ordinance, said property owner shall be responsible for providing the Board of Supervisors with sufficient evidence that demonstrates the accuracy of this claim.

    a) This requirement shall apply in any instance where a property owner claims that a building on their property has not been provided with the minimum setbacks established for a C-WES, C-SES and/or C-BESS. If the building in question is a dwelling that is not yet ready for occupancy, the owner shall provide sufficient evidence that demonstrates that it will be ready for occupancy within one (1) year.

3. Following the conclusion of the Public Hearing, the Board of Supervisors shall vote on whether to grant the developer Consent to Proceed with Final Review of the Siting Permit.

    a) The Board may request additional information be submitted by the Developer before granting consent to proceed, if it is deemed necessary to confirm compliance with all applicable requirements of this ordinance, or adequately inform the general public and individual property owners of the

impact of the project.

b) The Board may impose additional conditions on the proposed development, which the developer must comply with in order for the Siting Permit to be approved. Such conditions shall be limited to anything deemed necessary to protect the public health, safety and community welfare. Such conditions shall be agreed to in writing by the developer, before the Board's Consent to Proceed.

4. Granting Consent to Proceed shall authorize the Developer to initiate the Final Review of a Siting Permit, following the completion of final design plans (as outlined in Article VII).

a) Granting Consent to Proceed shall not guarantee the final approval of a Siting Permit, and final approval may be denied by the Board of Supervisors if the final design does not conform with the minimum requirements of this Ordinance, or any additional conditions imposed under the authority of Section G(3)(b) of this Article.

b) Final approval may also be denied by the Board if material or substantial changes are made to the design and/or scope of the project following the granting of Consent to Proceed.

5. If the Board of Supervisors decides not to grant Consent to Proceed, they shall clearly state the reason(s) for doing so, and provide the Developer with a copy of a written statement attesting to the same.

6. The Administrator shall provide mailed notification of the Board's decision to the owners and occupants of all properties within one (1) mile of each wind turbine, solar array, and/or battery equipment installation, as well as any other members of the general public that attended as a result of the newspaper publication for the hearing, excluding any such individuals that were present at the meeting in which the decision was made.

H. **Validity of Active Permit Applications.** If the developer does not initiate the Final Review of a Siting Permit within one (1) year of the Board's Consent to Proceed, the Siting Permit application shall be deemed null and void.

1. If requested by the Developer, an extension may be granted by the Board of Supervisors, provided that sufficient evidence is presented to demonstrate the ongoing viability of the project.

a) In any such instance, the Developer shall submit a written request for extension to the Administrator, which explains the reason(s) for the extension, and specifies the anticipated timeline for submitting final design plans.

b) In order for the extension request to be approved, the Developer shall submit the request no less than sixty (60) days prior to the one (1)-year anniversary of the date on which the Board granted Consent to Proceed.

c) If it is determined that the information supplied by the Developer is insufficient to justify an extension, the Board shall not deny said request until the Developer has been provided with an explanation and an

opportunity to submit additional information before the close of the one (1)-year permit period.

2. In any instance where a Siting Permit application has expired, the Developer may reapply for a new Siting Permit, subject to all applicable requirements outlined in this Article.

ARTICLE VII: SITING PERMIT – FINAL REVIEW

A. **Purpose.** Once the design plans for a C-WES, C-SES, and/or C-BESS have been finalized, the Developer must supply sufficient detail regarding the final scope and design elements of the project, so that the County can confirm whether the C-WES, C-SES and/or C-BESS will comply with all applicable requirements of this Ordinance, and any special conditions imposed following the Preliminary Review.

B. **Siting Permit Application – Initiation of Final Review.** The Developer shall notify the Administrator of their intent to proceed with Final Review of their previously submitted Siting Permit application (as outlined in Article VI, Section B of this Ordinance).

1. If any of the information from the previously submitted Siting Permit application since been modified, the Developer shall submit a revised version of the application form to the Administrator, where each such change is identified.

2. If any changes have been made to the details of the project, in terms of the physical location or extent of the proposed C-WES, C-SES, and/or C-BESS, or to the design components thereof, the Developer shall submit a report that identifies all such changes, and explains the reasoning for doing so in each case.

C. **Required Documentation**. In order for the County to proceed with Final Review of the Siting Permit, the Developer shall submit all of the following documentation, to be prepared and/or obtained entirely at the Developer's expense:

1. A final Site Plan for the proposed C-WES, C-SES, and/or C-BESS, comprised of a map and any associated diagrams or illustrations, which contains all of the information listed under Article VI, Section C(1) of this Ordinance.

2. A report from a licensed engineer containing all of the information listed under Article VI, Section C(2) of this Ordinance, plus the following:

   a) A description and technological explanation of the lightning protection system, fire suppression system, and Aircraft Detection Lighting System to be installed as part of a C-WES.

3. A sound analysis and summary report from a licensed engineer, utilizing the most current modeling software available, which shows the anticipated noise impact on all residential properties within one (1) mile of the C-WES, C-SES, and/or C-BESS.

   a) The report shall specify the maximum noise volume to be experienced at all occupied dwellings within the specified area, expressed in terms of A-weighted decibels (dBA).

   b) If the report concludes that any occupied dwelling on a non-participating property is likely to experience noise volume in excess of fifty (50) dBA, the Developer shall present a mitigation plan to reduce the impact to no greater than the aforementioned level. Details of said mitigation plan shall be provided to the applicable property owner(s) before the Public Hearing being held on the proposed C-WES, C-SES and/or C-BESS.

4. Documentation confirming that the developer has obtained legal permission from

all participating property owners for the development of a C-WES, C-SES and/or C-BESS on any portion of their land, including any previously recorded leases, easements or similar agreements.

5. Any signed waivers for the minimum setback requirements in Articles III through V of this Ordinance.

6. A copy of the final interconnection agreement(s) between the Developer and any utility provider(s) that will utilize the energy generated by the C-WES, C-SES and/or C-BESS.

7. Copies of any and all applicable permits issued by other permitting agencies at the Federal, State or Local level, which confirm compliance with any applicable requirements from those agencies.

    a) If applicable, this shall include documentation of an approved National Pollutant Discharge Elimination System (NPDES) permit from the Iowa Department of Natural Resources, along with the associated Erosion and Sediment Control Plan, which outlines the specific control practices to be utilized during construction of the C-WES, C-SES and/or C-BESS.

    b) This shall include any applicable permits from Des Moines County or the Federal Aviation Administration (FAA), if any portion of the C-WES will be located within or below the Part 77 Surfaces for the Southeast Iowa Regional Airport.

    c) This shall include any other applicable permits from Des Moines County, including Floodplain Development Permits, and any permits from the Secondary Roads Department, for working within the County right-of-way.

8. An Operations and Maintenance Plan, which shall contain the following:

    a) A description of how the C-WES, C-SES and/or C-BESS will be regularly operated and maintained, including references to any subcontractors or associated firms that will be directly involved.

    b) The expected frequency and duration of on-site visits and inspections by operations and maintenance personnel.

    c) The procedures for keeping the individual components of a C-WES, C-SES and/or C-BESS locked and secured outside of regular operations and maintenance visits.

    d) The procedures for waste disposal, including the manner and frequency with which crates, packing materials, damaged or worn parts, and used oils and lubricants will be removed from the C-WES, C-SES and/or C-BESS.

    e) A copy of all safety manuals for operations and maintenance personnel, from both the Owner and/or Operator and the manufacturer of the System components, which shall include any and all details regarding the procedures to be followed in the event of a fire, explosion, or severe weather event on the premises of the C-WES, C-SES, and/or C-BESS.

