



WOODBURY COUNTY ZONING COMMISSION

SPECIAL MEETING - WORK SESSION UTILITY-SCALE SOLAR ENERGY SYSTEMS

Monday, October 16, 2023 at 5:00 PM

The Zoning Commission will hold a public work session public meeting on **Monday, October 16, 2023 at 5:00 PM** in the Board of Supervisors' meeting room in the Basement of the Woodbury County Courthouse, 620 Douglas Street, Sioux City, IA. Please use the 7th St. entrance. Public access to the conversation of the meeting will also be made available during the meeting by telephone. Persons wanting to participate in the public meeting and public hearings on the agenda may attend in person or call: **(712) 454-1133** and enter the **Conference ID: 840 350 054#** during the meeting to listen or comment. It is recommended to attend in person as there is the possibility for technical difficulties with phone and computer systems.

AGENDA

1	CALL TO ORDER
2	ROLL CALL
3	PUBLIC COMMENT ON MATTERS NOT ON THE AGENDA
5	ITEM(S) OF BUSINESS
»	WORK SESSION FOR PROPOSED UTILITY-SCALE SOLAR ENERGY SYSTEMS ZONING ORDINANCE AMENDMENT(S). SUMMARY: To consider proposals to amend the Woodbury County Zoning Ordinance to include provisions for the permitting of utility-scale solar energy systems in the unincorporated areas of Woodbury County in the General Industrial (GI), Limited Industrial (LI), and Agricultural Preservation (AP) Zoning Districts. In addition, the concept of a utility-scale energy systems overall district will be explored and considered as well as the use of the Limited Industrial (LI) Zoning District.
6	PUBLIC COMMENT ON MATTERS NOT ON THE AGENDA
7	COMMISSIONER COMMENT OR INQUIRY
8	STAFF UPDATE
9	ADJOURN

WOODBURY COUNTY ZONING COMMISSION
WORK SESSION – UTILITY-SOLAR ENERGY SYSTEMS
DISCUSSION OUTLINE - October 16, 2023

➤ **Considerations**

- **General Development Plan and/or Future Land Use Map**
 - Consider updating the General Development Plan and/or Future Land Use Map to facilitate the expansion of the General Industrial (GI) and Limited Industrial (LI) Zoning Districts and add additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public.
 - **Retention of Existing Zoning Districts and Process with Added Requirements**
 - Consider retaining the current permitting procedures in the Woodbury County Zoning Ordinance but add additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public.
 - **Establishment of a Utility-Scale Solar Energy Systems Overlay Zoning District**
 - Consider establishing a utility-scale solar energy systems overlay zoning district that requires a rezone application to be reviewed by the Zoning Commission and considered for approval by the Board of Supervisors that must meet specific criteria for the appropriateness of the agricultural area to facilitate utility-scale solar systems.
 - **Establishment of a Agrisolar Utility-Scale Solar Energy Systems Overlay Zoning District**
 - Consider establishing an agrisolar utility-scale solar energy systems overlay zoning district for the specific purpose to coincide with an existing farming operation where each parcel of land includes over 51% of its usage for farming purposes which requires a rezone application to be reviewed by the Zoning Commission and considered for approval by the Board of Supervisors.
 - **Retention of the Current Policy for Utility-Scale Solar Energy Systems (No changes)**
-

➤ **Rough Outlines**

- **Utility-Scale Solar Ordinance (Outline) – Additional requirements for CUP process.**
 - Intention
 - Conditional Use Permit
 - Definitions
 - Requirements
 - Application Materials
 - Road Use and Repair Agreement
 - Public Drainage System Protection Agreement
 - Operation and Maintenance Plan
 - Decommissioning, Abandonment, Escrow Account, and Site Restoration Plan
 - Agricultural Impact Mitigation Plan (AIMP)
 - Grading Plan
 - Vegetation Management Plan
 - Wildlife and Habitat Assessment Mitigation Plan
 - Emergency Response Plan
 - Slope Stability Analysis Report
 - Corn Suitability Rating 2 (CSR2)
 - Future Operators
 - Severability
 - Penalty
 - Etc.
- **Overlay Districts (Outline)**
 - Purpose and Intent
 - Allowed Uses
 - Area Limitations
 - Dimensional Standards
 - Grading, Erosion, and Sedimentation Control
 - Supplemental Regulations
- **Overlay District Rezone Process (Outline)**
 - Authority
 - Purpose
 - Procedure
 - Application Materials

**Considerations for the Permitting of Utility-Scale Solar Energy Systems
in Unincorporated Woodbury County, Iowa**

Preliminary Zoning Commission Work Session Preparation Staff Report

October 13, 2023

Report Summary

As of the writing of this initial report, the Woodbury County Zoning Commission has completed two (2) public hearings. The first was held at the Moville Area Community Center on September 11, 2023 at 5:00 PM. The second was held in the basement of the Woodbury County Courthouse on September 25, 2023. Both meetings included constituents who offered comments both in support and opposition to the expansion of utility-scale solar in the Agricultural Preservation (AP) Zoning District. Audio to both meetings may be accessed for review by visiting the Woodbury County Zoning Commission “Committee” page on the Woodbury County website at: www.woodburycountyiowa.gov.

It is apparent, the decision to regulate solar energy systems is intricate and consequential to the future of the Woodbury County community. The intent of this report to offer the following considerations:

Consideration 1

Consider updating the General Development Plan and/or Future Land Use Map to facilitate the potential expansion of the General Industrial (GI) and Limited Industrial (LI) Zoning Districts and consider adding additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public.

Consideration 2

Consider retaining the current permitting procedures in the Woodbury County Zoning Ordinance but add additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public. Consider retaining the General Industrial (GI) Zoning District as the only allowed location for the consideration of a conditional use.

Consideration 3

Consider establishing a utility-scale solar energy systems overlay zoning district that requires a rezone application to be reviewed by the Zoning Commission and considered for approval by the Board of Supervisors that must meet specific criteria for the appropriateness of whether a particular area in the Agricultural Preservation (AP) Zoning District is suitable for utility-scale solar energy systems. Consider adding additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public.

Consideration 4

Consider establishing an agrisolar utility-scale solar energy systems overlay zoning district for the specific purpose to coincide with an existing farming operation where each parcel of land shall include over 51% of its usage for farming purposes.

Consideration 5

Consider retaining the current policy for utility-scale solar energy systems (No changes).

CONTENTS

CONSIDERATION SUMMARIES	
Consideration 1: General Development Plan and/or Future Land Use Map	3
Consideration 2: Retention of Existing Zoning Districts and Process with Added Requirements	4
Consideration 3: Establishment of a Utility-Scale Solar Energy Systems Overlay Zoning District	5
Consideration 4: Establishment of a Agrisolar Utility-Scale Solar Energy Systems Overlay Zoning District	6

CONSIDERATION DETAILS	
Consideration 1: Rationale for Focus on the Comprehensive Plan for 2040	7
Consideration 2: Expanded Conditional Use Permit Rough Draft Language	8
Consideration 3: Utility-Scale Solar Energy Systems Overlay Zoning District Rough Draft Language	27
Consideration 4: Agrisolar Utility-Scale Solar Energy Systems Overlay Zoning District Rough Draft Language	30

APPENDIX	
Zoning Commission Special Public Hearing in Merville Minutes – 9/11/23	32
Zoning Commission Public Hearing Minutes – 9/25/23	35
Public Comments / Information Submitted Since September 25	
Additional Sample Ordinances	

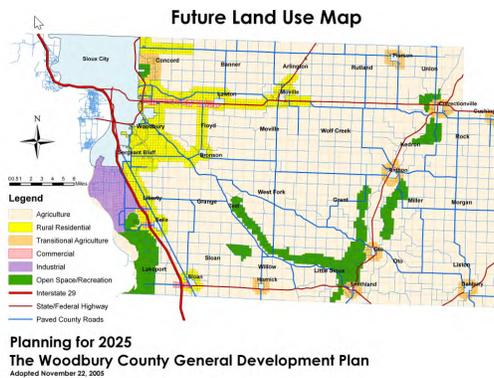
MEETING AUDIO ACCESS LINKS	
September 11, 2023: Zoning Commission Special Public Hearing in Merville	
- https://www.youtube.com/watch?v=XZQa-5kNgcQ&t=7s	
- https://tinyurl.com/Zoning91123	
September 25, 2023: Zoning Commission Public Hearing at Woodbury County Courthouse	
- https://www.youtube.com/watch?v=LJ-k9MCD8_8&t=4s	
- https://tinyurl.com/Zoning92523	

Please review the previous meeting packets with backup information including past comments and resources. They can be accessed online using the following links.

PREVIOUS MEETING PACKETS WITH BACKUP INFORMATION	
September 11, 2023: Zoning Commission Packet with Backup Materials	
- https://www.woodburycountyiowa.gov/files/committees/meetings/2023-09-11_packet_zoning_commission_34199.pdf	
- https://tinyurl.com/Packet91123	
September 25, 2023: Zoning Commission Packet with Backup Materials	
- https://www.woodburycountyiowa.gov/files/committees/meetings/2023-09-25_packet_zoning_commission_66298.pdf	
- https://tinyurl.com/Packet92523	

Consideration 1 - SUMMARY

- **Summary:** Update the General Development Plan and/or Future Land Use Map to facilitate the expansion of the General Industrial (GI) and Limited Industrial (LI) Zoning Districts and add additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public.
 - Amend the General Development Plan text:
 - Make further reference to utility-scale solar energy systems.
 - For example, amend - Economy and Economic Development Policy 2.5:
 - “Fully explore alternative renewable energy sources, particularly wind generation facilities both as a contribution to the total energy needs of the country and as a new source of income for property owners.”
 - Suggestion: either remove the reference to “wind” or add “utility-scale solar energy systems” and the “phrase not limited to”
 - Suggestion: add a reference to “utility-scale battery energy systems”
 - Example: “Fully explore alternative renewable energy sources as a contribution to the total energy needs of the country and as a new source of income for property owners.”
 - Amend the Future Land Use Map to include additional industrial areas:



- Identify areas of the county where industrial expansion would be appropriate.
- Amend the Zoning Ordinance to include “Utility-Scale Solar Energy Systems” as a Conditional Use in the Limited Industrial (LI) Zoning District in addition to the current General Industrial (GI) Zoning District.
- **Proposed Zoning Districts:** General Industrial (GI) and Limited Industrial (LI)
- **Permitting Mechanism:** Conditional Use Permit
 - **Recommendation:** Expand Conditional Use Permit Ordinance Criteria to include: expanded requirements (application materials, site plan, setbacks, etc.); interconnection agreement; operation and maintenance agreement; decommission plan; agricultural impact mitigation plan; vegetative management plan; wildlife/biological habitat assessment and mitigation plan; setback analysis; emergency response plan, road use agreement, etc.
- **Review Board:** Zoning Commission
- **Approval Board:** Board of Adjustment
- **Notification Area:** 500 Feet from Project Area

• **Brief Background:**

- Woodbury County is presently in the process of developing a new Comprehensive Plan for 2040. If Consideration 1 is considered, staff suggests using the current development plan process to address the county’s priorities as it pertains to a comprehensive renewable energy policy. The future land use map could be amended to offer more areas in the county that could be considered as acceptable for increased industrial and commercial activities. It is recommended to address the development plan in the early spring of 2024 with subsequent amendments to the Zoning Ordinance to add additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public.

Consideration 2 - SUMMARY

- **Summary:** Retain the current permitting procedures in the Woodbury County Zoning Ordinance but add additional requirements to the conditional use permitting process to make expectations clear for the applicants, area landowners, and the general public.
 - **Zoning District:** General Industrial (GI)
 - **Permitting Mechanism:** Conditional Use Permit
 - **Review Board:** Zoning Commission
 - **Approval Board:** Board of Adjustment
 - **Notification Area:** 500 Feet from Project Area
 - **Development Plan Justification:**
 - Compatible with Economy and Economic Development Policy 2.5:
 - “Fully explore alternative renewable energy sources, particularly wind generation facilities both as a contribution to the total energy needs of the country and as a new source of income for property owners.”
 - Compatible with Agricultural Policy 3.4:
 - “Protect prime farmland as determined by high corn suitability ratings (i.e. over 65 CSR) from conversion to other land uses. Discourage non-agricultural uses in prime farmland areas and other agricultural districts by providing residential lot size requirements and proper separation distances between residential and agricultural uses.”
 - Compatible with Conservation and Environmental Policy 7.3:
 - “Establish standards and practices to encourage preservation of environmentally sensitive areas such as wetlands, wooded areas, waterways (streams, ponds, lakes, rivers, etc.), and other amenities.”
 - Compatible with Conservation and Environmental Policy #7.2:
 - “Establish grading standards that create stable development sites, minimize erosion and sedimentation and water runoff. These standards may encourage conservation of less developable sites, particularly in the steeper slopes of the Loess Hills.”

Brief Background:

- The Woodbury County Zoning Ordinance facilitates the permitting for utility-scale solar energy systems as a conditional use in the GI Zoning District. Presently, the Zoning Commission reviews the application and then makes a recommendation to the Board of Adjustment. Under this policy, utility-scale energy systems are construed as an industrial activity and have been placed into the industrial area of the county to ensure that productive farm ground can remain in production. The Zoning Ordinance facilitates the opportunity to rezone to the GI Zoning District in order for a conditional use permit to be considered. However, the rezone process requires consideration of the following criteria:
 - Conformance with the goals and objectives set forth in the approved General Development Plan for Woodbury County including the Future Land Use Map;
 - Compatibility and conformance with the policies and plans of other agencies with respect to the subject property;
 - Consideration of the Corn Suitability Rating (CSR) of the property;
 - Compatibility with adjacent land uses;
 - Compatibility with other physical and economic factors affecting or affected by the proposed rezoning; and
 - Any other relevant factors
- **Spot Zoning** is defined in the Zoning Ordinance as “An arbitrary zoning or rezoning of a small parcel of land, usually surrounded by other uses or zoning categories that are of a markedly or substantially different intensity, that is not consistent with the comprehensive land use plan, and that primarily promotes the private interest of the owner rather than the general welfare. This term is not used within these regulations, but is included here because it is commonly used to describe proposed rezonings, which may or not actually be spot zoning.
- If the development plan and/or its associated future land use map does not support a rezoning change, it is not recommended to proceed with the change in zoning district. If there is a desire to consider such a rezone, the development plan should be revisited, debated, and be considered for amendment(s) to the text of the plan or future land use map.

Consideration 3 - SUMMARY

- **Summary:** Establish a utility-scale solar energy systems overlay zoning district that requires a rezone application to be reviewed by the Zoning Commission and considered for approval by the Board of Supervisors that must meet specific criteria for the appropriateness of the agricultural area to facilitate utility-scale solar systems.
 - **Proposed Zoning Districts:** Establishment of a “Utility-Scale Solar Overlay Zoning District” to be used only over the “Agricultural Preservation (AP) Zoning District.
 - **Permitting Mechanism:** Rezone and Conditional Use Permit
 - **Rezone to “Utility-Scale Solar Overlay Zoning District”**
 - Zoning Commission makes a recommendation to the Board of Supervisors as to whether the rezone to the overlay district is appropriate or not.
 - Establish a criteria to qualify an area as acceptable or not for the overlay district: CSR2?; Slope; Acre Cap; Density/Setbacks, No floodplain, agricultural use, etc.
 - Board of Supervisors approves the rezone process including approval of specific agreements with the county such as decommissioning, road use, etc.
 - **Conditional Use Permit**
 - The Woodbury County Zoning Commission reviews a conditional use permit application and makes a recommendation to the Board of Adjustment who approves or denies the permit.
 - **Notification Area:** One (1) mile.
 - **Development Plan Justification:**
 - Compatible with Economy and Economic Development Policy 2.5:
 - “Fully explore alternative renewable energy sources, particularly wind generation facilities both as a contribution to the total energy needs of the country and as a new source of income for property owners.”
- **Background:**
 - Both Linn County and Scott County use an overlay district to facilitate the permitting of utility-solar in agricultural areas. Linn’s overlay district is known as the “Renewal Energy Overlay District” while Scott’s is a “Utility Solar-Floating District.” They use the rezone process to switch the footprint of a solar project area to the overlay district. The effect is creating an area for solar but retaining primary uses of the base zoning district.
 - Specifically, Linn County’s ordinance states that “the renewable energy overlay district shall be geographically located in those areas currently zoned AG (Agricultural) or CNR (Critical Natural Resources).” The intention of Scott County’s floating district is to find a balance that keeps in mind the characteristics of the abutting properties and area, and other matters such as habitat, natural resources, agricultural preservation, safety, health, and general welfare. Scott County’s ordinance makes it clear it is not their intention to allow for utility solar on prime agricultural land.
 - This concept of an overlay district could be an option for a balanced policy in Woodbury County. For example, the county could establish a “Utility-Scale Solar Overlay Zoning District,” and enumerate standards that must be met in order to rezone the property to the overlay district while retaining all the existing uses of the base zone.
 - If the rezone were to be successful, then the Zoning Commission and Board of Adjustment could review the application through the CUP process (with additional criteria to be added) or the Board of Supervisors could approve the solar project through the overlay district creation process.
 - On page 28 (33 of the PDF) of the Zoning Ordinance, Woodbury County does have an example of the “CD -- Conservation Development Overlay Zoning District”. A “CD” can be instituted as an overlay over other districts such as AP, AE, NR, and SR. Also, see page 17 (22 of the PDF) which uses the rezone process.
 - Based on what Linn County and Scott County have done, this could be a feasible option to have the debate at the Board of Supervisors level as to whether a particular area of ag land would be suitable or not for utility solar.
 - The overlay district is designed to not be a spot zone but a way to look at the unique nature of an area for a special use without changing the base zone or the controlling zoning district’s land use requirements. Thus if a solar farm is removed, it would revert back to the base use of the controlling zoning district or be considered for future conditional use permitting if a new solar system was to be proposed.

Consideration 4 - SUMMARY

- **Summary:** Establish an agrisolar utility-scale solar energy systems overlay zoning district for the specific purpose to coincide with an existing farming operation where each parcel of land includes over 51% of its usage for farming purposes which requires a rezone application to be reviewed by the Zoning Commission and considered for approval by the Board of Supervisors.
 - **Proposed Zoning Districts:** Establishment of a “Agrisolar Utility-Scale Solar Overlay Zoning District” to be used only over the “Agricultural Preservation (AP) Zoning District.
 - **Permitting Mechanism:** Rezone and Conditional Use Permit
 - **Rezone to “Agrisolar Utility-Scale Solar Overlay Zoning District”**
 - Zoning Commission makes a recommendation to the Board of Supervisors as to whether the rezone to the overlay district is appropriate or not.
 - Establish a criteria to qualify an area as acceptable or not for the overlay district.
 - Board of Supervisors approves the rezone process including approval of specific agreements with the county such as decommissioning, road use, etc.
 - **Conditional Use Permit**
 - The Woodbury County Zoning Commission reviews a conditional use permit application and makes a recommendation to the Board of Adjustment who approves or denies the permit.
 - **Notification Area:** One (1) mile.
 - **Development Plan Justification:**
 - Compatible with Economy and Economic Development Policy 2.5:
 - “Fully explore alternative renewable energy sources, particularly wind generation facilities both as a contribution to the total energy needs of the country and as a new source of income for property owners.”
 - Compatible with Agricultural Policy 3.5:
 - “Recognize the importance of livestock production and related agricultural businesses as part of the agricultural economy of Woodbury County.”
- **Brief Background:**
 - Agrisolar, also known as agrivoltaics or dual-use solar is the co-existence of the use of land for both agriculture and solar energy generation purposes. Dual uses include solar panels being used in conjunction with the cultivation of different crops such as “vegetables and berries, utilizing livestock grazing for managing vegetation, beekeeping, and planting native vegetation and pollinator habitat” (Kolbeck-Urlacher, 2023, p. 4). Dual use “practices can create environmental and economic benefits such as new revenue streams for local farmers, increased pollinators, wildlife habitat, enhanced soil health, reduced erosion, and carbon storage” (p. 4).