9. A copy of the final Road Use Agreement with Des Moines County Secondary Roads, as outlined in Article X, along with financial security that guarantees

payment for all costs associated with the repair of roads and other infrastructure following the construction of the C-WES, C-SES and/or C-BESS.

10. A Wildlife Monitoring and Mitigation Plan, as outlined in Article XI of this Ordinance.

11. An Emergency Response Plan, as outlined in Article XII of this Ordinance, which shall be reviewed and adopted by Des Moines County Emergency Management and the applicable Fire Department(s) serving the project area before its submittal to the Board of Supervisors.

12. A Decommissioning Plan, as outlined in Article XIII of this Ordinance, along with financial security that guarantees payment for all costs associated with the decommissioning of the C-WES, C-SES and/or C-BESS.

13. Information regarding the extent of the Liability Insurance policy that will apply to the C-WES, C-SES and/or C-BESS, in accordance with Article XII, Section E of this Ordinance.

    a) This shall be accompanied by confirmation that the insurance provider has been supplied with a copy of the required Emergency Response Plan, along with the Decommissioning Plan and associated cost estimate (as outlined in Articles XII and XIII).

D. **Additional Documentation for Wind Energy Systems.** In addition to all of the documents referenced in Section C of this division, the Siting Permit application for a Commercial Wind Energy System shall be accompanied by the following:

1. A line of sight analysis and summary report from a licensed engineer, utilizing the most current modeling software available, which shows the anticipated visual impact on all residential properties within one (1) mile of each individual turbine within the C-WES.

    a) The report shall specify the amount of shadow flicker to be experienced at all occupied dwellings within the specified area, expressed in terms of both total hours per year and total minutes per year.

    b) If the report concludes that any occupied dwelling on a non-participating property is likely to experience shadow flicker in excess of thirty (30) hours per year, the Developer shall present a mitigation strategy to reduce the impact to no greater than the aforementioned levels. Details of said mitigation strategy shall be provided to the applicable property owner(s) before the Public Hearing being held on the proposed C-WES.

    c) Mitigation strategies may include turning off the turbines at times of day when shadow flicker is most likely, based on the results of the analysis. Such recurring practices shall be incorporated into the required Operations and Maintenance Plan for the C-WES (see Section C(8) of this Article).

2. A description of the procedures to be used for monitoring ice accumulation on wind turbine blades, and the mitigation measures to be used for preventing ice throw.

3. Documentation confirming that the developer has consulted with the National

Telecommunications and Information Administration (NTIA), and thereby obtained confirmation that the proposed C-WES is not likely to cause Electromagnetic Interference with radio, telephone, Internet, broadband, Doppler radar or television signals.

E. Additional Documentation for Solar Energy Systems. In addition to all of the documents referenced in Section C of this division, the Siting Permit application for a Commercial Solar Energy System shall be accompanied by all of the following:

1. A Stormwater Management Plan, prepared by a licensed engineer, which details the measures to be taken during and after construction of the C-SES, to minimize any increase in the volume of stormwater runoff that is a direct result of its construction and ongoing operations.

2. A Soil Maintenance Plan, which describes the vegetation planting and other soil maintenance practices to be used on the premises of a C-SES during and after construction, to demonstrate compliance with the requirements of Article IV, Section E of this Ordinance.

   a) This plan shall include references to any and all outreach conducted with qualified natural resource professionals such as the Iowa DNR and NRCS, either for this particular C-SES or a previous, similar project in Des Moines County or another community with similar climate and soil conditions.

   b) This plan shall include references to the methods used to control weeds, pests, and other potential hazards to adjoining agricultural properties.

   c) This plan shall include a description of any chemicals or solvents that will be used for the routine cleaning of solar panels, and details on the method and location of storage if any of these will be stored on site.

   d) Photographs and illustrations of the proposed practices shall be provided, with examples from previous projects in similar communities whenever possible.

3. A report outlining the results of the baseline soil sample addressed in Article IV, Section D(5) of this Ordinance.

F. Fee Structure. All applications for Final Review of a Siting Permit shall be accompanied by the payment of an administrative fee.

1. The fee structure for Final Review of a Siting Permit shall be set through resolution by the Board of Supervisors.

2. The fee rate shall be structured so that the amount is directly proportional to the amount of time spent by County staff and officials administering and overseeing the application review process.

3. The fee rate shall be structured so that it varies depending on the overall physical size and/or energy capacity of the specific C-WES, C-SES and/or C-BESS, as proposed.

4. Once established, the Board of Supervisors may modify said fee structure by resolution, as necessary.

G. Application Submitted – Notice to Property Owners.

1. Upon the submission of a complete Siting Permit application, the Administrator shall provide mailed notification to the owners and occupants of all properties within one (1) mile of each wind turbine, solar array and/or battery equipment installation. Said notice shall contain the following:

   a) A statement that a Siting Permit application for a C-WES, C-SES and/or C-BESS is being reviewed for land within one (1) mile of their property.

   b) Basic information about the proposed project, including the type of System, its general location, and the overall size of the System.

   c) A statement that a Public Hearing for final review of the proposed C-WES, C-SES and/or C-BESS will be conducted within ninety (90) days, and the owner will be notified in advance, once that Hearing has been scheduled.

H. Application Review.

1. The Administrator shall review the submitted application materials, and confirm whether the proposed development complies with all applicable requirements of this Ordinance, and any conditions that were agreed to by the Developer before the Board of Supervisors granted Consent to Proceed.

   a) The Board may choose to utilize the services of a third-party consultant to assist in reviewing any of the technical documents and studies submitted along with an application for a Siting Permit, such as the Operations and Maintenance Plan and Decommissioning Plan. The Developer shall be responsible for all fees associated with such consultant activities.

2. If any aspect of the proposed development is determined not to comply with the aforementioned requirements and conditions, the Administrator shall notify the Developer of any such issues, and provide an explanation of what changes are necessary.

3. The Developer shall coordinate with the Administrator to address any identified issues and make any necessary changes to the project plans or documentation.

4. Upon the submission of a complete Siting Permit application, the Administrator shall furnish copies of the submitted application to the representatives of the following County Departments for their review before the Public Hearing: Assessor, Auditor, Conservation, Emergency Management, E911/GIS, Health and Secondary Roads. These Departments shall be instructed to submit any comments in response within thirty (30) days.

5. Once the Administrator has confirmed that the proposed development complies with all applicable requirements and conditions, they shall submit a final report to the Board of Supervisors prior to the Public Hearing (as outlined in Section I of this Article). This report shall provide a summary of the proposed development, and confirmation that it complies with all applicable requirements and conditions.

   a) This report shall also include a summary of any comments submitted by the aforementioned County Departments and nearby property owners.

I. **Public Hearing and Vote.** Within ninety (90) days of the submission of a complete Siting Permit application with all required documentation, the Board of Supervisors shall hold a Public Hearing regarding the proposed C-WES, C-SES and/or C-BESS. The Board may grant an extension for an additional ninety (90) days, if necessary to allow the developer to make any changes to ensure compliance.

1. The Administrator shall provide mailed notification to the owners and occupants of all properties within one (1) mile of each wind turbine, solar array and/or battery equipment installation, and shall be published in a newspaper of general circulation within the community no fewer than four (4) or greater than twenty (20) days prior to the hearing.

2. Following the conclusion of the Public Hearing, the Board of Supervisors shall vote on whether to approve or deny the Siting Permit.

    a) The Board may request additional information be submitted by the Developer before voting on the Siting Permit, if it is deemed necessary to confirm compliance with all applicable requirements of this Ordinance, or any conditions agreed to before granting Consent to Proceed.

    b) The Board may attach additional conditions to the approval of a Siting Permit, which shall be limited to anything deemed necessary to protect the public health, safety and community welfare. Such conditions shall be agreed to in writing by the developer, before Board approves the Siting Permit.

3. The approval of a Siting Permit shall authorize the Developer to begin construction of the C-WES, C-SES, and/or C-BESS, and all such construction shall be completed prior to the expiration of the Permit.

    a) Granting Consent to Proceed shall not guarantee the final approval of a Siting Permit, and

4. If the Board of Supervisors votes to deny the Siting Permit, they shall clearly state the reason(s) for doing so, and provide the Developer with a copy of a written statement attesting to the same.

    a) The Siting Permit may be denied by the Board of Supervisors if the final design does not conform with the minimum requirements of this Ordinance, or any additional conditions previously imposed by the Board.

    b) Final approval may also be denied by the Board if material or substantial changes are made to the design and/or scope of the project following the granting of Consent to Proceed.

5. The Administrator shall provide mailed notification of the Board's decision to the owners and occupants of all properties within one (1) mile of each wind turbine, solar array and/or battery equipment installation, as well as any other members of the general public that attended as a result of the newspaper publication for the hearing, excluding any such individuals that were present at the meeting in which the decision was made.

J. **Validity of Approved Permits.** An approved Siting Permit shall be valid for two (2) years

following approval by the Board of Supervisors.

1. If requested by the Developer, an extension may be granted by the Board of Supervisors, provided that sufficient evidence is presented to demonstrate the ongoing viability of the project.

    a) In any such instance, the Developer shall submit a written request for extension to the Administrator, which explains the reason(s) for the extension, and specifies the anticipated timeline for the completion of construction.

    b) In order for the extension request to be approved, the Developer shall submit the request no less than sixty (60) days prior to the two (2)-year anniversary of the Siting Permit approval.

    c) If it is determined that the information supplied by the Developer is insufficient to justify an extension, the Board shall not deny said request until the Developer has been provided with an explanation and an opportunity to submit additional information before the close of the two (2)-year permit period.

2. A Siting Permit may be revoked by the Board of Supervisors, if it is determined that a C-WES, C-SES, and/or C-BESS has been constructed in a manner that does not conform with the approved Permit.

ARTICLE VIII: METEOROLOGICAL EVALUATION TOWERS

A. **Permitting Requirements.** When proposed for temporary use in relation to a proposed Commercial Wind Energy System, meteorological evaluation towers shall require an approved MET Tower Permit before being placed or installed at a given location for assessing wind conditions. In total, the Developer shall provide all of the following to the Administrator:

1. An application for a MET Tower Permit, using forms supplied by the County, which shall include the following information:
    a) The location of the proposed meteorological evaluation tower(s).
    b) The number of individual properties contained within or directly impacted by the tower(s).
    c) The size and height dimensions of the tower(s).
    d) The length of the anticipated timeframe during which the tower(s) will be in place.
    e) Contact information for all representatives of the Developer that will be involved in the permitting and review process.
2. A Site Plan, comprised of a map and any associated diagrams or illustrations, which contains all of the following information:
    a) The location of all proposed tower(s) structures and associated anchors for guy-wires.
    b) A line marking a radius of one thousand (1,000) feet surrounding the base of each tower.
    c) The location of any existing buildings or structures within one thousand (1,000) feet of each proposed tower(s), measured from the base, and measurements to indicate the distance between it and each of these buildings and structures. The distance from structures on non-participating properties may be approximated using aerial photography.
    d) The locations of all driveway entrance points for obtaining access to individual tower(s), as well as any other private entrances to the public roadway system within one thousand (1,000) feet of them.
3. Formal documentation of agreements signed between the Developer and all properties upon which the proposed tower(s) will be located.
4. Documentation of an approved entrance permit from the Des Moines County Secondary Roads Department, for any new or modified entrances from a County roadway necessary to access a tower.
5. Documentation of any and all applicable permits issued by other permitting agencies at the Federal, State or Local level, including any necessary permits from the Federal Aviation Administration, if located near an airport or other regulated landing facility.

6. Payment of an administrative fee for review of the MET Tower Permit, which shall be set through resolution by the Board of Supervisors, with the fee rate based on the total number of towers proposed.

B. Review and Approval. Upon receipt of a complete application and all required attachments, the Administrator shall review the materials to ensure conformance with the requirements in Section C of this Article, and following the completion of this review, shall act to either approve or deny the MET Tower Permit request.

1. The Administrator may attach additional conditions to the approval of a MET Tower Permit, which shall be limited to anything deemed necessary to protect the public health, safety and community welfare.

2. The approval of a MET Tower Permit shall not be construed as the approval of any C-WES eventually proposed for construction on the same site or nearby properties. Before submitting a MET Tower Permit application, Developers are strongly advised to assess the relative viability of a system at that location, in conformance with the requirements listed in Article III of this Ordinance.

C. Minimum Siting Standards.

1. For any meteorological evaluation tower, the minimum setback between it and any structure or utility line shall be equal to the height of the tower plus ten (10) percent of that height, with this distance measured from the point at which the applicable structure or utility line would be the closest to the base of the tower, on a horizontal plane extending between the two.

2. If any portion of a meteorological evaluation tower is located within the jurisdiction of the *Des Moines County Airport Approach Zone Regulations (Ordinance No. 58)*, then it shall comply with the applicable height restrictions of that ordinance.

3. For each tower, visible and reflective objects such as plastic sleeves, reflectors or tape shall be placed on the anchor points for guy-wires, and along the outer and innermost guy-wire up to a height of eight (8) feet above the ground. Visible fencing shall be installed around the anchor points of guy-wires.

D. Removal.

1. All meteorological evaluation towers shall be removed within one (1) year of the commencement of operations for an associated C-WES.

2. Any towers determined by the Administrator to be abandoned shall be removed at the expense of the Developer, and failure to comply shall constitute a violation of this Ordinance, subject to the penalties outlined in Article I, Section G.

3. The preceding regulations in Section D of this Article shall apply to any meteorological conversion tower that was permitted and installed under the authority of any previously adopted County ordinance.

ARTICLE IX: COMMUNICATIONS AND ENFORCEMENT

A. **Purpose**. Once a Siting Permit has been approved for a Commercial Wind or Solar Energy System, and/or a Commercial Battery Energy Storage System, it is essential to ensure that adequate lines of communication are established and maintained between County staff and officials, representatives of the Developer, Owner and/or Operator, and members of the general public. It is also necessary to identify the role of the County in enforcing the provisions of this ordinance throughout the duration of the project.

B. **Public Points of Contact**.

1. The Developer, Owner and/or Operator shall provide the County with contact information for any member of the general public to ask questions or report issues and conflicts concerning the C-WES, C-SES, and/or C-BESS, from the start of construction through the end of decommissioning.

    a) If multiple points of contact will be used for different purposes, or for separate phases of the project (i.e. construction, operational lifespan and decommissioning), then the purpose of each contact shall be identified, and shall be furnished to the County before the commencement of the applicable phase.

    b) The designated points of contact shall be readily available to respond to public comments, complaints and inquiries, whether by telephone, regular mail, or electronic mail.