Source: Kolbeck-Urlacher, H. (2023). *Policy Approaches for Dual-Use and Agrisolar Practices*. AgriSolar Clearinghouse. <https://www.agrisolarclearinghouse.org/policy-approaches-for-dual-use-and-agrisolar-practices/>

Consideration 1 – Rationale for Focus on the Comprehensive Plan for 2040

Woodbury County is currently in the process of organizing a new comprehensive plan (“plan”). Since early 2021, the plan has been in development but has been placed on hold. At this time, the County is at a convenient juncture evaluate whether renewable energy sources continue to be a development priority for the county over the next decade and beyond. The current debate considering the appropriateness of utility-solar systems being placed in areas of the county other than industrial naturally fits into the comprehensive plan adoption process.

The current plan that has been in place since 2005, acknowledges renewable energy sources in its Economy and Economic Development Policy 2.5 which states “fully explore alternative renewable energy sources, particularly wind generation facilities both as a contribution to the total energy needs of the county and as a new source of income for property owners” (p. 19). However, the plan also includes the initiative to protect prime farmland. In particular, Agricultural Policy 3.5 states “protect prime farmland as determined by high corn suitability ratings (i.e. over 65 CSR) from conversion to other land uses. Discourage non-agricultural uses in prime farmland acres and other agricultural districts by providing residential lot size requirements and proper separation distances between residential and agricultural uses” (p. 20).

The priorities of a community are embodied in a comprehensive plan to serve as a guide or a rationale for basing land use decisions. Iowa Code 335.1-3 states the following as it pertains to comprehensive plans:

1. The regulations shall be made in accordance with a comprehensive plan and designed to preserve the availability of agricultural land; to consider the protection of soil from wind and water erosion; to encourage efficient urban development patterns; to lessen congestion in the street or highway; to secure safety from fire, flood, panic, and other dangers; to protect health and the general welfare; to provide adequate light and air; to prevent the overcrowding of land; to avoid undue concentration of population; to promote the conservation of energy resources; to promote reasonable access to solar energy; and to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements. However, provisions of this section relating to the objectives of energy conservation and access to solar energy shall not be construed as voiding any zoning regulation existing on July 1, 1981, or to require zoning in a county that did not have zoning prior to July 1, 1981.
2. The regulations shall be made with reasonable consideration, among other things, as to the character of the area of the district and the peculiar suitability of such area for particular uses, and with a view to conserving the value of buildings and encouraging the most appropriate use of land throughout such county.
3. The regulations and comprehensive plan shall be made with consideration of the smart planning principles under section 18B.1 and may include the information specified in section 18B.2, subsection 2.

Following the adoption of the General Development Plan: Planning for 2025 on November 22, 2005, the county established a revised Zoning Ordinance and Subdivision Ordinance that were adopted on July 22, 2008. Subsequent to adoption, the Zoning Ordinance has been amended numerous times as it takes an amendment to the Zoning Ordinance to change any zoning district from one designation to another. The most recent amendment occurred with the approval of Ordinance No. 75 which was a Zoning Ordinance Map Amendment (rezone) from the Agricultural Preservation (AP) Zoning District to the Agricultural Estates (AE) Zoning District.

The process of amending the ordinance, as was the case with Ordinance No. 75, requires a look at the priorities within the comprehensive plan. Is it appropriate or not to introduce a particular use onto property designated as agriculture? The current plan tells the community that Woodbury County has a priority to explore renewable energy sources. It also has an initiative to protect prime farmland by use of the Corn Suitability Rating. In 2005, when this plan was developed, it also included a “Future Land Use Map” that illustrates the areas within the county that the public expects particular uses to be allowed or not allowed. Portions of the county were designated as agricultural, rural residential, transitional agriculture, commercial, industrial, and open space/recreation.

In 2008, a land use summary table was adopted within the Zoning Ordinance that directly enumerates the priorities of land use in the county. The public, appointed officials, and elected officials at that time, decided that electrical energy generation (not including wind) is a prohibited use in all zoning districts except for the General Industrial (GI) Zoning District. To be clear, this decision reflects the comprehensive plan. It shows the public is open to renewable energy, however, it demonstrates that the public chose the industrial areas as the most suitable locations to be considered through the conditional use process.

With a future comprehensive plan in the works and ready for debate before the Zoning Commission and Board of Supervisors, staff offers this “Consideration 2” as a pathway for considering the renewable energy priorities of the county. Within the comprehensive plan debate, the public can request expansion of the industrial areas for the placement of renewable energy assets. Therefore, it is feasible to explore expanding industrial areas on the future land use map which in turn could facilitate the rationale for an ordinance amendment to rezone additional areas for industrial uses such as utility-scale energy.

Consideration 2 – Expanded Conditional Use Permit Rough Draft Language

Section 5.08: Utility-Scale Solar Energy Systems Conditional Use

1. **Intent.** These regulations provide uniform and comprehensive standards for the installation and use of Utility-Scale Solar Energy Systems (US-SES) in unincorporated Woodbury County. US-SES may include, solar panels, solar support structures, inverter/transformers, energy storage technologies, wiring, and other equipment necessary for the generation, storage and delivery of electricity. The intent of these regulations is to protect the public health, safety, and community welfare while allowing development of utility-scale solar energy resources for utility, commercial, and industrial purposes.
2. **Conditional Use Permit (CUP).** A conditional use permit issued by the Woodbury County Board of Adjustment shall be required within the General Industrial (GI) Zoning District and the Limited Industrial (LI) Zoning District. This use is prohibited in all other Zoning Districts in Woodbury County. This use shall be subject to the procedures and standards included in this Ordinance. Concentrating solar power systems are prohibited.
3. **Definitions.** For uses in this Ordinance, certain terms shall be interpreted or defined as follows:
 - A. **Agrisolar or Agrivoltaics.** A utility-scale solar system co-located on the same parcel of land primarily adapted, by reason of nature and area, for use for agricultural production, including crop production, grazing, apiaries, or other agricultural products or services. Fifty-one percent (51%) of the use of the land is for agricultural purposes.
 - B. **Applicant.** The person or entity submitting the application under this Ordinance, which is normally expected to be the owner or operator of a US-SES, or the owner of the US-SES development.
 - C. **Community Solar.** A utility-scale solar energy system developed by a municipality, utility, or other third party that typically allows community members to subscribe to the project.
 - D. **Conditional Use Permit (CUP).** A use that is allowed in conformance with the regulations of the zoning district in which it is located, if and only if, approved by the Board of Adjustment as provided in subsection 2.02-9. A CUP issued by the Woodbury County Board of Adjustment is required before associated building permit(s) can be issued in unincorporated Woodbury County.
 - E. **Concentrating Solar Power Systems.** A system that generates solar power by using mirrors, lenses, or similar reflecting surfaces to concentrate sunlight collected over large areas onto smaller focal areas. Concentrating solar power systems are prohibited.
 - F. **Corn Suitability Rating 2 (CSR2).** An index to the inherent soil productivity of each kind of soil for row crop production. The index is scaled from 100, for the most productive soils, to 5 as the least productive.
 - G. **Critical Slope Angle.** The maximum slope incline which the soil and rock materials underlying the slope can support, without failure, under existing climate, vegetation, and land use.

- H. **Developed Project Areas.** The total project area that is subject to an agreement between the Owner/Operator and the Participating Landowner and is actually developed and utilized for placement of a US-SES.
- I. **Easement.** A legal agreement for the use of property for a specified purpose.
- J. **Feeder Circuits/Lines.** A power line or network of lines used as a collection system that carries energy produced by a solar energy system to an interconnection point like a substation. Feeder circuits are most often placed underground.
- K. **Glare/Glint.** Light reflected off of a surface.
- L. **Ground-Mounted System.** A system where a rack(s) of panels is mounted on concrete posts or poles anchored in the ground and are wired or plumbed to an adjacent home or structure.
- M. **Interconnection.** Link between a generator of electricity and the electric grid. Interconnection typically requires connection via infrastructure such as power lines and a substation, as well as a legal agreement for the project to be connected to the grid.
- N. **Module.** An individual unit comprised of multiple photovoltaic (PV) cells, with multiple modules used in a solar energy system.
- O. **Mounting.** The method of anchoring solar energy system modules to the ground or a building.
- P. **Non-Participating Landowner.** A landowner who has not signed a binding agreement with the Applicant/Developer/Owner of the US-SES project.
- Q. **Occupied Structure.** For the purpose of this ordinance, shall include any existing occupied house, apartment, barn, or machine shed regularly used by the property owner, or parties in possession of the property at the time of the permit application.
- R. **Operator.** The entity or individual that operates a solar energy system.
- S. **Owner.** The entity or entities with an equity interest in the US-SES, including their respective successors and assigns. Owner does not mean the landowner from whom a lease, easement, or other property right is acquired for locating the US-SES unless the landowner has an equity interest in the US-SES, or any person holding a security interest in the US-SES solely to secure an extension of credit, or a person foreclosing on such security interest provided that after foreclosure, such person seeks to sell the US-SES at the earliest practical date.
- T. **Participating Landowner.** A landowner under lease, easement or other binding property agreement with the applicant, developer, or owner of the US-SES.

- U. **Photovoltaic (PV) Cells.** Semiconductors which generate electricity whenever light strikes them; generally grouped on panels.
- V. **Professional Engineer.** A qualified individual who is licensed in the State of Iowa as a professional engineer.
- W. **Project Area.** The geographic area encompassing all components of a US-SES project, including border fencing.
- X. **Property Line.** The legal boundary between separately owned real estate parcels, and between privately owned parcels and public owned land or public right of way.
- Y. **Residence.** A house, apartment or other shelter that is the abode of a person, family, or household and regularly occupied.
- Z. **Setback.** The minimum distance from a certain object, structure or point to the edge of any part or component of the US-SES.
- AA. **Slope.** The inclination of the land surface from the horizontal, with the steeper and longer having the most erosion potential.
- BB. **Solar Array.** Equipment used for private or utility scale solar energy systems. Can be mounted on primary or accessory structures, on a racking system affixed to the ground, or integrated as a mechanical or structural component of a structure.
- CC. **Solar Collector.** A device, structure or part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electrical energy.
- DD. **Solar Easement.** An easement created to protect a solar project from encroachment by adjacent properties which would shade panels. See Iowa Code 564A.
- EE. **Solar Energy.** Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.
- FF. **Solar Energy Systems, Private.** An energy system that converts solar energy to usable thermal, mechanical, chemical, or electrical energy primarily for immediate onsite use that already has an existing principal use on the same parcel. Solar Energy Systems, Private shall be allowed only as a non-utility scale accessory use to a permitted principal use. Surplus energy sold back to a utility must comply with all applicable laws including but not limited to Section 199, Chapter 15.11(5) of Iowa Administrative Code, and all requirements of the Iowa Utilities Board. Systems can be mounted on primary or accessory structures, on a racking system affixed to the ground, or integrated as a mechanical or structural component of a structure.
- GG. **Solar Energy Systems, Utility Scale (US-SES).** An energy system, commonly referred to as a “solar farm”, which converts solar energy to useable thermal, mechanical, chemical, or electrical energy

Woodbury County Community & Economic Development (Planning & Zoning)

primarily for transmission through the electrical grid for offsite use or wholesale and/or retail sale. Systems can be mounted on primary or accessory structures, on a racking system affixed to the ground, or integrated as a mechanical or structural component of a structure. Utility scale solar energy systems do not include concentrating solar power (CSP) systems.

HH. Solar Panel. 1) A grouping of photovoltaic cells used to generate electricity directly from sunlight. A grouping of these panels is called an array. 2) A panel circulating water or other liquid through tubes to collect, transfer and store the sun’s heat for domestic hot water and building heat.

II. Solar Storage Battery. A device that stores energy from the sun and makes it available in an electrical form.

JJ. Solar Storage Unit. A component of a solar energy device that is used to store solar-generated electricity or heat for later use.

KK. Solar Thermal Energy System (STES). A system that directly heats water or other liquids using sunlight. The heated liquid is used for such purposes as space heating and cooling, domestic hot water, and heating pool water.

LL. Structure. Anything constructed or erected on the ground or attached to the ground, including but not limited to, antenna(s), buildings, sheds, cabins, residences, signs, storage tanks, towers, wind turbines and other similar objects.

MM. Structure-Mounted Energy System. A system where photovoltaic panels or solar thermal panels are mounted on racks attached to the roof or side-walls of a building. Panels can be flush-mounted or angled for optimal sun exposure.

NN. Substation. A facility that converts electricity produced by a generator like a solar energy system to a higher voltage, allowing for interconnection to high-voltage transmission lines.

OO. System Height. The height of a solar energy system, usually referring to ground mounted systems. Total system height is the measurement from the ground to the top of the mounting or modules associated with a system.

PP. Transmission lines. Power lines used to carry electricity from collection systems or substations over long distances.

4. Requirements. US-SES are subject to the following requirements:

A. Setbacks. All US-SES and any upgrades to existing solar energy systems shall observe the following setbacks, to be measured from the edge of the solar panels and equipment (not underground facilities such as cable or fencing):

Protected Area TBD	Setback Requirement TBD
Adjacent Property Lines	50 feet* ?TBD
Occupied Residence	1000 feet ?TBD

Woodbury County Community & Economic Development (Planning & Zoning)

Unoccupied Non-Residential Building	100 feet ?TBD
Public Road Right-of-Way	100 feet ?TBD
Public Drainage District Right-of-Way	100 feet ?TBD
Public Conservation Area	1 mile ?TBD
Cemetery	600 feet ?TBD
City Limits	2 miles ?TBD
Airports (public and private)	5 miles and FAA consultation and determination required. ?TBD

* US-SES to be built on more than one parcel and parcels are abutting, a zero (0) side or rear setback shall be permitted to the property line in common with the abutting parcel(s).

- (1) Solar panels, structures, and electrical equipment, excluding fences and power lines for interconnection, shall be kept a minimum of **one thousand (1000? - TBD)** feet from dwellings, **unless the property owner waives the setback to the minimum as required from the property lines of the controlling Zoning District. Waiver must be in writing, considered for approval or denial by the Board of Supervisors, and recorded.**

- (2) Setback Waivers. Property owners and municipalities may require a waiver from the setbacks as established in this Section, except for the following protected areas: airports, cemeteries, public conservation areas, and public road rights-of-way

PROVIDED, a waiver shall not alter any other non-waived setback requirement.

To effectuate such a waiver, the applicant must provide the Zoning Director with a recordable instrument signed by all owner(s)(or the controlling governmental entity) of the affected protected area that specifically identifies the nature and extent of the waiver. All waivers must be reviewed by the Board of Supervisors for compliance with this Section; and if deemed compliant, it shall be recorded in the office of the Woodbury County Recorder by the applicant. No waiver shall be granted for setbacks less than the required minimums for the Zoning District.

- B. Height. A solar panel shall be no less than two (2) feet (Twenty-Four inches) off the ground. A solar panel shall not exceed twenty (20) feet in height above grade at maximum tilt of the solar panel(s).
- C. Screening. Project shall provide vegetative screening for all dwellings within 1,000 feet of the project boundaries.

- (1) Applicant shall submit a screening plan for each dwelling within 1,000 feet of the project boundaries.

- (2) Screening may be waived by the owner of a dwelling. Waiver must be in writing and recorded.

- (3) Screening may be waived by the Board of Adjustment upon submission of a viewshed study from the applicant demonstrating that the project is not within the viewshed of the dwelling due to topography, existing vegetation, or other factors. The point of reference used in the viewshed study shall be as close to the dwelling as possible.

- (4) Any vegetative screening within the project boundaries shall be maintained throughout the life of the project by the project owner. Any screening on the dwelling property shall be

maintained by the project owner for no less than twelve months.

- (5) Deciduous trees shall have a minimum caliper of 1.5” when planted, shall be at least six (6) feet tall within three (3) years of installation, and shall have a minimum mature height of twelve (12) feet.
 - (6) Screening plans shall use no less than two varieties of tree.
- D. Utility connections. Reasonable efforts shall be made to place all utility connections from the solar installation underground, depending on appropriate soil conditions, shape and topography of the site, distance to the connection, or other conditions or requirements.
 - E. Glare minimization. All solar panels must be constructed to minimize glare or reflection onto adjacent properties and adjacent roadways and must not interfere with traffic, including air traffic, or create a safety hazard.
 - F. Compliance with local, state and federal regulations. Utility scale solar installations shall comply with applicable local, state and federal regulations.
 - G. Appurtenant structures. All appurtenant structures shall be subject to bulk and height regulations of structures in the underlying zoning district.
 - H. Floodplain considerations. Utility scale solar installations are considered to be maximum damage potential structures and facilities for purposes of the floodplain district regulations.
 - I. Fencing/security. A security fence must be installed along all exterior sides of the utility scale solar installation and be equipped with a minimum of one gate and locking mechanism on the primary access side. Security fences, gates and warning signs must be maintained in good condition until the utility scale solar installation is dismantled and removed from the site.
 - J. Panel Height. To encourage the establishment of a diverse native seed mix, panels shall be installed a minimum of 24" from the lower edge of the panel at maximum tilt to the ground.
 - K. Submittal Requirements. In addition to the requirements in Section 2.02.9, the applicant shall submit all required materials contained in this subsection at the time of the application for a Conditional Use Permit.
 - L. Permitting Process. The applicant shall go through the following process prior to, during, and after the conditional use permit consideration process.
 - (1) Applicant shall meet with the Zoning Director and submit all required documents.
 - (2) Zoning Director will submit all documents to the Woodbury County Department Approval Committee. Committee shall consist of the Woodbury County Board of Supervisors and the Zoning Director along with the department head or the designated employee from the following departments: Woodbury County Conservation, Woodbury County Engineer/Secondary Roads, Woodbury County Emergency Management, Woodbury County Emergency Services. All identified departments must approve with signature that all requirements pertaining to that department are met prior to moving on in the process.

Woodbury County Community & Economic Development (Planning & Zoning)

- (3) The Woodbury County Board of Supervisors shall consider for approval the following agreements and plans prior to the submission of the conditional use permit to the Board of Adjustment:
1. Woodbury County Road Use and Repair Agreement
 2. Woodbury County Public Drainage System Protection Agreement
 3. Operation and Maintenance Plan.
 4. Decommissioning, Abandonment, Escrow Account, and Site Restoration Plan
 5. Agricultural Impact Mitigation Plan (AIMP)
 6. Grading Plan
 7. Vegetation Management Plan
 8. Wildlife and Habitat Assessment and Mitigation Plan
 9. Emergency Response Plan

Final approval of the US-SES Conditional Use Permit shall not proceed until the Board of Supervisors has approved these agreements plans and the Chairman and the applicant have executed these agreements.