2. The Administrator shall serve as the County's official point of contact regarding the operations of a C-WES, C-SES, and C-BESS, if the Developer, Owner and/or Operator is found to be nonresponsive, or any member of the general public reports a complaint to the County.

    a) The Administrator shall keep a detailed record of any such submitted comments, and shall evaluate each to determine whether a violation of this Ordinance has occurred (in accordance with Article I, Section G).

    b) If it is determined that a violation has occurred, the Administrator shall promptly notify the Owner and/or Operator of the specific details of the violation, and provide them with an opportunity to respond and present a specific plan and timeline for resolving the violation.

    c) If the Developer, Owner and/or Operator fails to respond or present plans for resolving the observed violation, then the County may impose penalties for the violation, in accordance with Article I, Section G of this Ordinance.

C. **Changes During Operational Lifespan**.

1. The County shall be notified within ninety (90) days if any of the following occurs at any point during the operational lifespan of the C-WES, C-SES and/or C-BESS:

    a) The ownership of the C-WES, C-SES and/or C-BESS is transferred or otherwise altered in any way, including the primary contact information.

    b) The Operator of the C-WES, C-SES and/or C-BESS has changed in any way,

including the primary contact information.

c) The operations and maintenance procedures for the C-WES, C-SES and/or C-BESS have been altered in any substantial way.

2. The County shall be notified within forty-eight (48) hours if the emergency contact information for a C-WES, C-SES, and/or C-BESS has been modified in any way.

D. Inspections and Required Access.

1. The Administrator shall be allowed access to a permitted C-WES, C-SES and/or C-BESS at any time, to conduct an inspection and confirm compliance with all applicable provisions of this Ordinance. This shall apply during the construction phase, as well as at any point during the operational lifespan of the System, or during decommissioning.

a) The Administrator may utilize the assistance of a third-party consultant during such inspections, and any such consultant shall also be allowed access to the System.

2. Des Moines County Emergency Management and local Fire Departments shall also be allowed access to a permitted C-WES, C-SES or C-BESS at any time, to conduct training exercises and/or respond to an emergency in-progress.

ARTICLE X: ROAD USE AND MITIGATION OF DAMAGES

A. **Purpose.** The transport of oversize/overweight loads associated with a Wind, Solar or Battery Energy System is likely to cause substantial traffic disruptions along public roadways in the project area. This is also likely to generate excessive dust and cause serious damage to or deterioration of County roadways and other associated infrastructure. Therefore, it is necessary to ensure that residents and officials are fully prepared for the anticipated traffic disruptions and that adequate mitigation efforts are undertaken for the damages incurred, without the placement of any financial burden on the County and its taxpayers.

B. Road Use Agreement. The Developer of a Commercial Wind or Solar Energy System, and/or a Commercial Battery Energy Storage System, shall enter into a Road Use Agreement with the Des Moines County Secondary Roads Department, before any roadways are used for the transport of oversized equipment for a C-WES, C-SES, and/or C-BESS.

1. For the initial construction of a C-WES, C-SES and/or C-BESS, the Developer shall enter into a Road Use Agreement and submit documentation of such agreement to the Administrator, before approval of a Siting Permit by the Board of Supervisors.

2. For the planned decommissioning of a C-WES, C-SES and/or C-BESS at the end of its operational lifespan, or the repowering of any such system in its entirety, the Owner and/or Operator shall contact the County Engineer no less than three-hundred sixty-five (365) days prior to the planned decommissioning or repowering, to begin development of the agreement.

3. For any targeted decommissioning activities resulting from damage sustained in an emergency event, the Owner and/or Operator shall contract the County Engineer no less than seven (7) days after the damaging event, to coordinate the transportation of any oversized equipment necessary to disassemble and transport damaged components.

    a) If the Owner and/or Operator intends to repower the damaged portion after the original components have been removed, they shall contact the County Engineer no less than thirty (30) days prior to the planned transportation of replacement components.

4. Under no circumstances shall any oversize/overweight loads associated with the construction, repowering or decommissioning of a C-WES, C-SES and/or C-BESS be transported on Des Moines County roadways before the adoption of a Road Use Agreement that covers such transportation activities.

C. Road Use Agreement – Submission Requirements.

1. The Road Use Agreement shall clearly outline the roles and responsibilities regarding the use of County roadways during the construction or decommissioning of the C-WES, C-SES and/or C-BESS, as well as the repair of any such roadways that are damaged as a result of the construction activity.

2. In developing the Agreement, the Developer, Owner and/or Operator shall supply the County Engineer with the following information:

    a) The anticipated start and end dates of construction or decommissioning activity for the C-WES, C-SES and/or C-BESS

    b) A map of all proposed routes to be used for the transport of C-WES, C-SES, and/or C-BESS equipment, materials and personnel during the construction process.

    c) A description of any necessary traffic control activities and/or formal detours for local motorists during the construction period.

    d) A summary and description of the types and quantities of construction materials to be transported during the construction of the C-WES, C-SES and/or C-BESS.

    e) A summary and description of the anticipated overweight/oversize loads to be transported to the construction site, based on the quantity, weight, and size dimensions of the loads.

    f) A description of the planned communication process between the County Engineer and the Developer, Owner, and/or Operator during the development of the Agreement, and throughout the construction, repowering or decommissioning. This shall include details regarding the timing, location and format of meetings, and coordination of reviewing and refining the draft document before its adoption.

3. The Developer shall be responsible for any administrative fees associated with developing a Road Use Agreement with Des Moines County Secondary Roads.

D. Cost Estimate. Following the submittal of all information required by Section C of this Article, the County shall obtain an estimate for the total cost for the repair of roadways and other infrastructure that are likely to be damaged during the construction of the C-WES, C-SES, and/or C-BESS.

1. The cost estimate shall be prepared by a professional engineer licensed in the State of Iowa, at the Developer's expense.

2. A baseline survey shall be conducted, to assess and evaluate existing roadway conditions before construction of the C-WES, C-SES and/or C-BESS.

    a) The survey shall factor in the presence and condition of any other infrastructure that may be damaged as a result of the construction of the C-WES, C-SES and/or C-BESS, including above or below-ground utility lines, drainage tile networks, private driveway entrances, and the components of a levee and drainage system.

    b) The survey shall include video with metadata to aid in geolocation and compatibility with the Des Moines County GIS system.

3. The cost estimate shall encompass the total cost of any and all dust mitigation measures and repairs necessary to return the roadway and all other impacted infrastructure to the condition observed in the baseline survey.

4. The cost estimate shall also include the cost of providing general liability insurance coverage to non-participating property owners, in the event that the Developer's liability insurance coverage lapses for any reason.

E. Financial Security. Any and all costs associated with the repair of roadways and other infrastructure damaged as a result of the construction of the C-WES, C-SES and/or C-BESS shall be paid for entirely by the Developer, without assistance from the County.

1. Before the approval of a Siting Permit for a C-WES, C-SES and/or C-BESS, the Developer shall provide the Board of Supervisors with a surety bond for financial security, to be prepared and furnished at the Developer's own expense.

2. The bond shall cover no less than one-hundred fifty (150) percent of the cost estimate outlined in Section D of this Article.

3. The bond shall only be released when the County Engineer determines, following inspection, that the roadways and associated infrastructure have been repaired to their pre-construction condition.

F. Construction – Notification of Local Officials.

1. At least thirty (30) days prior to the commencement of construction for a C-WES, C-SES and/or C-BESS, a set of detailed plans for roadway usage, traffic control, and the timing and duration of operations shall be provided to the Administrator and County Engineer, along with each of the following:

   a) The Des Moines County Emergency Management Agency

   b) The Fire Department(s) that cover any portion of the C-WES, C-SES and/or C-BESS project area, and any other Fire Departments with Mutual Aid agreements to provide services within that area

   c) The EMS/ambulance service(s) that cover any portion of the C-WES, C-SES and/or C-BESS project area, and any other EMS/ambulance services with Mutual Aid agreements to provide service within that area

   d) The Des Moines County Sheriff's Department, and all Fire Departments and EMS/ambulance services that serve the project area (including through Mutual Aid agreements)

   e) Representatives of any School District(s) that provide bus transportation within the project area.

2. The Administrator and the other aforementioned entities shall be notified if any substantial delays in the completion of construction will be necessary, and the details shall be provided regarding the revised timeframe and duration of the project.

G. Construction – Notification of Property Owners. At least thirty (30) days prior to the commencement of construction for a C-WES, C-SES and/or C-BESS, the Developer shall, at their own expense, provide mailed notification to the owners and occupants of all property within one and one-quarter (1.25) miles of any public roadway segment to be utilized for the transport of wind turbine towers and blades.

1. This notification shall identify the roadway segments to be utilized, any necessary detours or other traffic control plans, and the anticipated timing and duration of the activities, with specific dates identified whenever possible.

2. In order for the County to confirm compliance with this requirement, a copy of the notification letter shall be provided to the Administrator and County Engineer, along with a list and/or map of the property owners that were contacted.

H. Construction Monitoring and Emergency Repairs. The Administrator and County Engineer shall monitor the construction process and notify the Developer if any major damage to County roadways or utility infrastructure has occurred as a result of these activities, rendering those roads or utilities unusable without immediate repair.

1. If deemed necessary to ensure the safe and efficient movement of traffic on the County Roadway system, the Administrator may require the Developer to cease all transportation associated with the project until the area of major damage has been rectified.

a) The use of detours as a result of such unforeseen damage shall not be implemented until the Administrator and Engineer have been notified of any additional roadways to be used in transporting the equipment.

b) The costs for completing such emergency repairs shall be borne entirely by the Developer, the same as any other repair activities after construction is complete, as outlined in Section E of this Article.

I. Certificate of Completion.

1. Following the conclusion of all construction, repowering, or decommissioning activities, the County Engineer shall inspect the condition of all roadways covered by the Road Use Agreement.

2. Once all such roadways are determined to be in acceptable condition under the terms of the Agreement, the Engineer shall issue a Certificate of Completion to the Developer, Owner, and/or Operator, attesting to the same.

ARTICLE XI: WILDLIFE MONITORING AND MITIGATION

A. **Purpose.** Wind, Solar and Battery Energy Systems are likely to create safety hazards to certain kinds of wildlife, especially birds and bats. While these hazards are not entirely avoidable, they can be successfully reduced and mitigated through careful planning during the design phase, as well as monitoring and modifications during the operational lifespan of the System.

B. **Wildlife Monitoring and Mitigation Plan – Submission Requirements.** Before the approval of a Siting Permit for a Commercial Wind or Solar Energy System, and/or a Commercial Battery Energy Storage System, the Developer shall submit a Wildlife Monitoring and Mitigation Plan, which demonstrates that the project will not negatively impact the long-term sustainability of wildlife populations in Des Moines County, including migratory birds, birds of prey, bats, and other endangered species. The Plan shall include all of the following:

1. Field studies that document existing wildlife conditions within the proposed C-WES, C-SES and/or C-BESS, and a buffer of three (3) miles around any portion of the project perimeter that is within three (3) miles of the boundary of a public conservation area. These studies shall be used as a baseline for comparison with post-construction conditions.

    a) Such studies shall be conducted by a licensed third party professional chosen by the Board of Supervisors, at the Developer's expense.

    b) Such field studies shall be conducted in compliance with the recommendations of the Land-Based Wind Energy Guidelines (WEG) from the U.S. Fish and Wildlife Service.

    c) Such studies shall include, but not be limited to, the following: acoustic bat monitoring, migratory bird observations and radar monitoring, raptor and eagle nesting surveys, and assessments of wetlands, riparian corridors and hibernacula.

2. Documentation of consultation and/or correspondence with the Des Moines County Conservation Board, Iowa Department of Natural Resources, and U.S. Fish and Wildlife Service, regarding the presence of any migratory birds, birds of prey, bats or other endangered species that could be negatively impacted by the project. This may include the Mississippi Flyway, active and non-active bald eagle nests, riparian corridors, and maternity, foraging and roosting habitats for any endangered bat species.

3. Confirmation that the operations of the C-WES, C-SES and/or C-BESS will not negatively impact the long-term sustainability of any wildlife species that is protected under Chapter 481B of the *Iowa Code*, the Federal Endangered Species Act, the Migratory Bird Treaty Act, or the Bald and Golden Eagle Protection Act.

4. A list of stipulations associated with any required State or Federal permit regarding wildlife impacts, along with an explanation of how the proposed C-WES, C-SES and/or C-BESS will comply with those requirements.

5. A predicted mortality rate for avian and bat species in the project area, to be used as a baseline in post-construction monitoring (as outlined in Section D of this Article).

   a) This rate shall be minimal enough not to negatively impact the long-term sustainability of the applicable species populations in Des Moines County. If data suggests that the rate may have such an impact, then measures shall be made to reduce the impact, in accordance with Section B(6) of this Article.

6. A description of any active measures to be implemented during the design and construction of the C-WES, C-SES and/or C-BESS, to address such topics as:

   a) Prevention of collisions and/or electrocution for avian and bat species, through both the physical location and design characteristics of the C-WES, C-SES and/or C-BESS infrastructure.

   b) Avoidance of developing within or in close proximity to any sensitive environmental sites that have been identified by local, state or federal conservation agencies on private land within the proposed project area, including a documented habitat for endangered species or migratory birds.

   c) An increase in distance beyond the minimum required setback between the components of a C-WES, C-SES and/or C-BESS and a public conservation area, to be consistent with the recommendations of the Iowa Department of Natural Resources and/or U.S. Fish and Wildlife Service, regarding a particular species or type of habitat area.

   d) Restoration efforts to establish a replacement wildlife habitat at an off-site location, in any instance where sensitive habitat losses are deemed to be unavoidable within the project area.

   e) Site design elements to minimize the fragmentation of wildlife habitat through the construction of the C-WES, C-SES and/or C-BESS.

   f) Efforts to minimize wildlife disruptions during the construction of the C-WES, C-SES and/or C-BESS.

7. A description of the operation and maintenance procedures to be conducted following the construction of the C-WES, C-SES and/or C-BESS, including the activities outlined in Section D of this Article.

C. Review and Approval of Plan.

1. The Des Moines County Conservation Board shall review the Wildlife Monitoring and Mitigation Plan, and submit any relevant comments to the Board of Supervisors.

2. The Board of Supervisors shall act to approve and adopt the Wildlife Monitoring and Mitigation Plan, in conjunction with the approval of a Siting Permit for the C-WES, C-SES and/or C-BESS.