- (4) Conditional Use Permit Application will be presented to the Woodbury County Zoning Commission for review and the Woodbury County Board of Adjustment for a public hearing and decision on the Conditional Use Permit as per the requirements in this Ordinance and Section.
- (5) The use(s) outlined in the application shall be established in accordance with the draft plans considered by the Board of Adjustment within five (5) years of approval. “Commencing Construction” is determined by disturbance of soil at project site, that is not part of a primary farming operation. Any portion of the development plan not completed within five (5) years of approval by the Board of Adjustment shall not be installed until the development has been reauthorized by the Zoning Director. Reauthorization shall be subject to the regulations in effect at the time reauthorization is requested.

- 5. Application Materials.** In addition to all submittal requirements of a conditional use application, the application for a US-SES installation shall include the following information on the site plan or in narrative form, supplied by the utility scale installation owner, operator or contractor installing the structures:
- A. The name and address of the applicant, as well as the proposed owners or operators of the project, including the contact information (name, address, telephone and email) of their authorized representatives. The application shall designate the entity who requests the Conditional Use Permit.
 - B. A certified abstractor listing of the names and mailing addresses of all owners of real property lying within one (1) mile from the subject property shall be provided with the application.
 - C. Legal descriptions of all properties, leased and/or owned, identified to be part of the project area.
 - D. Number, location and spacing of solar panels/arrays.
 - E. Planned location of underground or overhead electric lines.

Woodbury County Community & Economic Development (Planning & Zoning)

- F. Project development timeline which indicates how the applicant will inform adjacent property owners and interested stakeholders in the community.
- G. Pre-construction survey of nearby roads that may be impacted by construction of the facility.
- H. Interconnection Agreement.
- I. Operation and Maintenance Plan.
- J. Decommissioning Plan.
- K. Soil Erosion and Sediment Control Plan
- L. Vegetative Management Plan.
- M. Wildlife/Biological Habitat Assessment & Mitigation plan.
- N. Setback analysis showing the minimum setback requirements, or any agreed on greater setback provisions, are met by the project.
- O. Emergency Response Plan.
- P. Corn Suitability Rating 2 (CSR2)
- Q. Slope Stability Analysis Report

6. Woodbury County Road Use and Repair Agreement

- A. Roads. Applicants shall adhere to the Woodbury County Road Use and Repair Agreement, and in doing so, shall identify all roads to be used for the purpose of transporting solar components, substation parts, cement, and/or equipment for construction, operation or maintenance of the solar installation and obtain applicable weight and size permits from the impacted road authority prior to construction.
- B. Existing Road Conditions. Applicants shall conduct a pre-construction survey, in coordination with the impacted local road authorities to determine existing conditions of roads identified pursuant to **Section 6.1**. The survey shall include photographs or video and written documentation of the condition of the identified road facilities. The applicant is responsible for on-going road maintenance and dust control measures identified by the County Engineer during all phases of construction.

7. Woodbury County Public Drainage System Protection Agreement

- A. Applicants shall adhere to the Woodbury County Public Drainage System Protection Agreement, and in doing so, shall be responsible for immediate repair of damage to public drainage systems stemming from construction, operation or maintenance of WECS (where required).

8. Operation and Maintenance Plan. The applicant shall submit a plan for the operation and maintenance of the solar installation including all necessary services, frequency of service, preventative maintenance

measures, and monitoring. The operation and maintenance plan should include at a minimum:

- A. Preventative maintenance practices and schedules for all on-site equipment including but not limited to: inverters, panels, equipment pads, tracking systems, transformers, access entrances, internal roads, gates, fencing, security systems, stormwater management installations.
- B. Annual reporting and verification to county on the status or changes to ongoing service schedule.
- C. Schedule of all other monthly, annual, or semiannual reporting requirements for other submittals including: agricultural impact mitigation plan, decommissioning plan, and vegetation management plan.
- D. Noise. No operating solar energy equipment shall produce noise exceeding any of the following limitations, with the exception of initial construction and routine maintenance. Adequate setbacks and effective noise mitigating equipment shall be used to comply with these limitations:
 - (1) An hourly average noise level of fifty-five (55) dBA during the day (between sunrise and sunset), and an hourly average noise level of fifty (50) dBA at night (between sunset and sunrise), as measured at the occupied dwelling of any adjacent property containing an existing residential structure. If the ambient sound pressure level exceeds 55 dBA during the day or 50 dBA at night, the standard shall be the ambient Leq (equivalent continuous sound pressure level) plus 5 dBA.
 - (2) A baseline noise evaluation shall be completed by a board certified professional by the Institute of Noise Control Engineering (INCE), or an appropriately licensed Professional Engineer (PE) prior to construction of the proposed solar site.
 - (3) A post-construction noise evaluation shall be performed by a third-party board certified professional by the Institute of Noise Control Engineering (INCE), or an appropriately licensed Professional Engineer (PE) following commencement of commercial operation of the project to verify compliance with the County's standards.
 - (4) The owner(s) of an adjacent property may voluntarily agree, by written and recorded waiver, to a higher noise level.
- E. Issue resolution protocols. Contact information for responsible party to address issues that may arise (damaged equipment causing excessive noise, etc).
- F. Disposal/recycling plan for damaged or obsolete facility equipment or hazardous waste. No storage of inoperable or obsolete equipment shall be allowed to remain on-site. Site operator shall be responsible for the cleanup of debris related to storm damage.
- G. Cleaning chemicals and solvents. During operation of the proposed installation, all chemicals or solvents used to clean photovoltaic panels should be low in volatile organic compounds and the operator should use recyclable or biodegradable products to the extent possible. Any on-site storage of chemicals or solvents shall be referenced.
- H. Maintenance, repair, or replacement of facility. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a

level acceptable to emergency response officials. Any retrofit, replacement or refurbishment of equipment shall adhere to all applicable local, state and federal requirements.

- I. Repowering. Proposals to replace more than twenty five percent (25%) of the panels in a facility within a twelve (12) month period will be required to submit a new conditional use permit application based on the requirements in this ordinance for review and approval. A repowering event does not include replacement of panels in previously approved locations due to weather damage, equipment failure, or a force majeure event.
 - (1) The plan shall include updated information for some or all of the reports and plans required by this section, as determined necessary by the Zoning Director.
 - (2) The Board of Adjustment shall review and approve, conditionally approve, or deny the repowering plan as per the requirements of Section 2.02.9 and 5.08.

9. Decommissioning, Abandonment, Escrow Account, and Site Restoration Plan.

- A. The application must include a decommissioning plan that describes the following:
 - (1) The anticipated life of the utility scale solar installation.
 - (2) The anticipated manner in which the project will be decommissioned, including plans to recycle components and dispose of any hazardous materials.
 - (3) The anticipated site restoration activities.
 - (4) The estimated decommissioning costs in current dollars.
 - (5) The method for ensuring that funds will be available for decommissioning and restoration of the site.
- B. Decommissioning cost considerations. The applicant shall provide the estimated cost of decommissioning, excluding the salvage value, should be presented from both the solar developer and from an independent third-party engineer, at the recommendation of the Woodbury County Engineer, at the expense of the developer.
 - (1) Removal of any hazardous materials at the facility, as determined by a Toxic Characteristic Leaching Procedure (TCLP) or other similar test approved by Woodbury County and as described in the facility's Operations and Maintenance Plan. TCLP testing shall be performed prior to any ground disturbance at the project site.
 - (2) Salvage value shall not be included in the cost estimate.
 - (3) The estimated decommissioning cost must be updated every 5 years of the project using the same process as the initial decommissioning cost process.
- C. Site restoration activities. Restoration activities shall include, but not be limited to, the following:

Woodbury County Community & Economic Development (Planning & Zoning)

- (1) Removal of all components and equipment.
 - (2) Soil in project area shall be decompacted and seeded with a cover crop, unless otherwise specified in the approved vegetation plan and/or agricultural impact mitigation plan.
 - (3) For any part of the energy project on leased property, the plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates or repurposed buildings in place or regarding restoration of agricultural crops or forest resource land. Any use of remaining structures must be in conformance with the regulations in effect at that time.
- D. Performance agreement and proof of financial surety. At the time of permitting, the applicant, facility owner, or site operator shall provide a Performance Agreement and accompanying financial surety instrument to cover the cost of decommissioning in accordance with the following:
- (1) A bond shall be required for 125% of the most recent estimated decommissioning total cost paid for by the project owner/developer. The bond shall remain in place until one (1) year after the last day of decommissioning.
 - (2) Decommissioning funds shall be maintained in the form of a performance bond, surety bond, bank letter of credit, stable parent company guarantee, or other form of financial assurance as approved by the Woodbury County Board of Supervisors. Any financial document evidencing the maintenance of the decommissioning funds shall include provisions for releasing the funds to the County in the event decommissioning is not completed in a timely manner.
 - (3) Prior to any ground disturbance, grading or construction activity on the site, twenty-five percent (25%) of total estimated decommissioning costs shall be provided by any of the means listed above. An additional twenty five percent (25%) shall be provided within five (5) years and ten (10) years of the date of initial approval, and the remaining twenty five percent (25%) of the total re-estimated decommissioning costs shall be provided within fifteen (15) years of the date of initial approval. From that point forward, 100% of the total estimated decommissioning costs as determined by the most recent re-estimation shall be maintained in the decommissioning fund until the end of the functional life of the project.
 - (4) Financial surety shall be maintained for the life of the project.
 - (5) Proof of recertification of the financial surety instrument must be submitted to the County annually.
 - (6) Every five (5) years, the facility owner or operator shall retain an independent Licensed Iowa Engineer approved by the County to re-estimate the total cost of decommissioning and attest that the value of the financial surety instrument is appropriate. This report shall be filed with the County and shall incorporate any new industry information learned since the last cost determination.
 - (7) The required amount of the decommissioning fund shall match the re-estimated cost of decommissioning. Within ninety (90) days of filing the re-estimation report with the County, the facility owner or operator shall cause the fund balance of the financial surety instrument

Woodbury County Community & Economic Development (Planning & Zoning)
to be adjusted to ensure that it matches the re-estimated decommissioning cost.

- E. Escrow Account. At the time of permitting, the applicant, facility owner, or site operator shall provide at least \$100,000 per megawatt of project in an escrow account in addition to the total decommissioning funds that shall remain in the account up until one year after the last day of the decommissioning upon successful completion will be returned to the application/owner/operator. Any interest earned in the account shall belong to the County.
- F. Commencement of site decommissioning. Decommissioning of the site shall commence at the time identified in the project decommissioning plan or performance agreement, or when the facility is determined to have been abandoned.
- (1) Decommissioning shall be completed in accordance with the approved decommissioning plan.
 - (2) The landowner or tenant shall notify the Zoning Director both when the project is discontinued and when decommissioning is complete.
 - (3) Third-party verification, as well as County verification of completed decommissioning will be required before the financial surety may be released.
 - (4) The facility will be considered abandoned or out of commission in the following circumstances:
 1. Upon termination or expiration of the solar farm leases/easements or
 2. After one year without production, storage of energy, or use as a backup facility.
 3. Exceptions could be made for:
 - a. A force majeure event that has occurred or is occurring, which will prevent the facility from resuming operation within 12 months.
 - b. If the facility is in the process of being repowered.
 - c. The project is pending completion of construction of the facility due to a backlog of cases or service requests in the MISO queue.
 - d. A situation in which the project owner can provide evidence to the Woodbury County Board of Supervisors, that the facility's period of continuous inactivity is due to circumstances beyond the project owners control and that the facility has not been abandoned.
 - e. Appeal of the notice of abandonment from the county within a set time of the project owner's receipt of the notice in which the project owner explains the reasons for operational difficulty and provides a timeframe for corrective action that the county deems reasonable.

10. Agricultural Impact Mitigation Plan (AIMP)

- A. The applicant shall submit an AIMP detailing strategies to avoid or mitigate detrimental impact to agricultural land resulting from the construction, operation, maintenance and/or decommissioning of the solar project. The primary goal of the AIMP is long-term protection of soil health to ensure the project area can be used for productive agricultural use both during, and at the end of the functional life of the project.
- B. The AIMP shall include, but not be limited to, the following information:
- (1) Project overview. Provide general background, list of project components, and construction timeline.
 - (2) Environmental/Agricultural Monitoring
 1. On-site monitoring to be conducted by third party environmental/agricultural professional during construction.
 2. Report of findings to be submitted to county every 30 days during construction.
 3. Responsible for verification and monitoring during and post construction of:
 - a. Soil segregation, stockpiling, backfilling, respreading methods
 - b. Trenching, & foundation installation
 - c. Compaction avoidance and decompaction practices
 - d. Grading Plan adherence
 - e. Wet weather conditions planning
 - f. Drain tile system
 - g. Erosion and sediment control measures
 - h. Installation and effectiveness of stormwater management structures
 - i. Invasive species prevention and mitigation
 - (3) Best Management Practices During Construction and Operation
 1. Best Management Practices (BMPs) shall be included that demonstrate Low Impact Development (LID) measures the applicant will take during construction to minimize negative impact to long-term soil health and future agricultural viability. BMPs should preserve topsoil, reduce or eliminate compacted soils, test and design the project with regard for protection of existing soil profile below 12 inches, include robust long-term soil health monitoring protocols, invasive species prevention, and establish and

Woodbury County Community & Economic Development (Planning & Zoning)
maintain native, deep-rooted vegetative ground cover.

(4) Subsurface Drain Tile Survey, Avoidance & Mitigation Plan

1. Documentation and mapping of existing drain tile systems within the entire project area including elevation, location, and size of tile inlet and outlets
2. Plan for relocation, removal or restoration of tile damaged during construction
3. Description of long-term maintenance and plan for ongoing review of existing and newly constructed tile systems (if applicable).

(5) Pre-construction Soil Health Analysis and Long-Term Soil Monitoring Plan

1. Prior to construction, a soil analysis shall be conducted and assessed by a third-party professional to establish baseline soil health.
2. Required sampling protocol:
 - a. Pre-Construction and Post-Construction Baseline Surveys
 - i. One sampling location per zone shall be created based on random sample method or soil type, with each zone not to exceed 20 acres.
 - ii. Two samples shall be collected from each sampling location (for example, the plow layer from 0 to 8 inches and subsoil from 8 to 16 inches).
 - iii. Each sample shall consist of a minimum of 10 subsamples collected from disparate locations surrounding the sample location in each zone. Samples shall be analyzed for soil health and soil chemical parameters during the same seasonal period and at the same sampling locations once prior to construction and once post-construction to establish a baseline.
 - iv. In-field assessment resource evaluations shall be performed in conjunction with soil health testing for the purpose of tracking compaction, soil organic matter and aggregate stability indicators.
 - v. Soil sample analyses shall utilize a laboratory testing program that includes standard chemical analysis for Phosphorous, Potassium, Calcium, Sulfur, pH, Cation Exchange Capacity (CEC), base saturation, and organic matter, and soil health analyses for soil respiration, wet aggregate stability, and active (permanganate oxidizable) carbon.

(6) Year 5 through end of project life

1. Same sampling protocol as above except frequency shall occur once every five years.
2. Third-party evaluation and report on soil condition changes against baseline data throughout the lease period. Frequency of reporting shall match sampling protocol.

C. Soil Protection and Compaction Avoidance

- (1) Plan should include, at a minimum, a narrative or plan for LID construction practices and methods to be used during each stage of construction for protecting and preserving topsoil. Practices and methods should address, at a minimum, topsoil removal, segregation, stockpiling, replacement during backfill, and respreading, grading minimization, compaction prevention, wet weather conditions, and post-construction decompaction.
- (2) All project areas in agricultural production at the time of permit issuance, shall be seeded with temporary cover within three months of commencement of pre-construction/civil activities (mobilization) if disturbance is not intended to occur within two months.

11. Grading Plan. A grading plan shall be submitted and shall include all proposed changes to the landscape of the site (e.g., clearing, grading, topographic changes, tree removal, etc.). The plan shall be accompanied with the following documentation:

A. Erosion and Sediment Control

- (1) The applicant agrees to conduct all roadwork and other site development work in compliance with a national pollutant discharge elimination system (NPDES) permit as required by the state department of natural resources and comply with requirements as detailed by local jurisdictional authorities during the plan submittal. If subject to NPDES requirements, the applicant must submit the permit for review and comment, and an erosion and sediment control plan before beginning construction. The plan must include both general 'best management practices' for temporary erosion and sediment control both during and after construction and permanent drainage and erosion control measures to prevent damage to local roads or adjacent areas and to prevent sediment-laden run-off into waterways.

B. Stormwater Management Plan

- (1) For the purposes of pollutant removal, stormwater rate and runoff management, flood reduction and associated impacts, the applicant shall provide a detailed analysis of pre- and post-development stormwater runoff rates for review by local jurisdictional authorities.

12. Vegetation Management Plan. The applicant must provide a Vegetation Management Plan. The plan shall include the primary function of promoting long term soil health, through plant stand persistence, plant diversity, and use of deep-rooted perennials by utilizing recognized establishment and maintenance practices for native vegetation. The Vegetation Management Plan shall include:

- A. A description of the site characteristics including project location, size of the project in terms of acres, existing vegetation, current land uses, soils on and adjacent to the site using, topography with and adjacent to project site using 2' contours, and a description of the general hydrologic conditions of the site and adjoining areas noting any significant features (public waters, water bodies, drainage

ways, wetlands, farmed wetlands, restorable wetlands, sinks, hydric soils, etc.).

- B. A description of the management areas with maps including but not limited to the following: areas under the arrays, perimeter plantings, and any other designated management areas within or adjacent to the site.
- C. A description of the management objectives for each management area including:
 - (1) Short-term management objectives for each area (seed establishment 0-5 years). The emphasis will be on management strategies used during the vegetation establishment phase such as: cover crop and soil stabilization, weed and non-native species management, targeted re-seeding, etc.
 - (2) Long term management objectives for each area (5 years after establishment to end of permit) such as: target goals such as the percentage of the site covered by native species, development of a monitoring plan, and management strategies such as supplemental seeding.
- D. Establishment and management practices including:
 - (1) Site preparation (schedules/sequence of planned construction, planting, and management activities).
 - (2) Eliminating soil compaction prior to seeding.
 - (3) Seedbed preparation.
 - (4) Invasive species prevention.
 - (5) Cover crop planting and temporary covers.
 - (6) Establishment methods in years 0-5.
 - (7) Management methods in year 6 and beyond.
 - (8) Grazing practices (if applicable).
- E. Seeding and planting practices including:
 - (1) Seed mixes (names, ounces/acre in Pure Live Seed), seeds per sq ft., of mix based on seeds per sq ft). A complete list of seeds shall be provided as well as a map denoting the seed mix areas. Prior to seed procurement, seed origin shall be added to the list of seeds.
 - 1. At a minimum, ground under and around the solar array shall be planted with a perennial vegetated ground cover that includes a mix of perennial grasses and wildflowers that will preferably result in short stature prairie with a diversity of forbs and flowering plants that bloom throughout the growing seasons. Perennial vegetation (grasses and forbs) used shall be native on a regional basis (preferably to Iowa) but where appropriate to the ground cover plan goals, may also include other naturalized

Woodbury County Community & Economic Development (Planning & Zoning)

and non-invasive species which limit noxious and invasive species encroachment, provide habitat for pollinators and wildlife, build soil health, and/or provide other ecosystem services (i.e. clovers). Non-native species shall be limited to the following: legumes, not exceed 20 seeds per square foot and grasses, not to exceed 15 seeds per square foot.