D. Post-Construction Monitoring and Mitigation. Avian and bat populations in the project area shall be monitored by a licensed third-party professional for a minimum of three (3)

years following the completion of construction.

1. This requirement shall apply anytime an existing C-WES, C-SES and/or C-BESS is expanded to include additional turbines, or substantially modify existing components (such as increasing the height of a turbine).

2. The Owner and/or Operator shall submit an Annual Monitoring Report to the Board of Supervisors and Des Moines County Conservation Board for each of the three (3) years within the post-construction monitoring period. Each report shall include the following:

    a) The methods utilized for data collection

    b) Listings of raw data and any observed trends

    c) Analysis of avian and bat mortality rates

3. If the observed mortality rate exceeds the predicted rate in the Wildlife Monitoring and Mitigation Plan, the Owner and/or Operator shall identify and implement specific strategies for mitigating the problem, including but not limited to:

    a) Design modifications to the components of the C-WES, C-SES and/or C-BESS, such as painting one or more of the blades black or another dark color.

    b) Implementation of deterrent technologies or operational adjustments to prevent wildlife mortality.

    c) Modifications to the placement, intensity or duration of lighting used within the C-WES, C-SES and/or C-BESS.

    d) Regular monitoring to remove litter, carrion, weeds and other unwanted items that serve to attract birds or bats to feed on the premises of the C-WES, C-SES and/or C-BESS.

    e) Temporary shutdowns of C-WES, C-SES and/or C-BESS equipment, during specific times of day and/or specific seasons. For a C-WES, this may include rotating wind turbine blades to an angle where they produce minimal rotational force (known as ‘feathering’).

    f) Off-site habitat creation/restoration efforts to attract wildlife away from the C-WES, C-SES and/or C-BESS.

4. If it is necessary to implement specific mitigation strategies during the post-construction monitoring period, the Owner and/or Developer shall consult with the County Conservation Board, Iowa Department of Natural Resources and U.S. Fish and Wildlife Service, and present their specific mitigation plans to the Board of Supervisors and County Conservation Board before implementation.

5. The results of any necessary mitigation strategies shall be identified in each subsequent Annual Monitoring Report, until evidence shows that the mortality rate has been reduced to levels consistent with those established in the Wildlife Monitoring and Mitigation Plan.

    a) The three (3)-year requirement for the submittal of an Annual Monitoring Report shall be extended in any instance where additional documentation

is necessary to ensure the success of mitigation strategies.

6. Once the initial monitoring period has concluded, and any identified issues have been sufficiently mitigated, avian and bat populations shall periodically be monitored by a licensed third party professional, with each monitoring period comprising a length of no less than one (1) year, and no more than five (5) consecutive years transpiring between each subsequent monitoring period.

    a) The Owner and/or Operator shall then submit a Wildlife Monitoring Report to the Board of Supervisors and Des Moines County Conservation Board following the completion of each monitoring period.

    b) If the observed mortality rate exceeds the predicted rate in the Wildlife Monitoring and Mitigation Plan, for any of the subsequent reports, the Owner and/or Operator shall follow the same procedures listed in Sections D(3) through D(5) of this Article, until the issue is successfully mitigated.

7. All post-construction monitoring reports shall be made available for viewing by the general public.

ARTICLE XII: EMERGENCY RESPONSE

A. **Purpose.** While Wind, Solar and Battery Storage Systems are subject to the same hazards as any other manmade infrastructure, the risks to life and property are especially significant, due to their large size and typically remote location. Therefore, it is necessary to ensure that plans have been prepared in advance, to facilitate a prompt, efficient response to any such emergency.

B. **Emergency Response Plan – Submission Requirements.** Before the approval of a Siting Permit for a Commercial Wind or Solar Energy System, and/or a Commercial Battery Energy Storage System, the Developer shall submit an Emergency Response Plan, which contains response procedures to be followed in the event of any emergency related to a C-WES, C-SES, and/or C-BESS.

1. The Emergency Response Plan shall address emergency incidents, including but not limited to:

    a) Natural disaster/severe weather, including lightning, hail, earthquakes, wildfires, and tornadoes and similar high wind events

    b) Fire/explosion

    c) Security breach

    d) Capacity/transmission issues

    e) Environmental/chemical issues, including HAZMAT

    f) Medical emergencies, involving construction or maintenance personnel

    g) Ice throw and the accumulation of ice on a wind turbine blade.

2. The Plan shall include emergency contact information for the Operator, to be readily accessible at any point within a twenty-four (24) hour period.

3. The Plan shall provide adequate information to ensure that emergency response professionals can readily locate and safely obtain access to the C-WES, C-SES and/or C-BESS in the event of an emergency.

4. The Plan shall demonstrate the ability of the Operator's emergency contact to readily coordinate the deployment of their own personnel to the site within one (1) hour after an emergency is reported, as necessary.

5. The Plan shall address the roles and responsibilities of local emergency response professionals, in relation to the Operator's own personnel, during an emergency event. It shall also demonstrate that the Operator's personnel will have sufficient training to safely and effectively exercise the responsibilities delegated to them by the Plan.

6. An Emergency Response Plan for a C-WES shall demonstrate the ability to readily identify potential locations for the emergency landing of medical evacuation aircraft within the vicinity of the C-WES, as necessary.

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7. An Emergency Response Plan for a C-BESS shall include the following, to reduce the risk of fire, electric shock and other injuries:

   a) Procedures for the safe shutdown, de-energizing and/or isolation of equipment and systems under emergency conditions, as well as their safe start-up following the cessation of such emergency conditions.

   b) Procedures for the inspection and testing of associated alarms, interlocks and controls.

   c) Procedures to be followed in response to notifications from the C-BESS, which when provided, could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing notification to emergency response professionals for potentially dangerous conditions in the event of a system failure.

   d) Procedures for conducting drills of the aforementioned procedures during training exercises for emergency response professionals.

8. In recognition of the reality that by necessity, rural Fire Departments are often staffed by volunteers with limited resources, the Plan shall address the potential need for special assistance as follows:

   a) If required by the Fire Department(s) and/or EMS/ambulance services(s) covering the project area, the Plan shall accommodate specialized training for emergency response personnel, to be offered on an annual basis, as well as the acquisition of any specialized equipment necessary for responding to an emergency at a C-WES, C-SES and/or C-BESS. All such training and equipment shall be provided by the Owner and/or Operator at no cost to the applicable service provider.

   b) The Plan shall address whether it would be necessary for the developer to compensate Fire Department(s) or other emergency response personnel for any specialized services that are especially costly and unique to an emergency involving wind turbine(s), solar array(s), and/or battery equipment. The Plan shall also provide an explanation for how the fee for such services would be calculated.

9. The Plan shall include the provision of an annual on-site tour for local emergency response professionals, to ensure adequate awareness of all critical infrastructure within the C-WES, C-SES and/or BESS in the event of an emergency.

10. The Plan shall provide a detailed explanation of the procedures associated with the cleanup of debris, along with the repair, reactivation, replacement, and/or decommissioning of C-WES, C-SES and/or C-BESS equipment as a result of any damage sustained in an emergency event.