2. Wherever native vegetation is discussed, native vegetation shall be defined as seed mix plan that meet criteria as described within the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Iowa 327 Conservation Cover Standard and supporting reference documents developed through the use of the Iowa NRCS Native Seed Calculator, or any other similar standard as approved.
 3. Cover Crop and other short-term seeding methods shall be utilized for the purpose of site stabilization for all areas in agricultural production within three months of commencement of pre-construction/civil activities (mobilization) if planned disturbance is not intended to occur within 2 months of the time of permit issuance, preventing growth of noxious and invasive species, and aide in long term vegetative establishment. In addition to seed criteria specified above cover crop choice(s) shall meet or exceed 80% by volume of Pure Live Seed at time of use, be seeding date and zone appropriate for the selected species and be based on minimum thresholds as described within the USDA - NRCS Iowa 340 Cover Crop Standard, or other similar standard as approved.
- (2) If visual screening is part of the project, provide a complete list of plantings as well as the size of the plantings.
 - (3) Summarize steps taken to ensure that any pesticides used at or near the site will not drift and impact native vegetation.
 - (4) Describe how planting will be conducted in each area (array, perimeter, detention area, etc.) including the sequence of planting, time of planting, and planting method.

F. Vegetation monitoring and adaptive management practices to be used on site including:

- (1) Construction monitoring. For compliance with the Agricultural Impact Mitigation Plan, a third-party qualified site monitor shall be required to be present on site during construction to ensure soil health is maintained.
- (2) Vegetation establishment and monitoring plan. A qualified third-party independent monitor shall complete vegetation monitoring activities and provide reports to Woodbury County staff. Reports shall be submitted annually during the establishment phase (first 5 years) and every three years afterwards. Reports shall include: summary of site conditions and management activities, description of adaptive management actions implemented, description of any management challenges, an evaluation of whether the project is meeting stated management objectives.
- (3) Adaptive management practices. Adaptive management approach shall use the results of the annual report and other site visits to determine measures necessary to achieve the stated

13. Wildlife and Habitat Assessment and Mitigation Plan

- A. The applicant shall submit a Wildlife and Habitat Assessment and Mitigation Plan detailing strategies to avoid, or mitigate for, detrimental impact to existing habitat and wildlife resulting from the construction, operation, maintenance and/or decommissioning of the solar project. Consideration of established migration patterns, emphasis on habitat fragmentation avoidance, and allowance for limited wildlife movement into and through the array zones via wildlife friendly fencing design shall be considered.
- B. Fenced array areas are limited to 160 acres before establishment of a wildlife corridor shall be required.
- C. Solar panels, structures, electrical equipment, and fencing, excluding power lines for interconnection, through established drainageways. Drainageways shall be defined as stream corridors and open ditches containing perennial flow throughout the majority of the growing season.

14. Emergency Response Plan

- A. The applicant shall submit an emergency response plan prior to any ground disturbance at the project site detailing the planned response actions that will be taken by the solar facility operator, including any battery energy storage systems in the event of an emergency situation. These actions are intended to minimize health risks to personnel and people in the surrounding community, as well as minimize adverse impacts to the environment.
 - (1) The plan shall include, but is not limited to, a detailed narrative of response procedures and the facility representatives responsible for management of the following plausible contingencies that could occur at the facility: natural disaster/severe weather, fire, security incident, capacity/transmission, environmental, chemical, pipeline (if applicable), and medical. It shall include procedures for a site evacuation, designated egress routes and emergency staging areas.
 - (2) The plan shall include a stand-alone section detailing the emergency response protocols specific to battery energy storage areas (if applicable).
 - (3) The plan shall be developed in coordination with local first responders, Woodbury County Emergency Management & Woodbury County Public Health personnel.

15. Slope Stability Analysis Report. A site-specific geotechnical report shall be submitted by a professional licensed engineer qualified in the field of geotechnical engineering, registered in the State of Iowa, and prepared in accordance with generally accepted geotechnical and environmental engineering practices to assess the potential risk of slope instability or landslide for the proposed development in its existing and post developed state. The report shall confirm that the project area is not contained in locations with slopes exceeding five percent (5%).

16. Corn Suitability Rating 2 (CSR2). The CSR2 weighed average shall be provided for the project area. The average CSR2 is to be calculated using current Soil Survey Geographic Database (SSURGO) data furnished

17. Future Operators. Future operators, successors, assignees, or heirs shall agree in writing to accept and to conform to all conditions of approval in the staff report. Prior notice to the County of the intent to sell or transfer ownership shall be done in a timely manner. Such agreement shall be filed with and accepted by the County before the transfer to a new operator, successor, assignees, or heirs shall be effective.

18. Severability

A. Should any section or provisions 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.

19. Penalty

A. Any person, persons, firms, partnerships or corporations, whether acting alone or in concert with any other, who violates this Ordinance shall be guilty of a simple misdemeanor as authorized by Iowa Code Section 331.302.

20. Effective Date

A. This Ordinance shall be in effect after its final passage, approval, and publication as provided by law.

Consideration 3 - Utility-Scale Solar Energy Systems Overlay Zoning District Rough Draft Language**Section 5.08 Utility-Scale Solar Energy Systems Overlay District**

- A. Purpose and Intent.** The Utility-Scale Solar Energy Systems Overlay District (US-SESO) is intended to be mapped as an overlay of the Agricultural Preservation (AP) Zoning District. The US-SESO zone is intended to allow for the orderly development of utility-scale solar energy projects including utility-scale solar energy systems, utility-scale battery energy systems, community solar systems, and agrisolar or agrivoltaic systems. This section establishes an overlay district that serves the following purposes:
- (1) To provide a reasonable and thoughtful balance to limited development and use of utility-scale energy systems in the AP Zoning District.
 - (2) To encourage the continued role of agriculture as the primary economic sector in the unincorporated areas of Woodbury County and the continued preservation of its rural character.
 - (3) To encourage development that conforms to the vision, goals, and policies in the Woodbury County Development Plan.
 - (4) To encourage sustainable and energy efficient development and reasonable access to renewable energy not limited to solar.
 - (5) To maintain or enhance soil health for future agricultural use after project decommissioning.
- B. Allowed Uses.** The specific land uses allowed as principal allowed, conditional and accessory in the AP Zoning District are allowed in the US-SESO in addition to the following use(s) which are hereby established as conditional uses:
- (1) Utility-Scale Solar Energy Systems (US-SES)
 - (2) Utility-Scale Battery Energy Systems (US-BES) Required
 - (3) Community Solar Systems
 - (4) Agrisolar
- C. Area Limitations.** The US-SESO shall be capped to 10,000 acres over the Agricultural Preservation (AP) Zoning District. No more than 10,000 acres shall be established as the overlay of the Agricultural Preservation (AP) Zoning District. Each granted Zoning Ordinance Map Amendment (rezone) shall reduce the cap by the number of acres approved in each rezone until the original 10,000 acres cap is reduced to 0.
- D. Dimensional Standards.** Section 3.04 includes a table of comparative dimensional standards for all zones. The dimensional standards of the AP Zoning District shall apply to the US-SESO unless otherwise specified in this Ordinance.
- E. Grading, erosion and sedimentation control.** All grading activity must be in compliance with the grading erosion/sediment control regulations of Woodbury County and the Iowa Department of Natural Resources.

- F. Supplemental regulations. All pertinent provisions of Article 5, Supplemental Regulations, shall apply to uses and development in the US-SESO Zoning District.

Section 5.09: Utility-Scale Energy Systems Overlay Rezone Process

1. Authority. The Board of Supervisors shall amend the zoning district map to provide a Utility-Scale Solar Energy Systems Overlay District (US-SESO) pursuant to the procedures set out in this Ordinance and Section 335 of the Iowa Code.
2. Purpose. As set forth in subsection 5.08, The US-SESO is intended to allow for the orderly development of utility-scale energy system projects. As the title describes, the US-SESO is not intended to be a free-standing zoning district; it is to be applied as an overlay to an existing Zoning District.
3. Procedure. The procedure for amending the zoning ordinance map is to create a US-SESO is the same as rezoning to one of the base zones as described in subsection 2.02-4 above with the exception of the following requirements that shall be met:
 - A. The average Corn Suitability Rating 2 (CSR2) of the area to be rezoned shall not exceed 65 unless 51% or more of each parcel to be rezoned shall be used for agricultural production.
 - B. The area to be rezoned contains a soil slope of no more than 5% only for fixed arrays in order to preserve the land and to account for soil erosion, compaction, and future land stewardship.
 - C. No portion of the US-SESO may be located within the Special Flood Hazard Area (SFHA) including the 100-Year and 500-Year Floodplain.
4. Application Materials: In addition to all submittal requirements of a Zoning Ordinance Map Amendment (rezone) application as per **Section ____**, the submittal requirements for the Utility-Scale Solar Energy Systems Conditional Use contained in **Section ____** shall be submitted with this application for the US-SESO district and shall include the following information supplied by the utility scale installation owner, operator or contractor:
 - A. A certified abstractor listing of the names and mailing addresses of all owners of real property lying within one (1) mile from the subject property shall be provided with the application.
 - B. The name and address of the applicant, as well as the proposed owners or operators of the project, including the contact information (name, address, telephone and email) of their authorized representatives. The application shall designate the entity who requests the rezone to the US-SESO and the Conditional Use Permit.
 - C. Corn Suitability Rating 2 (CSR2). The CSR2 weighed average shall be provided for the project area. The average CSR2 is to be calculated using current Soil Survey Geographic Database (SSURGO) data furnished by the United States Department of Agriculture Natural Resources Conservation Service (NRCS).
 - D. Slope Stability Analysis Report. A site-specific geotechnical report shall be submitted by a professional licensed engineer qualified in the field of geotechnical engineering, registered in the State of Iowa, and prepared in accordance with generally accepted geotechnical and environmental engineering practices to assess the potential risk of slope instability or landslide for the proposed

Woodbury County Community & Economic Development (Planning & Zoning)
development in its existing and post developed state. The report shall confirm that the project area is not contained in locations with slopes exceeding five percent (5%).

- E. The application requirements of Sections 2.02.9, 5.08, 5.09 and other requirements within this ordinance shall be provided with the application.
- F. A development plan shall be provided as specified in this Ordinance.

Consideration 4**Section 5.08 Utility-Scale Solar Energy Systems Overlay District**

G. Purpose and Intent. The Utility-Scale Agrisolar Energy Systems Overlay District (US-SESO) is intended to be mapped as an overlay of the Agricultural Preservation (AP) Zoning District. The US-SESO zone is intended to allow for the orderly development of utility-scale agrisolar or agrivoltaic systems. This section establishes an overlay district that serves the following purposes:

- (1) To provide a reasonable and thoughtful balance to limited development and use of utility-scale agrisolar or agrivoltaic systems in the AP Zoning District.
- (2) To encourage the continued role of agriculture as the primary economic sector in the unincorporated areas of Woodbury County and the continued preservation of its rural character.
- (3) To encourage development that conforms to the vision, goals, and policies in the Woodbury County Development Plan.
- (4) To encourage sustainable and energy efficient development and reasonable access to agrisolar or agrivoltaic systems.
- (5) To maintain or enhance soil health for future agricultural use after project decommissioning.

H. Allowed Uses. The specific land uses allowed as principal allowed, conditional and accessory in the AP Zoning District are allowed in the US-SESO in addition to the following use(s) which are hereby established as conditional uses:

- (1) Agrisolar or Agrivoltaic utility-scale solar systems

- I. Area Limitations.** The US-SESO shall be capped to 10,000 acres over the Agricultural Preservation (AP) Zoning District. No more than 10,000 acres shall be established as the overlay of the Agricultural Preservation (AP) Zoning District. Each granted Zoning Ordinance Map Amendment (rezone) shall reduce the cap by the number of acres approved in each rezone until the original 10,000 acres cap is reduced to 0.
- J. Dimensional Standards.** Section 3.04 includes a table of comparative dimensional standards for all zones. The dimensional standards of the AP Zoning District shall apply to the US-SESO unless otherwise specified in this Ordinance.
- K. Grading, erosion and sedimentation control.** All grading activity must be in compliance with the grading erosion/sediment control regulations of Woodbury County and the Iowa Department of Natural Resources.
- L. Supplemental regulations.** All pertinent provisions of Article 5, Supplemental Regulations, shall apply to uses and development in the US-SESO Zoning District.

Section 5.09: Utility-Scale Energy Systems Overlay Rezone Process

- 5. Authority.** The Board of Supervisors shall amend the zoning district map to provide a Utility-Scale Solar Energy Systems Overlay District (US-SESO) pursuant to the procedures set out in this Ordinance and

Section 335 of the Iowa Code.

6. Purpose. As set forth in subsection 5.08, The US-SESO is intended to allow for the orderly development of utility-scale energy system projects. As the title describes, the US-SESO is not intended to be a free-standing zoning district; it is to be applied as an overlay to an existing Zoning District.
7. Procedure. The procedure for amending the zoning ordinance map is to create a US-SESO is the same as rezoning to one of the base zones as described in subsection 2.02-4 above with the exception of the following requirements that shall be met:
 - D. Fifty-one percent (51%) or more of each parcel to be rezoned shall be used for agricultural production.
 - E. The area to be rezoned contains a soil slope of no more than 5% only for fixed arrays in order to preserve the land and to account for soil erosion, compaction, and future land stewardship.
 - F. No portion of the US-SESO may be located within the Special Flood Hazard Area (SFHA) including the 100-Year and 500-Year Floodplain.
8. Application Materials: In addition to all submittal requirements of a Zoning Ordinance Map Amendment (rezone) application as per **Section**____, the submittal requirements for the Utility-Scale Solar Energy Systems Conditional Use contained in **Section**____ shall be submitted with this application for the US-SESO district and shall include the following information supplied by the utility scale installation owner, operator or contractor:
 - G. A certified abstractor listing of the names and mailing addresses of all owners of real property lying within one (1) mile from the subject property shall be provided with the application.
 - H. The name and address of the applicant, as well as the proposed owners or operators of the project, including the contact information (name, address, telephone and email) of their authorized representatives. The application shall designate the entity who requests the rezone to the US-SESO and the Conditional Use Permit.
 - I. Slope Stability Analysis Report. A site-specific geotechnical report shall be submitted by a professional licensed engineer qualified in the field of geotechnical engineering, registered in the State of Iowa, and prepared in accordance with generally accepted geotechnical and environmental engineering practices to assess the potential risk of slope instability or landslide for the proposed development in its existing and post developed state. The report shall confirm that the project area is not contained in locations with slopes exceeding five percent (5%).
 - J. The application requirements of Sections 2.02.9, **5.08**, **5.09** and other requirements within this ordinance shall be provided with the application.
 - K. A development plan shall be provided as specified in this Ordinance.

Woodbury County Community & Economic Development (Planning & Zoning)
APPENDIX

Minutes - Woodbury County Zoning Commission Special Meeting – September 11, 2023

The Zoning Commission (ZC) special meeting convened on the 11th of September at 5:00 PM at the Movable Community Center in Movable, Iowa. The meeting was also made available via teleconference.

ZC Members Present: Chris Zellmer Zant, Corey Meister, Jeff O'Tool, Tom Bride
County Staff Present: Dan Priestley, Dawn Norton
Public Present: Angie Heck, Tony Heck, Kim Luze, Rich Luze, Vicki Atwell, Steve Mrla, Leo Jochum, Bev Jochum, Janet Yanak, Tony Yanak, Dennis Ragan, JoAnn Sadler, Zach Hummel, Wally Wagner, John Johnston, Jeremy Taylor, Kevin Heck, Kyle Gates, Eric Nelson, Elizabeth Widman, Rebekah Moerer, Genise Hallowell, Kalyn Heetland, Josh Heetland, Elisabeth Cendejas, Jesus Cendejas, Robert Knaack, Greg Jochum, Brad Jochum, Tom Jochum, Bob Fritzmeier

Call to Order

Chair Chris Zant formally called the meeting to order at 5:00 PM. Four Commissioners were present. Commissioner Parker was absent.

Public Comment on Matters Not on the Agenda

None

Approval of Previous Meeting Minutes – July 24, 2023

O'Tool motioned to approve the minutes from July 24, 2023. Second: Bride. Motion carried: 4-0.

Formal approval of Zoning Commission Rules of Procedure

At the July 24, 2023 meeting of the Zoning Commission, the rules of procedure were approved and sent to the Board of Supervisors who voted to approve the rules on August 8, 2023. Motion to formally adopt the rules and authorize the chair to sign the Rules of Procedure by Meister. Second: O'Tool. Motion carried: 4-0.

Public Hearing: Proposed Janet Heck Subdivision (Parcel #874724300005)

Priestley read the preliminary report and staff recommendation into the record. Kevin Heck, executor for Janet K. Heck has filed for a one (1) lot minor subdivision on the property identified as Parcel #8747243000005. This subdivision is being completed to separate the house location from the farm ground. This agricultural subdivision proposal has been properly noticed in the Sioux City Journal legal section on August 29, 2023. The neighbors within 1000 FT have been duly notified via an August 23, 2023 letter about the September 11, 2023 Zoning Commission public hearing. Appropriate stakeholders including government agencies, utilities, and organizations have been notified and have been requested to comment. The Woodbury County Engineer found the proposal in compliance with Iowa Code closure requirements and found that the lot(s) have adequate access. This property is located in the Agricultural Preservation (AP) Zoning District and is located in the Special Flood Hazard Area (SFHA) – Zone A. The City of Salix waived their extraterritorial review authority with the approval of Resolution No. 2023-20. The area of the subdivision is less than 5 acres and the Base Flood Elevation (BFE) data is not required. Based on the information received and the requirements set forth in the Zoning and Subdivision Ordinance, the proposal meets the appropriate criteria for approval. Motion to close public hearing: O'Tool. Second: Bride. Carried: 4-0. Motion to recommend the approval to the Board of Supervisors as proposed: O'Tool. Second: Meister. Motion carried: 4-0.