C. Review and Approval of Plan.

1. The Emergency Response Plan shall be submitted to the following for review and adoption:

   a) The Des Moines County Emergency Management Agency

   b) The Fire Department(s) that cover any portion of the C-WES, C-SES and/or

C-BESS project area, and any other Fire Departments with Mutual Aid agreements to provide service within that area

c) The EMS/ambulance service(s) that cover any portion of the C-WES, C-SES and/or C-BESS project area, and any other EMS/ambulance services with Mutual Aid agreements to provide service within that area

d) The Des Moines County Sheriff's Department

2. The Developer shall provide documentation of such to the Board of Supervisors, confirming that the aforementioned entities have all had the opportunity to review and adopt the Plan before the approval of a Siting Permit by the Board.

3. The Owner and/or Operator shall submit the Emergency Response Plan to the County Emergency Management Agency, Fire Department(s), EMS/ambulance service(s) and County Sheriff's Department for review and re-adoption on an annual basis, and shall be responsible for making any necessary modifications to the Plan before its re-adoption.

D. Response to Damaged Property. In any instance where an emergency event results in damage to the component(s) of a C-WES, C-SES and/or C-BESS, the Owner and/or Operator shall be responsible for all costs associated with the repair, reactivation, repowering, and/or decommissioning of those component(s), as well as the restoration of any and all non-participating properties with damage that was proximately caused by the C-WES, C-SES, and/or C-BESS.

1. If the emergency event results in conditions that present either an imminent danger to public safety, and/or the threat of environmental contamination, then the owner and/or operator shall mitigate all such danger within thirty (30) days of the damage event, through the demolition, disassembly and removal of all damaged components, along with the removal of any debris and surface-level contamination. Examples of such conditions include, but are not limited to, the following:

a) Major components of a C-WES, C-SES and/or C-BESS that are at imminent risk of collapse, or otherwise rendered structurally unsound as a result of storm or fire damage.

b) Oil and other chemicals leaking from the equipment of a C-WES, C-SES and/or C-BESS.

c) Exposed electrical wires or circuits at risk of spreading fire.

d) An area of scattered debris.

2. For any non-participating property where the soil was contaminated by chemicals leaking from a damaged C-WES, C-SES and/or C-BESS, the property Owner and/or Operator shall ensure that the soil is restored to its pre-damage condition within one-hundred eighty (180) days of the damage event.

3. The Owner and/or Operator shall fully reimburse any non-participating property owner in any instance where environmental cleanup costs or penalties were levied on that property owner by a State or Federal agency.

4. If any debris from the C-WES, C-SES and/or C-BESS happens to fall within the County road right-of-way, the Owner and/or Operator shall reimburse the County for the full cost of removing those materials and repairing any damaged infrastructure.

5. If the emergency event caused portion(s) of the C-WES, C-SES and/or C-BESS to become inoperative, while otherwise structurally sound, the Owner and/or Operator shall either repair and reactivate or repower them within three-hundred sixty-five (365) days of the damage event, or initiate decommissioning, subject to the requirements outlined in Article XIII of this Ordinance.

    a) In any applicable instance where decommissioning has not commenced within three hundred sixty-five (365) days of the emergency event, the County may initiate the process using funds from the financial security set aside in Article XIII, Section E of this Ordinance.

    b) If such funds are utilized by the County for cleanup purposes, the final cost of these activities shall be added to the amount of the decommissioning bond any remaining portions of the C-WES, C-SES and/or BESS at the time of the next renewal, as outlined in Article XIII, Section E(3) of this Ordinance.

6. The Board of Supervisors may extend any of the preceding deadlines in any instance where the removal and restoration cannot be completed within that timeframe, due to long-term weather conditions and/or State or Federal regulatory requirements.

E. Liability Insurance.

1. The Owner and/or Operator of a C-WES, C-SES and/or C-BESS shall maintain all-risk Liability Insurance coverage for the System throughout its construction, operational lifespan and decommissioning. Such coverage shall include, at a minimum, all of the following types of Liability:

    a) General Liability

    b) Property Damage

    c) Bodily Injury

    d) Environmental Liability

    e) Acts of God

2. Liability limits shall be based on the size and extent of the C-WES, C-SES, and/or C-BESS, but shall be no less than five (5) million dollars per occurrence, covered by an additional umbrella of no less than ten (10) million dollars.

ARTICLE XIII: DECOMMISSIONING AND ABANDONMENT

A. **Purpose.** Given that the infrastructure associated with Wind, Solar and Battery Storage Systems has an operational lifespan of limited duration, it is necessary to ensure that each System and all of its components are safely removed from the site once they cease to be operational, and that such removal activities do not place any financial obligation on the County and its taxpayers.

B. **Decommissioning Standards**. The decommissioning of a Commercial Wind or Solar Energy System, and/or a Commercial Battery Energy Storage System, shall comply with the following minimum standards, regardless of whether said decommissioning occurs as planned at the end of its operational lifespan, or as a result of abandonment or damage from an emergency event:

1. All structures, utility lines, and equipment associated with the C-WES, C-SES and/or C-BESS shall be removed, including the entirety of any such structures located below ground level.

    a) The requirement for complete underground removal may be waived if written permission has been obtained from any individual participating property owner(s), and the waiver shall apply only to those specific propert(ies). Such documentation shall be submitted to the Board of Supervisors before the start of decommissioning.

2. Following the removal of structures, utility lines and equipment, all remaining materials and debris shall be removed, and the site shall be inspected by a licensed third party professional chosen by the Board of Supervisors, to identify the presence of any potentially hazardous substances or contaminants. Such substances shall be removed and remediated in accordance with any and all applicable state and federal laws at the time of decommissioning.

3. All structural components removed from the site of a C-WES, C-SES, and/or C-BESS shall be recycled to the maximum extent feasible, and no portion of a wind turbine, solar array or battery be disposed of in a landfill within Des Moines County, due to limited space being available in a small rural landfill.

4. All areas of soil that had been disturbed to construct and operate the C-WES, C-SES and/or C-BESS shall be graded, reseeded, and otherwise restored to their condition before the establishment of the System(s), with the Corn Suitability Rating (CSR) value being no less than ninety-five (95) percent of the pre-construction CSR value for the same location.

    a) The CSR requirement may be waived if written permission has been obtained by any individual participating property owner(s), and the waiver shall apply only to those specific propert(ies). Such documentation shall be submitted to the Board of Supervisors before the start of decommissioning.

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5. Deconstruction activities shall not exceed three-hundred sixty-five (365) consecutive days in total duration, from commencement to conclusion.

    a) The Board of Supervisors may extend this deadline in any instance where the removal of large equipment cannot be completed within that timeframe, due to long-term weather conditions that prevent its safe transport on County roadways.

C. Decommissioning Plan – Submission Requirements. Before the approval of a Siting Permit for a C-WES, C-SES and/or C-BESS, the Developer shall submit a Decommissioning Plan to the Administrator, which complies with all requirements listed in Section B of this Article and includes each of the following:

1. A description of the planned procedure to remove all structures, utility lines, and other equipment associated with the C-WES, C-SES and/or C-BESS, along with any remaining materials or debris.

    a) This shall include a description of the process through which the site will be inspected to identify any hazardous substances or contaminants that may have been deposited on or below the ground surface, as well as the process to remove and remediate those materials.

2. A description of the planned procedure to restore all previously disturbed land to its condition before the construction of the C-WES, C-SES and/or C-BESS.

3. A description of the disposal process for the major components of each C-WES, C-SES and/or C-BESS, including wind turbines (tower, blade, and nacelle), solar arrays and battery equipment, which shall include evidence that the recycling of all such components was thoroughly evaluated and will be undertaken to the maximum extent feasible.