Public Hearing: Proposed Zoning Ordinance Map Amendment (Rezoning) (Parcel #884506200006)

Priestley read into record the preliminary report and staff recommendation. Richard and Kimberly Luze (Applicants/Owners) have filed a Zoning ordinance Map Amendment application with Woodbury County to request their property (Parcel #884506200006) be rezoned from Agricultural Preservation (AP) Zoning District to the Agricultural Estates (AE) Zoning District. The applicants are making this request to pursue an eventual split of their parcel to facilitate the ability to add a neighboring single-family dwelling in the future as there are presently two houses located within the existing quarter-quarter section. The split will likely consist of approximately three acres from the existing 18+ acres. This will be initiated at a future date. The neighbors within 1000 FT have been notified via an August 23, 2023 letter about the September 11, 2023 Zoning Commission public hearing. Appropriate stakeholders including government agencies, utilities, and organizations have been notified and have been requested to comment. This property is located in the Agricultural Preservation (AP) Zoning District and is not located in the floodplain. This requested zoning change is compliant with the future land use map of Woodbury County's development plan as this area is designated within the rural residential area. Based on the information received and the requirements set forth in the Zoning and Subdivision Ordinance, the proposal meets the appropriate criteria for approval. Staff recommends approval. Priestley has received some phone inquiries regarding future land uses. A Neighboring landowner spoke with concerns of possible subdivisions and increasing density. Priestley stated with Hwy 20 abutting the land, the state

would likely not allow more driveways off Hwy 20. If additional land splits were requested through a subdivision application, there would be public conversations and meetings. Ms. Atwell expressed concerns if a subdivision would go in and how it could affect her cattle farming. Bride stated it would have no impact on what she is currently doing and stated communication between landowners is important. Steve Mrla stated DOT could build a frontage road which would allow more access. Bride discussed how eliminant domain should not be used for private use. Bride motioned to close public hearing. Second: Meister. Carried: 4-0. Motion to recommend the approval to the Board of Supervisors as proposed: Meister. Second: Bride. Motion carried: 4-0.

Public Hearing: Utility-Scale Solar Systems – Consideration of Solar Ordinances for Recommendation(s) to the Board of Supervisors

Priestley read into the record the direction by the Woodbury County Board of Supervisors that occurred on August 8, 2023 for Planning and Zoning and the Zoning Commission to establish/examine a new ordinance as it relates to utility-scale solar systems. The purpose of this public hearing is to receive comments from the public about solar energy systems not limited to utility-scale solar systems, agrisolar or agrivoltaics, and community solar systems as the Commission works toward preparing a recommendation for a proposed ordinance or amendments to the Woodbury County Zoning ordinance to address the permitting process for such systems in industrial and/or agricultural areas. The Board of Supervisors have indicated that “if the county was to engage in utility-scale solar, at minimum, the county should consider this only if the following is met”:

- A conditional use permit for AP “C” with Planning and Zoning and Board of Adjustment to be able to site-specifically take into consideration the concerns of neighbors, land/soil, and other factors when approving permit.
- A slope of no more than 5% in order to preserve the land and to account for soil erosion, compaction, and future land stewardship.
- A maximum height of no more than 20’ for panel structures.
- Of all AP, no more than 49% can be in such a project. In short, 51% must be for agricultural production or no longer considered “AP.”
- Utility solar can be no more than 2% of all AP “agricultural preservation,” preserving 98% of AP. This equates to approximately 8,540 acres of the 427,000 acres of ag land, ag land constituting 75% of the 570,000 total acres in Woodbury County.
- Current notification for utility-scale solar shall be 1 mile for public comment instead of 500 feet.
- A requirement (or at least strong consideration) that the utility-scale solar project either be on a landowner’s property or that the owner of the land be a resident of Woodbury County.

Priestley identified additional comments/resources that were received after the printing of the Zoning Commission agenda packet with backup materials. In particular, resources were received from the Center of Rural Affairs, the Northwest Iowa Power Cooperative (NIPCO), the Woodbury County Rural Electric Cooperative, and the Iowa Land & Liberty Coalition. Additionally, Priestley provided a copy of a map illustrating soil content with less than 5% slopes in comparison with soils with CSR2 ratings greater than 65 and 75. Priestley then offered a summary of potential approaches that could be taken to craft an ordinance including which entity would be in charge of the permitting. Looking at other counties, there is a mix of permitting utility-scale solar based on a conditional use permit via the Zoning Commission and Board of Adjustment in comparison with a standalone home rule ordinance where the Board of Supervisors are the permitting body. Priestley indicated that the following concepts would be up for discussion as an ordinance is considered: Certified Abstractor’s Listing – Public Notification Area; Site Plan; Setbacks; Height; Protected Areas; Slope; Landscaping/Buffer/Screening; Fencing/Security; Signage; Lighting; Noise; Outdoor Storage; Utility Plan / Utility Connections / Agreements; Floodplain; Habitat and Natural Resource Considerations; Solar Glare Minimization; Weed Control; Grading Plan; Compliance with applicable laws (local, state, federal); Access; Road Use; Aviation Protection; Maintenance, Repair, or Replacement / Repowering; Waste; Soil Erosion / Sediment Control; Stormwater Management; Administration / Enforcement / Violations; Emergency Management; Timeline; Safety; Abandonment / Cessation of Operations; Decommissioning and Reclamation; Fees; Agrivoltaics / Agrisolar; Community Solar Systems; Concentrating Solar Power; Solar definitions; Etc.

The following paraphrased public comments were offered:

Greg Jochum (Salix) addressed the Commission regarding the differences between CSR1 and CSR2 as well as height.

Brad Jochum (Plymouth County) addressed the Commission regarding out of county ownership.

Tom Jochum (Sgt. Bluff) addressed the Commission regarding the advantages of solar.

Eric Nelson (Moville) addressed the Commission regarding solar as a commercial/industrial entity.

Woodbury County Community & Economic Development (Planning & Zoning)

Ron Wood (Salix) addressed the Commission regarding the need for solar power generation for growth.

Elizabeth Widman (Sgt. Bluff) addressed the Commission regarding the stewardship and protection of agricultural land from solar development.

Bob Fritzmeier (Sioux City) addressed the Commission regarding how solar installations help soil to rejuvenate and help the wildlife population.

Leo Jochum (Salix) addressed the Commission regarding renewable energy rates, vegetation for screening, capping AP land at 2%, and soil rejuvenation.

Kim Alexander (Smithland) addressed the Commission regarding money as a principal purpose for solar.

Will Dougherty (Urbandale) addressed the Commission on how MidAmerican works with various stakeholders as they pursue solar projects and offered an opportunity to tour the Port Neal solar site.

Ann Johnston (Salix) addressed the Commission with concerns on the impact of the farm ground and keeping the land the way it is.

Wally Kuntz (Moville) addressed the Commission inquiring about the tax income.

Supervisor Jeremy Taylor (Sioux City) addressed the Commission and responded to Mr. Kuntz's inquiry about generation usage tax.

Bride asked Will Dougherty from MidAmerican where the largest project was in Iowa, Dougherty stated Holiday Creek, north of Fort Dodge has an 800-acre, 100 M/Watt project. 8 acres generally produces 1 M/Watt.

Bride asked if there have been any requests to the Iowa Utilities Board for eminent domain for a commercial solar project.

Eric Nelson asked Dougherty about storage of excess power. Dougherty stated it is not an on-demand system. The grid goes where needed first, then to next load center. Port Neal is an on-demand system. Dougherty stated coal system is used as a back up to solar.

Motion to close public hearing: Meister. Second: O'Tool. Carried: 4-0.

Priestley thanked the attendees for their comments and questions. The information gathered will be taken into consideration as a proposal is prepared and possibly recommended by the Zoning Commission that would eventually go to the Board of Supervisors for up to three hearings. The next meeting of the Zoning Commission will be held on Monday, September 25 at 5:00 PM in the basement meeting room of the Woodbury County Courthouse where the Board of Supervisors meet.

Public Comment on Matters Not on the Agenda

None.

Commissioner Comment or Inquiry

None.

Staff Update

Priestley stated that the minor subdivision and rezone that were recommended this evening will be sent to the Board of Supervisors for consideration at future meeting(s).

Adjourn

Motion by Bride to adjourn; Second by O'Tool. Carried: 4-0. Adjourned: 6:34 p.m.

Minutes - Woodbury County Zoning Commission – September 25, 2023

The Zoning Commission (ZC) meeting convened on Monday, September 25 at 5:00 PM in the Board of Supervisors' meeting room in the Basement of the Woodbury County Courthouse, 620 Douglas Street, Sioux City, IA. The meeting was also made available via teleconference.

ZC Members Present: Chris Zellmer Zant, Corey Meister, Jeff O'Tool, Tom Bride, Barb Parker
County Staff Present: Dan Priestley, Dawn Norton
Public Present: Greg Jochum, Gwen Brunk, Roger Brunk, Russell Petersen, Tom Jochum, Brian Jochum, Leo Jochum, Blair Ulery, Jarrod Ulery, Bill Jochum, Tony Ashley, Dan Bittinger, Alan Fagan, Rebekah Moerer, Elizabeth Widman, Deb Harpenau, Kevin Alons, Jenny Barber, Rex Barber, Jesus Cendejas, Peter Widman, Sophia Widman, Emily Segura, Ann Johnston
Will Dougherty

Telephone:

Call to Order

Chair Chris Zant formally called the meeting to order at 5:04 PM. All five (5) Commissioners were present.

Public Comment on Matters Not on the Agenda

None

Approval of Previous Meeting Minutes – September 11, 2023

Meister motioned. Second: O'Tool. Motion carried: 5-0.

Public Hearing: Townley Addition, Minor Subdivision Proposal on Parcel #894607100007

Priestley read the preliminary report into the record. Donald J Townley, in his capacity as Trustee of the Derrill J. Townley Revocable Trust has filed for a one (1) lot minor subdivision on the property identified as Parcel #894607100007. This subdivision is being completed to separate the house location from the abutting ground. This proposal has been properly noticed in the Sioux City Journal legal section on September 14, 2023. The neighbors within 1000 FT have been duly notified via a September 11, 2023 letter about the September 25, 2023 Zoning Commission public hearing. Appropriate stakeholders including government agencies, utilities, and organizations have been notified and have been requested to comment. The Woodbury County Engineer found the proposal in compliance with Iowa Code closure requirements and found that the lot(s) have adequate access. This property is located in the Agricultural Preservation (AP) Zoning District and is located in the Special Flood Hazard Area (SFHA) – Zone A. The City of Sioux City conducted extraterritorial review with the acceptance and approval of the final plat with the approval of Resolution No. 2023-0696. The area of the subdivision is less than 5 acres and Base Flood Elevation (BFE) data is not required. Based on the information received and the requirements set forth in the Zoning and Subdivision Ordinance, the proposal meets the appropriate criteria for approval. The Woodbury County Engineer recommended an easement which was prepared. Motion to close public hearing: Bride. Second: O'Tool. Carried: 5-0. Motion to recommend approval to the Board of Supervisors as proposed: O'Tool. Second: Bride. Motion carried: 5-0.

Review of Conditional Use Permit Application: Proposed Telecommunication Tower 120 FT Monopole on Parcel #874316300005

Priestley read the preliminary report into the record. AGM Technology Investment Group DBA Nextlink have filed a conditional use permit application to request to install a 120-monopole communication tower to supply high speed internet to surrounding areas on the property designated as Parcel #874316300005. The proposed location is around 2.5 miles south of Anthon and about 4.2 miles northeast of Oto. This proposal has been noticed in the Sioux City Journals legal section on September 14, 2023. The neighbors within one (1) mile were duly notified via a September 13, 2023 letter about the October 2, 2023 Board of Adjustment public hearing. Appropriate stakeholders including government agencies, utilities, and organizations have been requested to comment. This property is located in the Agricultural Preservation (AP) Zoning District. Based on the information received and the requirements set forth in the Zoning Ordinance, the proposal meets the appropriate criteria for approval of the conditional use request. It is the recommendation of staff to approve the proposal. Motion to recommend the proposal to Board of Adjustment: O'Tool. Second: Parker. Motion carried 5-0.

Public Hearing: Solar Energy – Utility-Scale Solar Systems – Consideration of Solar Ordinances for Recommendations(s) to the Board of Supervisors

Priestley summarized the utility-scale solar energy system process including eight topics to be discussed at this meeting. The Woodbury County Zoning Commission has been directed by the Board of Supervisors on August 8, 2023 to establish/examine a new ordinance as it relates to utility-scale solar systems. The purpose of this public hearing is to receive comments from the public about a potential ordinance that could facilitate the permitting of utility solar in the Agricultural Preservation (AP) Zoning District in addition to the General Industrial Zoning District. The Zoning Commission held their first public hearing at the Merville Area Community Center on September 11, 2023. The Board of Supervisors have indicated, through their direction on August 8, that "if the county was to engage in utility-scale solar, at a minimum, the county should consider this only if the following is met":

Woodbury County Community & Economic Development (Planning & Zoning)

- A conditional use permit for AP “C” with Planning and Zoning and Board of Adjustment to be able to site-specifically take into consideration the concerns of neighbors, land/soil, and other factors when approving permit.
- A slope of no more than 5% in order to preserve the land and to account for soil erosion, compaction, and future land stewardship.
- A maximum height of no more than 20' for panel structures.
- Of all AP, no more than 49% can be in such a project. In short, 51% must be for agricultural production or no longer considered “AP”.
- Utility solar can be no more than 2% of all AP “agricultural preservation,” preserving 98% of AP. This equates to approximately 8,540 acres of the 427,000 acres of ag land, ag land constituting 75% of the 570,000 total acres in Woodbury County.
- Current notification for utility-scale solar shall be 1 mile for public comment instead of 500 feet.
- A requirement(or at least strong consideration) that the utility-scale solar project either be on a landowner’s property or that the owner of the land be a resident of Woodbury County.

Priestley also informed the Commission and the public that the Board of Supervisors have an agenda item for their September 26, 2023 meeting that may update the previous direction. The potential new direction would include the following:

- A conditional use permit for AP “C” with Planning and Zoning and the Board of Adjustment to be able to site-specifically take into consideration the concerns of neighbors, land/soil, and other factors when approving permit.
- A slope of no more than 5% ONLY for fixed arrays (most technology is now movable arrays) in order to preserve the land and to account for soil erosion, compaction, and future land stewardship.
- No more than 1% of industrial land conversion every 4 years for reclassification, roughly 5,700 acres.
- Current notification for utility-scale solar shall be 1 mile for public comment instead of 500 feet.
- A decommissioning plan from solar companies reviewed by P&Z/BOA subject to approval by the Woodbury County Board of Supervisors.

Matt Countryman (Renewable Energy Equity Partners) addressed the Commission regarding the importance of mitigation and ag restoration of land, and support of an overlay district.

Deb Harpenau (Salix) addressed the Commission supporting utility solar as a clean source of electrical generation.

Wally Wagner (Salix) addressed the Commission about progress, and change he has seen regarding his land, and types of land that would not be good for solar.

Jerrold Ulery (Ulery Energy) addressed the Commission supporting solar energy.

Kevin Alons (Salix) addressed the Commission regarding the use of solar on agricultural land as not an ag use, heavily subsidized, and questioned revenue for county.

Rebecca Moerer (Sioux City) addressed the Commission about not supporting solar in agriculture areas as it disturbs wildlife, and questions whether revenue would go.

Jesus Cendejas (Salix) addressed the Commission expressing concern for landowner stewardship, land depreciation, and impact of solar on neighbors.

Elizabeth Widman (Sergeant Bluff) addressed the Commission offering environmental concerns, impact on neighbors, glare, and noise issues.

Leo Jochum (Salix) addressed the Commission in favor of utility solar indicating that solar can co-exist with reasonable setbacks.

Ann Johnston (Salix) addressed the Commission opposing utility solar and questioning its recyclability

Will Dougherty (MidAmerican Energy) addressed the Commission indicating that there is not a one size fits all approach, plans could be put in place for decommissioning, buffers, and screening.

Leo Jochum submitted information sheet to Commissioners. Motion to accept: O’Tool. Second: Parker. Carried: 5-0. See received content beginning on Page 4 of the minutes.

Priestley presented photo of the utility solar system abutting Port Neal Road. He also should example photos of agrisolar or agrivoltaics.

Priestley provided a range of topics as an overview for a potential ordinance including: appropriate locations; ordinance type(s); process type(s); information collection; permitting requirements; and definitions. Priestley also discussed the concept of an “overlay district” which could be used in conjunction with the existing underlying zoning district. In particular, an overlay district is not intended to be a free-standing zoning district. It is applied to the

project area or footprint via the Zoning Ordinance Map Amendment (rezone) process. Specific standards or requirements can be directly tied to the overlay district. Thus, it is possible to create a series of requirements in which a proposed location would have to be met in order to be considered for the rezone to the overlay district. Therefore, as a hypothetical, the Zoning Commission and Board of Supervisors could consider a Zoning Ordinance Map Amendment (rezone) application to the Utility-Scale Solar Energy Systems Overlay District following the procedures set out in the Ordinance. This overlay could be applied over Agricultural Preservation (AP) zoned land while retaining its base uses. Once, the overlay district has been applied, conditional use permit application could be considered for the footprint of that area by going through a review by the Zoning Commission and consideration of the permit by the Board of Adjustment.

Priestley suggested that the Commission schedule a work study public meeting where the public and commissioners can discuss issues and form a preliminary ordinance or amendments to present to the Board of Supervisors as a recommendation.

Daniel Segura (Sioux City) addressed the Commission questioning the effectiveness of the overlay district as an added step.

Priestley indicated that specific requirements or conditions can be added to the rezone consideration process.

Bride motioned to close public hearing. Second: Parker. Carried: 5-0.

Zellmer Zant stated different applications are considered through different processes. Priestley explained that the overlay district would use the rezone process which requires a public hearing before the Zoning Commission and up to three public hearings before the Board of Supervisors. The Zoning Commission would offer a recommendation to the Board of Supervisors who ultimately would decide the appropriateness of the location. The Conditional Use Permit process would require review by the Zoning Commission and approval by the Board of Adjustment. The Board of Supervisors would be involved with special agreements such as road use and decommissioning. In terms of preparing an ordinance, both the rezone and conditional use processes will need to be defined including the approval/disapproval requirements for both.

Public Comment on Matters not on the Agenda

None

Staff Update

There will be a Board of Adjustment meeting on October 2, 2023 in the basement meeting room of the courthouse. The topic of solar will be shared with the Board only as an information item. The Board of Adjustment does not have a role as to the creation of new ordinances. The Zoning Commission formulates recommendations that are considered by the Board of Supervisors.

Adjourn

Motion by O'Tool to adjourn; Second by Meister. Carried: 5-0. Adjourned: 7:50 p.m.

RECEIVED FROM LEO JOCHUM (SALIX) – 6 PAGES

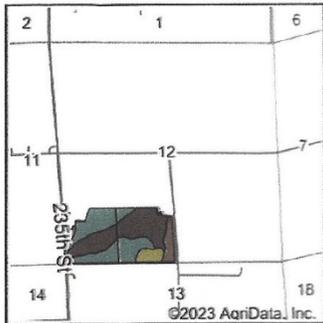
The first sheet is three farms located north of CF industries in the GI zone. Notice the CSR1 is 58 to 60, CSR 2 is around 10 to 12 points higher. This will be consistent throughout the higher quality soil in this area.

The left side of the next sheet shows where the Mid-America solar project is located with a CSR 1&2 of 61.9 and 71.1 respectively

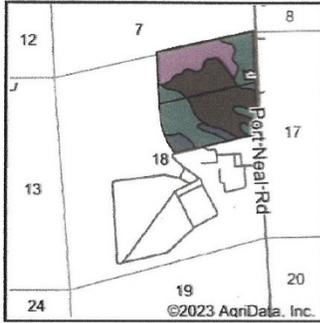
The right side of the page shows over 600 acres between hwy 75 and Interstate 29 with very high CSR1 and CSR2. The farms on these two sheets are within a large area which spans about six miles from east to west and are very consistent in quality. The land being discussed for solar is East of this area which has heavier soils and lower elevation.

The last three sheets represent farms located North and East of Salix that have CSR 1 ratings in the mid 40s with the exception of one. However the CSR2 increases by 30 plus points. The CSR1 rating is more relevant for land quality in that area because CSR2 has removed the rainfall factor. For this reason I don't think CSR should be considered for conditional use.

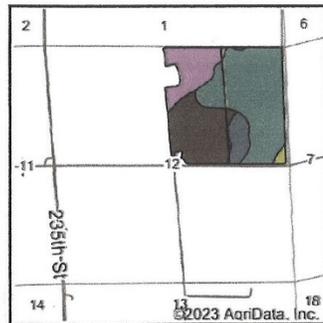
0 J



State: **Iowa**
 County: **Woodbury**
 Location: **12-87N-48W**
 Township: **Liberty**
 Acres: **72.02**
 Date: **9/18/2023**



State: **Iowa**
 County: **Woodbury**
 Location: **18-87N-47W**
 Township: **Liberty**
 Acres: **150.28**
 Date: **9/18/2023**



State: **Iowa**
 County: **Woodbury**
 Location: **12-87N-48W**
 Township: **Liberty**
 Acres: **150.89**
 Date: **9/18/2023**



Irr Class	Irr Class *c	CSR2**	CSR	*n NCCPI	Irr Class	Irr Class *c	CSR2**	CSR	*n NCCPI	Non-Irr Class *c	Irr Class *c	CSR2**	CSR	*n NCCPI	Soybeans
	Iw	Iw	77	63		Iw	Iw	77	63		Is	Is	72	65	80
	IIw	IIw	72	57		Is	Is	72	65		Iw	Iw	77	63	58
	Is	Is	72	65		IIIIs		49	33		IIIIs		49	33	37
	IIw	IIw	45	51		Iw		89	74		Iw	Iw	91	70	74
	IIw		58	51		1.42	*-	70.2	58.1		IVw		5	37	2
	IIIs		46	44							1.36	*-	70.1	59.2	*n 65.7
	1.44	*-	70.7	60											

Mid America Solar Farm



State: **Iowa**
 County: **Woodbury**
 Location: **18-87N-47W**
 Township: **Liberty**
 Acres: **123.17**
 Date: **9/18/2023**



Maps Provided By:



Land	Non-Irr Class *c	Irr Class *c	CSR2**	CSR	*n NCCPI Soybeans
	Is	Is	72	65	80
	Iw	Iw	77	63	58
	Illw		58	51	49
Age	1.35	*-	71.1	61.9	*n 67.7



State: **Iowa**
 County: **Woodbury**
 Location: **21-87N-47W**
 Township: **Liberty**
 Acres: **646.76**
 Date: **9/18/2023**



Maps Provided By:



Non-Irr Class *c	Irr Class *c	CSR2**	CSR	*n NCCPI Soybeans
Iw	Iw	77	63	58
Is	Is	72	65	80
Iw	Iw	94	79	83
Ilw		86	65	60
Illw		58	51	49
Illw		81	47	52
Iw		89	84	75
Ilw	Ilw	72	57	50
Ilw	Ilw	74	65	61
Iw	Iw	91	70	74
		5	5	
Iw		89	74	71
*-	*-	77.8	64.5	*n 66

Please review the previous meeting packets with backup information including past comments and resources. They can be accessed online using the following links.

PREVIOUS MEETING PACKETS WITH BACKUP INFORMATION

September 11, 2023:

- https://www.woodburycountyiowa.gov/files/committees/meetings/2023-09-11_packet_zoning_commission_34199.pdf
- <https://tinyurl.com/Packet91123>

September 25, 2023:

- https://www.woodburycountyiowa.gov/files/committees/meetings/2023-09-25_packet_zoning_commission_66298.pdf
- <https://tinyurl.com/Packet92523>

The subsequent pages include:

- **Public Comments / Information submitted since September 25**
- **Additional Sample Ordinances**

I've researched four Iowa counties and in each instance I've noticed that the Iowa Utilities Board application for utility solar is very in depth and also requires input from the DNR, Soil Conservation Service, County Health, Secondary Roads and other professional agencies to be a part of the development process. Soil management and preservation will be addressed by the conservation service to have a baseline soil sampling implemented with follow up periodic sampling to monitor the quality of the soil which will enable it to be brought back into agricultural production following decommissioning. I think that is very important and positive.

I'm also enclosing some information from the Center for Rural Affairs which addresses some policies that are site specific to certain counties.

Sincerely,
Leo R. Jochum

WOODBURY COUNTY BOARD OF SUPERVISORS AGENDA ITEM(S) REQUEST FORM

Date: 9/21/2023 Weekly Agenda Date: 9/26/2023

ELECTED OFFICIAL / DEPARTMENT HEAD / CITIZEN: Supervisor J. Taylor/M. Nelson

WORDING FOR AGENDA ITEM:

Give Direction to Planning and Zoning/BOA for Further Considerations During Public Hearings Regarding Utility-Scale Zoning

ACTION REQUIRED:

- Approve Ordinance
- Approve Resolution
- Approve Motion
- Public Hearing
- Other: Informational
- Attachments

EXECUTIVE SUMMARY:

The Board of Supervisors unanimously has voiced support for adding solar energy systems (private use) as accessory use in each zoning district and affirming support of solar energy systems (utility scale) in the G1 Zoning District. However, given that AP constitutes roughly 75% of Woodbury County's 875 sq. mi and inherent to Agricultural Preservation is the preservation of agriculture, we have an interest in doing what is inherent in the name: preserving agriculture. Toward that end, we are not against solar but think that the following strikes a very reasonable and thoughtful balance.

During the last item, we asked that consideration of adding utility-scale solar be considered in AP with limitations such as slope (<5%, no more than 2% of all AP be for solar, a "C" for conditional use, notification from 500 ft to 1 mi, at least 51% maintained in agricultural production.)

Upon public hearing comments and further reflection, we offer an alternative to be considered that might be preferable, namely the expansion of "Light Industrial." We would ask that landowners who desire such utility-scale solar be rezoned to this presently constituting only 101 acres of Woodbury County's 570,000 acres. Landowners could continue to farm the land but open up an avenue that would be far preferable than Agricultural Preservation and much more appropriate.

BACKGROUND:

- + A conditional use permit for AP "C" with Planning and Zoning and the Board of Adjustment to be able to site-specifically take into consideration the concerns of neighbors, land/soil, and other factors when approving permit.
- + A slope of no more than 5% ONLY for fixed arrays (most technology is now movable arrays) in order to preserve the land and to account for soil erosion, compaction, and future land stewardship.
- + No more than 1% of industrial land conversion every 4 years for reclassification, roughly 5,700 acres.
- + Current notification for utility-scale solar shall be 1 mile for public comment instead of 500 feet.
- + A decommissioning plan from solar companies reviewed by P&Z/BOA subject to approval by the Woodbury County Board of Supervisors.

FINANCIAL IMPACT:

None



Linn County Utility Scale Solar Scorecard

Planned percent of native species of the entire site's vegetative cover		
	25-35%	+12 points
	36-50%	+20 points
	51-65%	+28 points
	66-80%	+36 points
	>80%	+44 points
	<25%	+0 points

Number of agrivoltaic practices on site		
	1 practice	+5 points
	2 practices	+10 points
	>2 practices	+15 points
	No practices	0 points

Planned number of species in entire site's vegetative cover		
	5-9 species	+8 points
	10-15 species	+12 points
	16-19 species	+16 points
	>20 species	+20 points

Planned percentage of the entire site's vegetative cover that includes flowering plants		
	10-25%	+4 points
	26-50%	+8 points
	51-75%	+12 points
	>75%	+16 points
	No flowering plants	-15 points

Site Planning and Management		
	Site has approved vegetation management plan	+20 points
	Site has approved agricultural impact mitigation plan	+20 points

Planned seasons with at least three blooming species present		
	Spring (April - May)	+5 points
	Summer (June - August)	+5 point
	Fall (September - October)	+5 points

Percent of site in a medium (65-82) CSR area		
	10-25%	-2 points
	26-50%	-3 points
	51-75%	-4 points
	>75%	-5 points

Percentage of site that is graded		
	0-10%	+20 points
	10-30%	+10 points
	30-50%	+0 points
	>50%	-10 points

Percent of site in a high (83-100) CSR area		
	10-25%	-3 points
	26-50%	-4 points
	51-75%	-5 points
	>75%	-6 points

Increased Setbacks		
	No non-participating dwellings within 300' of project boundaries	+0 points
	No non-participating dwellings within 500' of project boundaries	+30 points
	No non-participating dwellings within 750' of project boundaries	+35 points
	No non-participating dwellings within 1,000' of project boundaries	+40 points
	No non-participating dwellings within 1,250' of project boundaries	+45 points

Percent of site in a low (<65) CSR area		
	10-25%	+6 points
	26-50%	+8 points
	51-75%	+10 points
	>75%	+12 points



Linn County Utility Scale Solar Scorecard

Average Solar Panel Height		
	>24"	+5 points
	>26"	+10 points
	>28"	+15 points
	>30"	+20 points
	>32"	+25 points

Exceptional Good Neighbor Practices		
	Good neighbor payments for adjacent non-participating landowners	+10 points
	Good neighbor payments for tenant farmers displaced by the project	+10 points
	Agreement to source labor locally	+15 points

- **For projects 25 MW or larger, we recommend that the county accept the Application for a Certificate, required by the Iowa Utilities Board, in lieu of a separate county application.**

GENERAL REQUIREMENTS

County ordinances may include a number of site and structure requirements, many of which are discussed in further detail within this document. Some counties may ask for this information as part of a “site plan.” Items required in an application for a utility-scale solar energy system may include:

- 1) Name of applicant.
- 2) Name of the project owner.
- 3) Description of the project — number of modules, manufacturer, mounting type, system height, system capacity, total land area covered by the system, and information about associated facilities like substations, feeder lines, battery storage, etc.
- 4) Legal description of the property where the solar energy system will be located.
- 5) Map of the project location and the surrounding area.
- 6) A decommissioning plan outlining the process for system removal—including individual modules and mounting—and property restoration before an easement is returned to a landowner.
- 7) Evidence of a power purchase agreement or interconnection application for the project.
- 8) Consultation with or notifications from relevant state and federal agencies showing the project will not be a hazard to wildlife, communications, air traffic, etc.
- 9) Documentation of easement locations acquired for solar energy systems and associated facilities.

Because the IUB requires similar types of information as part of the Generating Certificate application process, we recommend that for projects above 25 MW, counties accept the information submitted in such an application to the IUB in lieu of a separate application to avoid duplication.

SETBACKS

RECOMMENDATIONS:

- **Property line setbacks should not exceed 50 feet; setbacks from occupied residences should stay within a range of 100 to 200 feet.**
- **Counties should include waiver provisions allowing for the county to waive the mandated setback distance with the consent of the participating landowner and adjacent property owner.**
- **No setbacks should be required if a property line is shared by two participating landowners.**

Counties may choose to put into place setbacks, which specify the required distance of the project from homes, roads or existing rights-of-way, property lines, and other locations. Unlike setbacks for wind turbines, which are intended to address rare but dangerous scenarios such as turbine collapse, there are no safety concerns that point to the necessity of a specific setback requirement for solar facilities. Before putting setbacks into place, counties should consider the issues that a setback is meant to address and whether there is a separate project requirement that may better address it. While some level of setback may be appropriate, officials should carefully consider setback distances and the limits they may place on future development.

Many counties require solar installations to follow the same setback requirements (from property lines and rights of way) as other structures in the zoning district where they are located. Some counties opt for prescribed setback distances from property lines and occupied structures.

SETBACKS FROM RESIDENCES AND PROPERTY LINES

Some counties require specific setback distances between the solar system and property lines of occupied residences.

According to our research, a 50 foot property line setback is included in a number of ordinances from Iowa's neighboring states. A 100 to 200 foot setback for residential dwellings is also common, with some ordinances at 100 feet, some at 150 feet and some at 200 feet. These distances seem workable for developers, participants, and nonparticipants.

Utility-scale solar energy systems are likely to be sited in zones where residential dwellings are uncommon but may occur (agriculture, industrial, commercial). Counties can adopt an occupied structure setback that both reflects the needs and local characteristics of these zones and stays within the 100 to 200 foot range. There is no justification for larger setbacks from a safety perspective and larger setback distances would unnecessarily limit solar development in a county.

We recommend that property line setbacks do not exceed 50 feet from a property line and stay within a range of 100 to 200 feet from an occupied residence.

SETBACKS BASED ON ZONING DISTRICT

Although we recommend counties adopt specific setback distances for solar systems, counties could also choose to follow the minimum setback requirements of the zoning district where they are located, similar to Linn and Clinton Counties.

Since structures or vegetation on neighboring properties may cast shadows onto a solar system, causing a decline in solar panel efficiency, Linn County recommends greater setbacks in lieu of a "solar access agreement." These agreements are discussed in further detail later in this document.

Community solar projects may be appropriate in more types of zoning districts, including those in or closer to residential neighborhoods, especially if participants in community solar live in those districts. For this reason, counties should consider using the setback requirements of the zoning area



where the project is located to govern the solar facility. Further considerations for community solar projects are discussed later in this guide.

SHARED PROPERTY LINES

When a solar array is built across the property line of two participating landowners, no property line setback is required in Louisa County: ¹⁴

[Solar Farm Energy Systems] to be built on more than one parcel and parcels are abutting, a zero (0) side or rear setback shall be permitted to the property line in common with the abutting parcel(s).

In the case that a property line is shared by two participating landowners, a setback serves no purpose so we recommend this as a best practice.

RIGHTS OF WAY

A county may require a specific setback distance from a roadway. In counties with zoning, we recommend using the right of way setback standards for principal or accessory use structures specific to the zoning district where the project is located. In counties without zoning, we recommend consultation with right-of-way operators to ensure that projects do not disrupt current or planned use.

WAIVERS OR NEGOTIATED SETBACKS

Waivers are an important tool to improve flexibility and allow for the potential for additional land area to become available for solar development. However, providing a waiver is not a substitute for a setback policy that can enable cost-effective solar development.

Louisa County allows for written waiver agreements to be executed pursuant to the specific requirements set forth in the ordinance along with approval by the Zoning Board of Adjustment.

We recommend that counties allow for a waiver of the mandated setback distance with the consent of the participating landowner and adjacent property owner.

ADDITIONAL SITING STANDARDS

RECOMMENDATIONS:

- **Counties should carefully consider whether site and structure provisions are unnecessarily restrictive.**
- **Counties should allow for and encourage the project operator or owner to invest in fencing that facilitates movement of wildlife and pollinators.**
- **Solar access agreements should be facilitated by counties using Iowa Code § 564A.1 to guide their process.**



- **Counties should require appropriate safety warnings and signage at solar facilities.**

County officials should carefully consider whether site and structure provisions are unnecessarily restrictive. Well-established solar zoning guides describe the importance of avoiding inadvertent obstacles in an ordinance's major provisions:

From the American Planning Association (APA): "Even in cases where zoning codes explicitly address solar energy systems, subtle barriers such as height restrictions, lot coverage limitations, and setback, screening, landscaping, and utility requirements may still impede solar development."¹⁵

From the Great Plains Institute (GPI): "Limit regulatory barriers to developing solar resources. Ensure that access to solar resources is not unduly limited by height, setback, or coverage standards, recognizing the distinct design and function of solar technologies and land uses."¹⁶

FENCING

To protect the solar array and to provide for safety by preventing entry into a project area, counties may require fencing around the solar array. Both Clinton and Linn Counties use the same language to address fencing requirements:

A security fence must be installed along all exterior sides of the utility scale solar installation and be equipped with a minimum of one gate and locking mechanism on the primary access side. Security fences, gates and warning signs must be maintained in good condition until the utility scale solar installation is dismantled and removed from the site.¹⁷

Project developers are required to follow the specific fencing requirements of the National Electrical Code (NEC), which is updated every three years. Currently, the NEC requires a seven foot tall fence;



therefore we do not recommend that counties set their own fence height requirements.

Specific types of fencing may be desirable for reducing impacts to wildlife or limiting aesthetic concerns related to a project. For example, deer fencing may be less visually obtrusive while also allowing for wildlife and pollinators to move through a project area. This practice could soon be deployed in Iowa, as the developers of a large solar project in Howard County have proposed to surround the project area with deer fencing.¹⁸

County requirements for fencing should be limited because the NEC covers this requirement. However, we do recommend that counties allow for or encourage the project operator or owner to invest in fencing that facilitates movement of wildlife and pollinators.

HEIGHT RESTRICTIONS

The height of solar arrays is typically measured by the maximum tilt of the panels.

In some counties where large-scale solar is a permitted use, the height restrictions of solar arrays match the zoning district where they are located. Counties may also choose to set specific height limitations for solar systems. Counties could consider allowing for less stringent height restrictions if coupled with longer setbacks from neighboring properties. An example is adding two feet to the setback distance for each additional foot of height.¹⁹

It is important that counties do not set overly restrictive height limitations given ongoing research into potential agricultural co-uses of solar project areas such as livestock grazing and planting underneath panels. There are also no compelling safety reasons for height restrictions.

SOLAR ACCESS SPACE AND AGREEMENTS

Since solar panel performance relies on the amount of sunlight collected, counties may consider how improvements or new vegetative plantings on neighboring properties could cast shadows onto solar arrays. Developers may want an assurance of continued future access to sunlight to ensure project success over the 25 to 40 year life expectancy.

There are several Iowa statutory provisions that address access to solar energy and are intended to “facilitate the orderly development and use of solar energy.”²⁰ Iowa Code encourages voluntary solar access easements and sets out requirements for easements to protect solar access. The Code also authorizes city councils and county boards of supervisors to establish solar access regulatory boards (or authorize certain existing boards for this purpose).

These regulatory boards have the power to grant solar access easements to properties hosting solar projects in order to protect access to solar energy. The code allows public bodies to include provisions that would compensate the owner of the solar project if shade interferes with the project and/or that would compensate the owner of the easement for maintaining the easement space.²¹

Linn County’s ordinance provides for a “solar access agreement” process which is defined as a

“recorded easement which provides continued access to incident sunlight necessary to operate a solar collector.”²²

We recommend counties allow for solar access agreements using Iowa Code § 564A.1 to guide their process.

SAFETY AND SIGNAGE

Projects may be required to post signs that clearly feature the name, address, emergency contact information for the operator, and warnings. Safety requirements typically include clear safety notices to the public, such as high voltage warnings. Louisa County requires the following guidance on signage in its ordinance:

[Solar Farm Energy Systems] shall provide the following at all locked entrances:

- 1) A visible “High Voltage” warning sign;
- 2) Name(s) and phone number(s) for the electric utility provider;
- 3) Name(s) and phone number(s) for the site operator;
- 4) The facility’s 911 address, GPS coordinates; and,
- 5) A lock box with keys as needed.²³

These requirements are an appropriate best practice.