4. Documentation of existing conditions before the establishment of the C-WES, C-SES and/or C-BESS.

    a) This shall include aerial and ground level photographs, written descriptions, or any other such documentation that the Board of Supervisors deems necessary to document the existing condition of the properties involved.

    b) Specific measurements shall be provided for the Corn Suitability Rating (CSR) and the extent of soil compaction.

    c) Agricultural drainage systems shall be documented through field surveys and landowner input.

5. An estimate of the total cost for the decommissioning of the C-WES, C-SES and/or C-BESS, as outlined further in Section D of this Article, along with a written financial plan that adequately ensures that the Owner and/or Operator will be able to supply the necessary funds at the time of decommissioning.

    a) The financial plan shall stipulate that all costs associated with the decommissioning of the C-WES, C-SES and/or C-BESS shall be borne entirely by the Owner and/or Operator, without any assistance from the County.

b) The financial plan shall stipulate that the terms will apply to all future successors, assigns, or heirs to whom responsibility for operating the System may be transferred at a later date.

6. An estimate for the length of time for on-site deconstruction activities, which shall not exceed three hundred sixty-five (365) consecutive days in total duration.

7. A statement that Des Moines County shall have access to the C-WES, C-SES and/or C-BESS, and to the funds to effect or complete decommissioning no less than three hundred sixty-five (365) consecutive days after the structure(s) have ceased operations.

D. Cost Estimate. The following requirements shall apply to the cost estimate supplied by the Developer, as stipulated in Section C(5) of this Article.

1. At the Developer's expense, the cost estimate shall be prepared by a professional engineer licensed in the State of Iowa.

2. The cost estimate shall encompass all costs associated with the decommissioning of the C-WES, C-SES and/or C-BESS, including the deconstruction, transportation, and disposal of equipment, as well as restoration of the soil to the pre-development CSR value.

3. The cost estimate shall also include the anticipated cost of repairing roadways or other infrastructure following the removal and transport of all equipment, calculated under the same procedure outlined in in Article X, Section C.

4. The cost estimate shall also include the cost of providing general liability insurance coverage to non-participating property owners, in the event that the Developer's coverage lapses for any reason.

5. When preparing the cost estimate, under no circumstances shall the salvage value of the equipment be deducted from the total cost of decommissioning.

6. The County shall obtain an independent third-party review of the supplied cost estimate, and the Developer shall reimburse the County for the cost of conducting this review.

a) If the third-party review does not support the estimate supplied by the Developer, the Developer shall supply the County with an explanation of the discrepancy, obtained either through further consultation with their engineer, the third party reviewer, and/or other licensed professional(s).

b) Approval of the Decommissioning Plan shall be contingent on the submittal of a revised cost estimate that is supported by the third-party reviewer.

7. To account for inflation and any unanticipated future trends and influences, the cost estimate shall be reevaluated and updated three (3) years after the approval of a Siting Permit, and at every subsequent three (3) year interval, following the same process undertaken in the initial calculation.

E. Financial Security. Any and all costs associated with the decommissioning of a C-WES, C-SES and/or C-BESS shall be paid for entirely by the Owner and/or Operator, without

any assistance from the County or individual landowners in the project area.

1. Before the approval of a Siting Permit for a C-WES, C-SES, and/or C-BESS, the Developer shall provide the Board of Supervisors with a surety bond for financial security. This shall be used to complete the decommissioning of the C-WES, C-SES and/or BESS, should the Owner and/or Operator fail to do so.

2. The bond shall cover no less than one-hundred fifty (150) percent of the cost estimate outlined in Section D of this Article.

3. Following the approval of a Siting Permit for a C-WES, C-SES and/or BESS, the Owner and/or Operator shall continually renew the bond every three (3) years throughout the operational lifespan of the System. At the time of each renewal, the cost estimate shall be reevaluated under the same procedure as outlined in Section D of this Article, and the bond shall cover no less than one-hundred fifty (150) percent of the updated estimate for total cost.

4. The Owner and/or Operator shall provide the Board of Supervisors with a notice of their intent to continue operations no less than one hundred and eighty (180) days prior to the three (3) year anniversary of the previous bond filing or renewal, and shall supply the renewed bond to the Board no less than ninety (90) days prior to that anniversary.

    a) If the bond has not yet been renewed at ninety (90) days prior to the anniversary of the previous bond filing or renewal, then the Owner and/or Operator shall take the steps to begin the decommissioning of the C-WES, C-SES and/or C-BESS at that time.

5. Each time that the bond is filed or renewed, it shall be accompanied by a written agreement that stipulates that it will apply to all future successors, assigns, or heirs to which responsibility for operating the System may be transferred between the time of the filing and the next renewal.

6. The bond shall include a provision to ensure that if decommissioning is initiated, or required to be initiated, at any time during the three (3)-year duration of the bond, the bond will remain in effect until the County has confirmed that decommissioning has been completed.

7. The bond shall only be released once the Board of Supervisors can confirm that the land has been restored to its condition before the construction of the C-WES, C-SES and/or C-BESS, including the remediation of any contamination.

F. Confirmation of Decommissioning.

1. The Owner and/or Operator shall supply the County with documentation of on-site conditions following the completion of decommissioning. This shall include aerial and ground level photographs, descriptions of soil characteristics, and documentation of the Corn Suitability Rating, both before its initial development and after decommissioning.

2. The County may conduct its own inspection of the site, either directly or through the use of a third-party consultant, and the Owner and/or Operator shall be responsible for compensating the County for these activities.

G. Determination of Abandonment. Any C-WES, C-SES and/or C-BESS, or portion thereof, that has not been in operation for a period of one-hundred twenty (120) consecutive days shall be deemed to be abandoned by the Administrator, and notification of this determination shall be submitted to the Owner and/or Operator at this time.

1. Following the determination of abandonment, the Owner and/or Operator shall within ninety (90) consecutive days, either reactivate each abandoned structure or begin the process of dismantling and removing them.

    a) This required timeframe for reactivation shall only be extended if the Owner and/or Operator can provide sufficient evidence or documentation to the Board of Supervisors that the failure to reactivate is due to either a natural catastrophic event or a mechanical or technological failure that the Owner and/or Operator is actively working to remedy at the time.

2. If the Owner and/or Operator desires to reinstate and maintain operations for the abandoned structures, they shall provide the Board of Supervisors with substantial evidence of their intention and ability to do so within ninety (90) consecutive days of the abandonment determination, and resubmit such evidence every one-hundred eighty (180) days after the initial ninety (90) day period.

3. If the Owner and/or Operator proceeds to initiate decommissioning upon being notified of the abandonment determination, all on-site deconstruction activities shall be completed within three-hundred sixty-five (365) consecutive days of commencement.

4. In the absence of any intent to reinstate operations, failure to begin the dismantling and removal of any abandoned structure within ninety (90) consecutive days of the abandonment determination shall constitute a violation of this Ordinance, subject to penalties as specified in Article I, Section G.

    a) If the abandoned structures are not removed as required after the Owner and/or Operator is notified of the violation, the Board of Supervisors may initiate the removal of the C-WES, C-SES and/or C-BESS, using the funds set aside through the surety bond (as outlined in Section E of this Article).

    b) As needed, the Board may take any other legally authorized steps to recover the cost of the removal, including the sale of removed materials, or initiation of judicial proceedings against the Owner and/or Operator.