OPERATIONS AND MAINTENANCE PLANNING

RECOMMENDATIONS:

- **Counties should adopt an operations and maintenance plan designed to avoid negative impacts on the surrounding land, water, and neighbors.**
- **We encourage counties to consider requiring native vegetation to bolster wildlife, soil, and water quality benefits.**

Solar projects are expected to be in operation for at least several decades. To address both short-term and long-term maintenance of a project area, counties may require an operations and maintenance plan as part of the application process. Both Clinton County and Linn County address the same elements in the required operations and maintenance plan:

- Soil erosion and sediment control
- Stormwater management
- Ground cover and buffer areas
- Cleaning chemicals and solvents
- Maintenance, repair, or replacement of facility

In order to monitor compliance with maintenance requirements, Louisa County requires access to a project site:



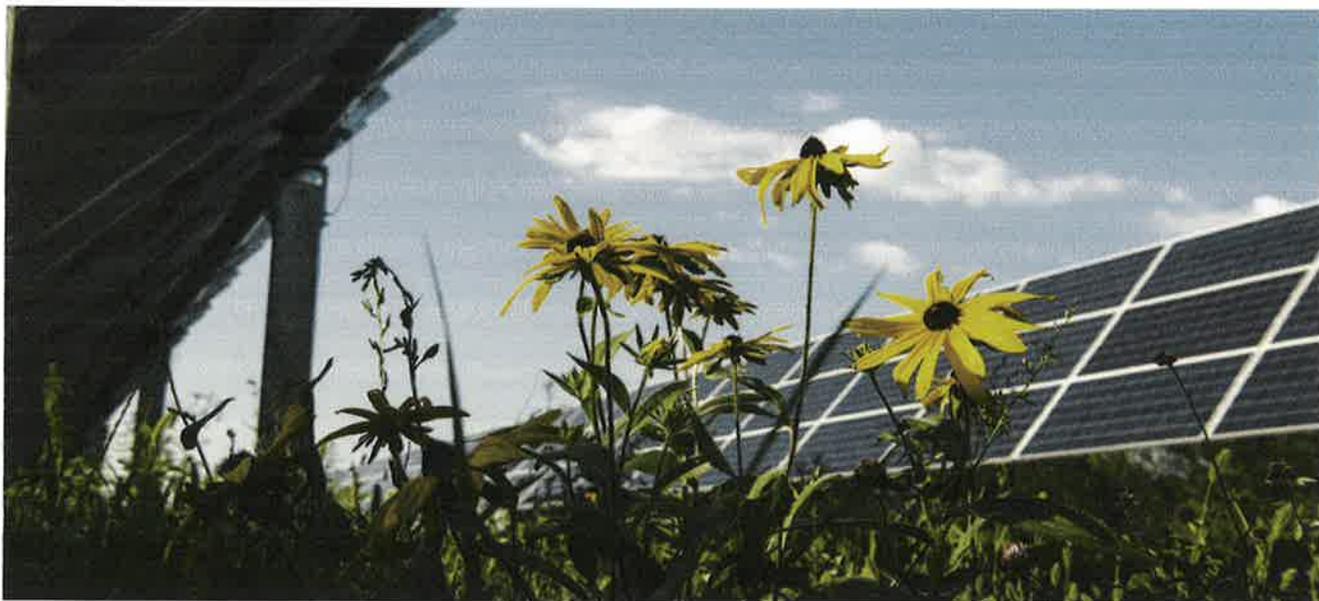
IOWA SOLAR SITING RESOURCE GUIDE: A ROADMAP FOR COUNTIES

The Zoning/Building Administrator and any necessary personnel may enter any property for which a special use or building permit has been issued under this ordinance to conduct an inspection to determine whether the conditions stated in the permit have been met as specified by statute, ordinance and code. Failure to provide access shall be deemed a violation of this ordinance.²⁴

NATIVE VEGETATION MANAGEMENT AND GROUND COVER

Utility-scale solar project sites often occupy multiple acres of land and are projected to cover three million acres across the nation by 2030. To produce 10 percent of Iowa's electricity from solar energy, 13,440 acres would need to be occupied by solar arrays, or 0.04 percent of all of Iowa's farmland. This offers an opportunity for project owners to demonstrate a commitment to environmental stewardship by establishing native vegetation on their solar project site(s). Investing in this practice will create habitat for a variety of at-risk pollinators, including honey bees, bumblebees, and monarch butterflies. For local officials considering the creation of a solar ordinance, this section explores a variety of considerations that can inform sound policy.

Historically, there were 28 million acres of native prairie across the state of Iowa; there is less than one-tenth of one percent of that native prairie remaining. Investments in native vegetation on solar project sites can also help restore habitat for wildlife like ring-necked pheasants, quails, and other grassland birds such as the dickcissel or the sedge wren.



Native prairie plants at the Chisago Solar Site, Chisago County, Minnesota, August 2018. Photo credit to Dennis Schroeder, National Renewable Energy Laboratory. Link: <https://www.flickr.com/photos/nrel/30733119928/in/album-72157699605466031/>



Meanwhile, other important environmental outcomes are also achieved through planting native perennial vegetation such as improved soil health and water quality and carbon sequestration. Importantly, the deep root systems of native vegetation can penetrate the soil surface as deep as 15 feet, allowing for increased soil structure and denitrification of water. Improving soil health and water quality also provides developers with the practical benefits of meeting stormwater drainage permit requirements and reducing erosion on project sites.

After considering the potential positive environmental outcomes, Linn County included a requirement within their solar ordinance to establish perennial vegetated ground cover:

Ground cover and buffer areas. Ground around and under solar arrays and in project site buffer areas shall be planted and maintained in perennial vegetated ground cover, and meet the following standards:

- 1) Top soils shall not be removed during development, unless part of a remediation effort.
- 2) Soils shall be planted and maintained in perennial vegetation to prevent erosion, manage run off and build soil. Seeds should include a mix of grasses and wildflowers, ideally native to the region of the project site that will result in a short stature prairie with a diversity of forbs or flowering plants that bloom throughout the growing season. Blooming shrubs may be used in buffer areas as appropriate for visual screening.
- 3) Seed mixes and maintenance practices should be consistent with recommendations made by qualified natural resource professionals such as those from the department of natural resources, county soil and water conservation service, or natural resource conservation service.
- 4) Plant material must not have been treated with systemic insecticides, particularly neonicotinoids.²⁵

The benefits of establishing even small areas of native vegetation have been proven to significantly improve pollinator and wildlife populations while helping developers maintain storm water permitting requirements, reduce erosion, and mitigate land use concerns. However, there are many important considerations for developers who wish to install native vegetation on their solar project site. While these recommendations will not typically be included in an ordinance, county officials should educate themselves on the options available to developers and the factors that influence developer implementation. We have included a short primer on those issues as an Appendix to this document.





INFRASTRUCTURE AND ROAD USE AGREEMENTS

RECOMMENDATION:

- **Counties should put a process in place for assessing and repairing infrastructure before construction begins.**

Solar construction crews will utilize roads in and out of a project site. Counties should have a lesser expectation of road impacts from solar development compared to wind development. To address potential impacts to public infrastructure, counties may adopt a road use plan.

Louisa County has adopted the following requirements for a road use agreement:

Road Use Agreements. All routes on county roads that will be used for the construction and maintenance purposes shall be identified on the site plan. All routes for either ingress or egress shall be shown. The solar farm developer must complete and provide a preconstruction baseline survey to determine existing road conditions for assessing potential future damage due to development related traffic. The developer shall provide a road repair plan to ameliorate any and all damage, installation, or replacement of roads that might be required by the developer. The developer shall provide a letter of credit or surety bond in an amount and form approved by the appropriate highway authority(s) officials when warranted. The provision of this subsection shall be subject to the approval of the Louisa County Engineer.²⁶

We recommend putting a process in place before construction begins that helps clarify for all parties what specific impacts a developer will be held responsible for and what steps must be taken to mitigate potential damage to roads and other infrastructure.



DECOMMISSIONING AND SITE RESTORATION

RECOMMENDATIONS:

- **Planning for the responsibility of decommissioning is a prudent step for a county ordinance. We recommend that counties require a decommissioning plan which defines the obligations of the project developer to remove the solar array and restore the land when the project will no longer be used.**
- **Counties should require the project developer/owner to notify the county of their intent to stop using the facility and that should be the trigger for decommissioning to begin.**

Solar ordinances often include a provision requiring the project owner to take responsibility for and bear the costs of decommissioning at the end of a solar project's life. These provisions ensure the county and landowners do not bear the cost of removing solar arrays.

Solar panels typically come with a 20 to 25 year warranty and could be useful for up to 40 years. Depending on the length of a landholder lease, or with a lease extension, projects could be refitted



with new panels once panels have reached their useful life. A county ordinance should include a notice requirement stating that once a developer/owner has determined that the facility will no longer be used, the developer/owner must notify the county of the intent to stop using the facility and to decommission the facility in accordance with the agreed-upon decommissioning plan.

We do not recommend that counties set a time limit for automatic decommissioning, such as no production for one (1) year, because as renewable penetration increases some renewable facilities may be used only as “peaker” facilities on days of extremely high electricity demand. Just because a facility is not producing electricity does not mean it is not being used as a back-up resource by the utility.

The following decommissioning example is from Linn County:

Decommissioning and site reclamation plan.

- a. The application must include a decommissioning plan that describes the anticipated life of the utility scale solar installation; the anticipated manner in which the project will be decommissioned; the anticipated site restoration actions; the estimated decommissioning costs in current dollars; and the method for ensuring that funds will be available for decommissioning and restoration.
- b. The applicant shall provide the basis for estimates of net costs for decommissioning the site (decommissioning costs less salvage value). The cost basis shall include a mechanism for calculating adjusted costs over the life of the project.
- c. Restoration or reclamation activities shall include, but not be limited to, the following:
 1. Restoration of the pre-construction surface grade and soil profile after removal of structures, equipment, graveled areas and access roads.
 2. Re-vegetation of restored soil areas with crops, native seed mixes, plant species suitable to the area, consistent with the county’s weed control plan.
 3. For any part of the energy project on leased property, the plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates or repurposed buildings in place or regarding restoration of agricultural crops or forest resource land. Any use of remaining structures must be in conformance with the regulations in effect at that time.

OTHER CONSIDERATIONS

NOISE

Inverters, the equipment that convert direct current (DC) electricity into alternating current (AC) electricity, can produce a soft sound during the daytime when the solar array is producing energy. Noticeable noise is not a common or expected impact and any noise should be imperceptible to

neighboring properties even without specific noise provisions.

We do not recommend adding standards for noise. Minimum setback requirements should sufficiently address these issues without adding specific, separate provisions for noise.

SCREENING

Some counties have chosen to adopt screening requirements in conjunction with setbacks. Counties should consider if screening requirements would be arbitrary and what, if any, other uses currently require screening. According to the National Renewable Energy Laboratory (NREL):

While aesthetic requirements are appropriate for historic districts, requiring solar energy systems to be screened from public view adds costs, can cause shading, and may prevent many installations.²⁷

We do not recommend that counties adopt screening provisions or requirements.

GLARE

The American Planning Association advises that “[s]ome residents may express concerns that glare from solar collectors will be either a public or private nuisance. However, because they are constructed of dark-colored materials and covered with anti-reflective coatings, new solar PV and thermal systems typically reflect as little as 2 percent of incoming sunlight.”²⁸

Similarly, a summary of research from the National Energy Research Laboratory states, “Local objections to proposed solar photovoltaic (PV) installations sometimes include concerns that the modules will cause glare that could impact neighbors or aviation. Research on this subject demonstrates that PV modules exhibit less glare than windows and water. Solar PV modules are specifically designed to reduce reflection, as any reflected light cannot be converted into electricity. PV modules have been installed without incident at many airports.”²⁹

Given how solar panels are constructed, glare or reflected light is not typically a major issue. Counties wishing to address this low-risk potential impact can include a provision in their ordinance, such as Clinton County and Linn County have:

All solar panels must be constructed to minimize glare or reflection onto adjacent properties and adjacent roadways and must not interfere with traffic, including air traffic, or create a safety hazard.^{30 31}

We do not recommend glare provisions in a solar ordinance. However, local or federal authorities may require a glare study that shows the potential impact to the surrounding area, particularly on infrastructure like airports and roadways. For example, the Federal Aviation Administration (FAA) required the City of Ames to conduct a glare study for its community solar project as a result of its proximity to an airport. If the study indicates that there is potential for glare, a project developer



From: Madonna Nitzke <mnitzke6@gmail.com>
Sent: Tuesday, September 26, 2023 9:26 AM
To: Daniel Priestley
Subject: Solar ordinance

Follow Up Flag: Flag for follow up
Flag Status: Flagged

CAUTION: This email originated from **OUTSIDE** of the organization. Please verify the sender and use caution if the message contains any attachments, links, or requests for information as this person may NOT be who they claim. **If you are asked for your username and password, please call WCICC and DO NOT ENTER any data.**

I would like to express my support for utility scale solar in Woodbury County. Savings to taxpayers now and into the future will propel us in the 21st century.

Madonna Nitzke
Sioux City, Iowa 51106

From: Dougherty, William (MidAmerican) <William.Dougherty@midamerican.com>
Sent: Thursday, October 5, 2023 2:08 PM
To: Daniel Priestley
Subject: RE: [INTERNET] Comments Requested Utility-Scale Solar Systems

Follow Up Flag: Flag for follow up
Flag Status: Flagged

CAUTION: This email originated from **OUTSIDE** of the organization. Please verify the sender and use caution if the message contains any attachments, links, or requests for information as this person may NOT be who they claim. **If you are asked for your username and password, please call WCICC and DO NOT ENTER any data.**

Good afternoon Dan,

I was wondering if Planning and Zoning has a draft solar ordinance yet or when one might be available. If/when it is available, MidAmerican would like to have a copy to review and provide comments to. We are also ready to answer any questions you may have as you go through the drafting process.

Also, I had a question come up about if any changes in the solar ordinance P&Z is working on would affect how projects are permitted in the GI zoned portion of the county. Is the intention to create a comprehensive solar ordinance to regulate solar projects throughout all the allowed zones, or would GI and AP have different permitting requirements/structures?

Let me know and thanks for your time. Take care.

Will Dougherty, P.E.
Project Developer
O: 515-242-4383
C: 515-587-7255



Johnson County, Iowa - Sample Ordinance Information

DISCLAIMER: This document is intended for illustrative purposes only. Accuracy of amendment language shown is not guaranteed until officially incorporated through the recodification process. This is not the official Unified Development Ordinance.

BB. Solar Energy Systems, Utility Scale. Utility Scale Solar Energy Systems with a total use area of twenty (20) acres or less are allowed as a primary use in the RE district, and are conditionally permitted in the A district. Utility scale solar energy systems with a total use area of greater than twenty (20) acres are allowed as primary uses in the RE district. All utility scale solar energy systems are subject to the following conditions regardless of use area size:¹

0A. For the purposes of administering this section, the “use area” shall include all areas associated with the utility scale solar use including, but not limited to, the furthest extent of fences, structures, stormwater infrastructure, parking, landscape screening, or other areas used in association with the use as determined by the approving authority.

- a. At the discretion of the Zoning Administrator, non-adjacent use areas located within one-half (0.5) mile may be considered cumulatively when determining whether approval requires a Conditional Use Permit or rezoning approval.
- b. At the discretion of the Zoning Administrator, non-adjacent use areas smaller than twenty (20) acres in size may be required to obtain approval through rezoning if they will be located within one-half (0.5) mile of an existing utility scale solar facility, regardless of ownership.

0B. The applicant shall submit detailed drafts of all materials contained in this subsection at the time of application for either a Conditional Use Permit or Zoning Map Amendment.

- a. Documents must be of sufficient detail for the approving authority to adequately review the proposal for compliance with these regulations at the time of submittal, but may remain yet-to-be finalized at the time of approval.
- b. Final plans shall be approved by the Zoning Administrator prior to commencement of any site disturbance or issuance of any grading or building permits for the site and shall substantially conform to the draft plans and material submitted at the time of review and approval by the approving authority.
- c. The use(s) outlined in the application shall be established in accordance with the draft plans considered by the approving authority within five (5) years of approval. Any portion of the development plan not completed within five (5) years of approval by the approving authority shall not be installed until the development plan has been reauthorized by the approving authority. Reauthorization shall be subject to the regulations in effect at the time reauthorization is requested.²

1. **Setback Standards.** All structures, including solar arrays, shall adhere to the primary structure setbacks for the district where the system is located. At the discretion of the approving authority, additional setbacks may be required as a condition of approval.³

¹ Ordinance 05-19-22-01

² Id.

³ Id.

Johnson County, Iowa - Sample Ordinance Information

2. Security Fencing. The solar energy system shall be fenced with a minimum seven (7) foot tall security fence. Warning/no trespassing signs shall be posted within sight of all points of fence line or no greater than fifty (50) feet apart.
 - a. Perimeter fencing for the site shall not include barbed wire nor chain-link and shall use wire woven or other wildlife-friendly fencing.
 - i. At the discretion of the approving authority⁴, critical electrical and communications equipment may be fenced with chain-link fence topped with barbed wire when such measures are deemed necessary to ensure public safety and provide additional security for the equipment.
3. Panel Clearance Height. The lowest edge of array panels (affixed or tracking) shall be at least eighteen (18) inches above the ground.
4. Roads. The applicant, owners, and their contractors⁵ are expected to avoid damaging public roads and shall be responsible for mitigation of damages to public roads. At the discretion of the approving authority⁶, a Public Roads Damage Avoidance and Mitigation Plan may be required and shall be in accordance with the following standards:
 - a. Identification of Potential Roads Usage. The applicant shall identify, with the approval of the Johnson County Engineer, all state and local public roads to be used within Johnson County to transport equipment, parts and material for construction, operation or maintenance of the solar energy system and related components.
 - b. Documentation of Road Conditions. Prior to construction, decommissioning, or implementation of a repowering plan, the Johnson County Engineer or a third party consultant selected by the Johnson County Engineer shall document the current conditions of the roads identified for use, with all associated costs paid for by the applicant or owners of the facility. The engineer shall document road conditions again thirty (30) days after construction is complete or as weather permits.⁷
 - c. Road Preparation and Damage. Any road preparation or maintenance necessitated by the solar energy system as identified by the County Engineer or the third party consultant shall be promptly completed at the applicant's expense. Any damage caused by the applicant, owner of the facility, or its contractors during construction, decommissioning, or implementation of a repowering plan shall be promptly repaired at the applicant or owner's expense.
 - i. The applicant shall demonstrate that it has appropriate financial assurance to ensure the repair of damaged roads.
 - ii. At the discretion of the approving authority, the applicant or owners of the facility may also be required to provide a financial surety instrument to cover all costs of potential damage to roads at the time of permitting or rezoning consideration.⁸

⁴ Ordinance 05-19-22-01

⁵ Id.

⁶ Id.

⁷ Id.

⁸ Id.

Johnson County, Iowa - Sample Ordinance Information

5. Ground Cover Standards. Ground under and around the solar array shall be planted with a perennial vegetated ground cover. All applications for which this subsection applies shall submit a ground cover plan for review and approval. The ground cover plan shall be developed in accordance with the following standards:
 - a. Top soils shall not be removed during development, unless part of a remediation effort.
 - b. The area shall be planted and maintained in perennial vegetation for the full operational life of the project to prevent erosion, manage runoff and build soil.
 - c. Vegetative cover should include a mix of perennial grasses and wildflowers that will preferably result in a short stature prairie with a diversity of forbs and flowering plants that bloom throughout the growing season. Perennial vegetation (grasses and forbs) used should preferably be native to Iowa, but where appropriate to the ground cover plan goals, may also include other naturalized and non-invasive species which provide habitat for pollinators and wildlife and/or other ecosystem services (i.e. clovers).
 - i. Plant materials for the ground cover area must not have been treated with systemic insecticides, particularly neonicotinoids.
 - ii. The application shall include the proposed seed mix specifications.
 - iii. Seeding zones and their selected seed mixes should be clearly mapped on a site plan.⁹
 - d. At the discretion of the approving authority¹⁰, other practices, such as small-scale farming or grazing, may be allowed in the ground cover area as part of the conditions of approval for the project.
 - e. Seed and/or planting mixes and maintenance practices should be consistent with recommendations made by qualified natural resource professionals, such as those from a state department of natural resources, county soil and water conservation services, or natural resource conservation service.
 - f. The ground cover plan must include management methods and schedules for how the vegetation will be managed on an annual basis, with particular attention given to the establishment period of approximately three (3) years. The plan must include provisions for replacement of any required vegetative cover that fails to establish or dies during the life of the project.¹¹
 - g. Reporting to the County on ground cover management and maintenance activities shall be on an annual basis for a minimum of five (5) years, after which point reduced frequency can be requested, and approved at the discretion of the Zoning Administrator.¹²
6. Landscaping Buffer. In an effort to mitigate any potential negative effects and reduce the visual impact of the solar energy system, a landscaping buffer may be required to be installed and maintained during the life of the array operation. Determination of screening requirements will be made by the approving

⁹ Ordinance 05-19-22-01

¹⁰ Id.

¹¹ Id.

¹² Id.

Johnson County, Iowa - Sample Ordinance Information

authority¹³ as part of the review and approval process and will be based on adjacent or nearby surrounding land uses and topography. Where the approving authority¹⁴ finds that a landscaping buffer is appropriate, landscaping shall be installed within a planting area around the portions of the site specified by the approving authority¹⁵ in accordance with the standards of this subsection. All applications for which this subsection applies shall submit a plan for review and approval. The landscaping buffer plan shall be in accordance with the following standards:

- a. The landscaping buffer shall preferably use trees, shrubs, grasses and forbs that are native to Iowa, or where appropriate may include naturalized and non-invasive species, or a combination thereof to provide a vegetative screen in all required areas. Screening shall have a minimum mature height equal to the height of any security fencing and shall achieve the required height within three (3) years of installation.
- b. Where landscape screening is required adjoining a public or private road, plants shall be planted at a rate that provides no less than sixty-six (66) percent screening at a height equal to the height of any security fencing.
- c. Where landscape screening is required as a buffer to nearby properties or uses, plants shall be planted at a rate that provides no less than one hundred (100) percent screening at a height equal to the height of any security fencing.
- d. The planting area shall be located immediately outside and adjacent to - and shall extend no further than fifty (50) feet beyond - the furthest extent of the onsite infrastructure required or proposed with the development. Onsite infrastructure includes, but is not limited to, the solar arrays, security fence, required parking areas, and required stormwater infrastructure.¹⁶
- e. Landscaping screening shall be evaluated under leaf-on conditions.
- f. Planting and maintenance practices should be consistent with recommendations made by qualified natural resource professionals, such as those from a state department of natural resources, county soil and water conservation services, or natural resource conservation service.
- g. The landscaping buffer plan must include management methods and schedules for how the vegetation will be managed on an annual basis, with particular attention given to the establishment period of approximately three (3) years. The plan must include provisions for replacement of any required landscaping that fails to establish or dies during the life of the project.¹⁷
- h. Reporting to the County on landscaping management and maintenance activities shall be on an annual basis for a minimum of five (5) years, after which point reduced frequency can be requested, and approved at the discretion of the Zoning Administrator.¹⁸

¹³ Ordinance 05-19-22-01

¹⁴ Id.

¹⁵ Id.

¹⁶ Id.

¹⁷ Id.

¹⁸ Id.

Johnson County, Iowa - Sample Ordinance Information

- 6A. Agricultural Impact Mitigation Plan. The applicant shall submit a plan detailing mitigation strategies that will be used to support agricultural use of the land at the end of the functional life of the project. The plan should include, but not be limited to, the following information:¹⁹
- a. Project Overview. Provide general background, list of project components, and construction timeline.
 - b. Topsoil Protection and Preservation Plan. The plan should include the following components.
 - i. Describe best practices and methods to be used during each stage of construction for protecting and preserving topsoil. Practices and methods should address, at a minimum, topsoil removal, segregation, stockpiling, replacement during backfill, and respreading, grading minimization, compaction prevention, and decompaction of otherwise undisturbed topsoil impacted by heavy equipment or storage of materials, and wet weather conditions.
 - ii. Prior to construction, provide results of a soil analysis conducted and assessed by a qualified professional to determine topsoil depths as well as identify any limitations for construction and mitigation that may require special consideration.
 - iii. Describe environmental monitoring that will be used during construction to ensure adherence to the best practices contained in the plan. The monitoring should be done by an environmental professional. The monitoring reports shall be submitted to the County every thirty (30) days during construction.
 - c. Construction Best Management Practices. Describe best management practices to be used during construction to address, at a minimum, invasive species prevention, erosion and sediment control, and debris removal.
 - d. Drain Tile Identification, Avoidance and Repair. Describe the general procedures to be used for identification, avoidance, and repair of any underground drainage tile lines located within the project site before, during, and after construction.
 - e. Sensitive Areas Protection. Describe the procedures to be used to monitor and adhere to Limits of Disturbance for limiting or preventing impacts to identified sensitive areas, in accordance with the approved Sensitive Areas Report and Sensitive Areas Exhibit.
 - f. Vegetation Management. Incorporate or make reference to both the separately required Ground Cover Plan and Landscaping Buffer Plan. Seeding zones and their selected seed mixes should be clearly mapped on the site plan.
 - g. Decommissioning and Site Reclamation. Incorporate or make reference to the separately required Decommissioning and Site Reclamation Plan.
7. Glare Minimization. All solar panels shall be constructed in a manner that minimizes the reflection or glare onto neighboring properties, does not interfere with traffic, and does not create a safety hazard.
- a. Utility scale solar energy systems shall also comply with all applicable airport zoning ordinances.
8. Site Plan. A site plan shall be submitted showing preliminary array details and location, fencing details and location, landscaping plan (if applicable), signage, location of underground and above ground

¹⁹ Ordinance 05-19-22-01

Johnson County, Iowa - Sample Ordinance Information

transmission facilities, project development timeline, and any other pertinent information as required by the Zoning Administrator. After approval²⁰ is issued, and prior to ground disturbance or issuance of building permit(s), the Zoning Administrator may approve minor modifications to the preliminary site plan to account for reasonable engineering optimization and final selection of equipment. The site plan application shall additionally include and conform to the following:

- a. Power and Communications Lines.
 - i. On-site power and communications lines between rows or banks of arrays, or from arrays to buildings or other on-site structures, shall be placed underground to the extent feasible and as permitted by the serving utility. The main service connection at the utility company right-of-way, and any new interconnection equipment, may be located above ground.
 - ii. Power and communications lines running from the on-site system(s) to interconnections with structures off-site shall be buried underground to the extent feasible and as permitted by the serving utility.
 - iii. At the discretion of the approving authority²¹, power and communications lines may be allowed to be unburied in the following cases:
 - a) Elements of the natural landscape, such as but not limited to shallow bedrock and water courses, interfere with the ability to bury lines;
 - b) Elements of existing infrastructure interfere with the ability to bury lines;
 - c) Or distance makes undergrounding infeasible.
 - b. The site plan shall provide proposed land use and development information for the entirety of the property(ies) included in the conditional use permit or zoning map amendment request.²²
 - c. At the discretion of the approving authority the development proposal may include a phasing plan. Where phasing is proposed, it shall be clearly indicated on the site plan. In no instance shall phasing be allowed to extend a development plan beyond five (5) years from the date of approval by the approving authority.²³
9. Operations and Maintenance Plan. The applicant shall submit a plan for the safe operation and maintenance of the solar energy system. The plan should include, but not be limited to, Emergency Operations Procedures describing the fire safety and response measures.
- a. A copy of the approved Emergency Operations Procedures shall be given to the system owner, the local fire department, and Johnson County Emergency Management. A permanent copy shall also be placed in an approved location to be accessible to facility personnel, fire code officials, and emergency responders.

²⁰ Ordinance 05-19-22-01

²¹ Id.

²² Id.

²³ Id.

Johnson County, Iowa - Sample Ordinance Information

- b. Signage at all locked entrances or in a prominent place on the fencing should provide the following information:
 - i. Name(s) and phone number(s) of the electricity utility;
 - ii. Name(s) and phone number(s) of the site operator(s); and
 - iii. The facility's 911 address and GPS coordinates.
- c. The site operator will coordinate with the local fire department and Emergency Management Agency (EMA) to offer or provide for training on an annual basis for five (5) years following completion of construction. Thereafter, the site operator shall offer or provide for training if requested by the local Emergency Management Agency (EMA) on a basis not to exceed once annually.²⁴

9A.Repowering. At the discretion of the Zoning Administrator, proposals to replace more than twenty five percent (25%) of the panels in a facility within a twelve (12) month period may be required to submit a plan for review and approval.²⁵

- a. The plan shall include updated information for some or all of the reports and plans required by this section, as determined necessary by the Zoning Administrator.
- b. The Zoning Administrator shall review and approve, conditionally approve, or deny the repowering plan.

10. Decommissioning and Site Reclamation Plan.

- a. The application must include a decommissioning plan that describes the following items: the anticipated life of the utility scale solar installation; the anticipated manner in which the project will be decommissioned, including plans to recycle components; the anticipated site restoration actions; the estimated decommissioning costs in current dollars; and the method for ensuring that funds will be available for decommissioning and restoration.
- b. The applicant shall provide estimates for the total cost for decommissioning the site as determined by a Licensed Engineer. Decommissioning costs shall not take salvage value into account.²⁶
- c. Restoration or reclamation activities shall include, but not be limited to, the following:
 - i. Restoration of the pre-construction surface grade and soil profile after removal of structures, equipment, graveled areas and access roads.
 - ii. Re-vegetation of restored soil areas with crops, native seed mixes and plant species suitable to the area, consistent with the County's weed control plan.
 - iii. For any part of the project on leased property, the plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates or repurposed buildings in place or regarding restoration of agricultural crops or forest resource land. Any use of remaining structures must be in conformance with the regulations in effect at that time.

²⁴ Ordinance 05-19-22-01

²⁵ Old.

²⁶ Id.

Johnson County, Iowa - Sample Ordinance Information

- d. Following a continuous one-year period in which no electricity is generated, or if substantial action on construction or repairs to the project is discontinued for a period of one year, the permit holder will have one year to complete decommissioning of the utility scale solar installation. At the discretion of the Zoning Administrator, the continuous one-year period that triggers decommissioning may be extended if the applicant demonstrates ongoing commitment to the project through activities such as but not limited to making lease payments or documentation of ongoing maintenance or repairs.
 - i. Decommissioning shall be completed in accordance with the approved decommissioning plan.
 - ii. The land owner or tenant shall notify the Zoning Administrator both when the project is discontinued and when decommissioning is complete.
- e. At the time of permitting, the applicant, facility owner, or site operator shall provide a Performance Agreement and accompanying financial surety instrument to cover the cost of decommissioning in accordance with the following:²⁷
 - i. Decommissioning funds shall be an amount equal to the total costs for decommissioning the site, plus a ten percent (10%) contingency.
 - ii. Decommissioning funds shall be maintained in the form of cash, certificate of deposit, performance bond, escrow account, surety bond, letter of credit, or other form of financial assurance as agreed to by the approving authority. Any financial document evidencing the maintenance of the decommissioning funds shall include provisions for releasing the funds to the County in the event decommissioning is not completed in a timely manner.
 - iii. Prior to any ground disturbance, grading or construction activity on the site, fifty percent (50%) of total estimated decommissioning costs shall be provided by any of the means listed above. An additional twenty five percent (25%) shall be provided within five (5) years of the date of initial approval, and the remaining twenty five percent (25%) of the total re-estimated decommissioning costs shall be provided within eleven (11) years of the date of initial approval. From that point forward, 100% of the total estimated decommissioning costs as determined by the most recent re-estimation shall be maintained in the decommissioning fund until the end of the functional life of the project.
 - iv. Financial surety shall be maintained for the life of the project.
 - v. Proof of recertification of the financial surety instrument must be submitted to the County annually.
 - vi. Every ten (10) years, the facility owner or operator shall retain an independent Licensed Engineer to re-estimate the total cost of decommissioning and attest that the value of the financial surety instrument is appropriate. This report shall be filed with the County.
 - a) The required amount of the decommissioning fund shall match the re-estimated cost of decommissioning. Within ninety (90) days of filing the re-estimation report with the

²⁷ Ordinance 05-19-22-01

Johnson County, Iowa - Sample Ordinance Information

County, the facility owner or operator shall cause the fund balance of the financial surety instrument to be adjusted to ensure that it matches the re-estimated decommissioning cost.

11. Onsite Battery Energy Storage Systems. Where an applicant proposes to include battery storage in conjunction with the solar energy system, they may be required to obtain a separate Conditional Use Permit in accordance with the underlying zoning district. In all cases, Battery Energy Storage Systems shall comply with the applicable standards in subsection 8:1.23.D1 of this ordinance.²⁸
12. The application shall comply with all Environmental Standards in Chapter 8.3.
 - a. Full stormwater management planning in accordance with section 8:3.6 of this ordinance shall be provided for all impervious surfaces, including internal access roads.²⁹
 - i. The designation of a surface type as impervious or pervious shall be in accordance with the Iowa Stormwater Management Manual. At the discretion of the approving authority, stormwater management planning may also be required for some or all pervious surfaces.
 - ii. The applicant, owner, or site operator shall provide as-built plans for all required stormwater management infrastructure within thirty (30) days of completion of on-site infrastructure or the start of energy generation from the site, whichever occurs first. As-built plans shall be certified by a Professional Engineer licensed in the State of Iowa.
13. The application shall comply with all applicable federal, state, and local regulations.

²⁸ Ordinance 05-19-22-01

²⁹ Id.

Linn County, Iowa - Sample Ordinance Information

Prepared by Stephanie Lientz
Linn County Planning & Development
935 2nd Street S.W., Cedar Rapids, Iowa 52404-2100
(319) 892-5130
Return to Becky Shoop, Auditor's Office

LINN COUNTY ORDINANCE # _____

**AN ORDINANCE AMENDING THE CODE OF ORDINANCES, LINN COUNTY, IOWA
BY MODIFYING PROVISIONS IN CHAPTER 107: ARTICLE VI SECTION 107-117 REGARDING
UTILITY SCALE SOLAR INSTALLATIONS AND BATTERY ENERGY STORAGE SYSTEMS, AND
ARTICLE VII SECTION 107-149 RENEWABLE ENERGY OVERLAY DISTRICT, AND ARTICLE VII
TABLE 107-147-1 REGARDING BATTERY ENERGY STORAGE SYSTEMS, AND ARTICLE IX
SECTION 107-180 DEFINITIONS RELATED TO UTILITY SCALE SOLAR AND BATTERY ENERGY
STORAGE SYSTEMS**

BE IT ORDAINED by the Board of Supervisors, Linn County, Iowa as follows:

SECTION 1. SUBSECTION MODIFIED. Chapter 107, Article VI, Section 107-117 § (h) is hereby repealed and replaced to read as follows:

(h) *Utilities, utility scale solar installations.*

- (1) *Purpose.* To encourage utility scale photovoltaic solar installations. Concentrating solar power (CSP) systems shall be prohibited.
- (2) *Major site plan and rezoning required.* A major site plan shall be submitted and reviewed prior to the approval of a utility scale solar installation. The area to be used for the utility scale solar installation shall require rezoning to the Renewable Energy overlay zoning district.
- (3) *Conformance with Linn County Utility Scale Solar Scorecard.* All projects shall meet the minimum passing threshold in the Linn County Utility Scale Solar Scorecard, as established by the Board of Supervisors.

Linn County, Iowa - Sample Ordinance Information

- (4) *Additional information.* In addition to all submittal requirements of a major site plan and rezoning application, the application for a utility scale solar installation shall include the following information on the site plan or in narrative form, supplied by the utility scale solar installation owner, operator or contractor installing the structures:
- a. Legal descriptions of all properties, leased and/or owned, identified to be part of the project area.
 - b. Number, location and spacing of solar panels/arrays.
 - c. Planned location of underground or overhead electric lines.
 - d. Project development timeline which indicates how the applicant will inform adjacent property owners and interested stakeholders in the community.
 - e. Pre-construction survey of nearby roads that may be impacted by construction of the facility.
 - f. Interconnection agreement.
 - g. Operation and maintenance plan.
 - h. Decommissioning plan.
 - i. Agricultural Impact Mitigation Plan.
 - j. Vegetative Management Plan.
 - k. Wildlife/Biological Habitat Assessment & Mitigation Plan.
 - l. Setback analysis showing the minimum setback requirements, or any agreed on greater setback provisions, are met by the project.
 - m. Emergency Response Plan.
- (5) *Site and structure requirements.*
- a. *Setback.* Setbacks for all structures (including solar arrays) must adhere to the minimum principal setback standards for the zoning district where the project is located in addition to dwelling and stream corridor setbacks
 1. Solar panels, structures, and electrical equipment, excluding fences and power lines for interconnection, shall be kept a minimum of three hundred (300) feet from dwellings, unless the property owner waives the setback. Waiver must be in writing and recorded.
 2. Solar panels, structures, and electrical equipment, excluding fences and power lines for interconnection, shall be kept a minimum of one hundred and twenty (120) feet from the centerline of all stream corridors and open ditches containing perennial flow throughout the majority of the growing season.
 - b. *Screening.* Project shall provide vegetative screening for all dwellings within 1,000 feet of the project boundaries.
 1. Applicant shall submit a screening plan for each dwelling within 1,000 feet of the project boundaries.
 2. Screening may be waived by the owner of a dwelling. Waiver must be in writing and recorded.

Linn County, Iowa - Sample Ordinance Information

3. Screening may be waived by the Zoning Administrator upon submission of a viewshed study from the applicant demonstrating that the project is not within the viewshed of the dwelling due to topography, existing vegetation, or other factors. The point of reference used in the viewshed study shall be as close to the dwelling as possible.
 4. Any vegetative screening within the project boundaries shall be maintained throughout the life of the project by the project owner. Any screening on the dwelling property shall be maintained by the project owner for no less than twelve months.
 5. Deciduous trees shall have a minimum caliper of 1.5" when planted, shall be at least six (6) feet tall within three (3) years of installation, and shall have a minimum mature height of twelve (12) feet.
 6. Screening plans shall use no less than two varieties of tree.
- c. *Utility connections.* Reasonable efforts shall be made to place all utility connections from the solar installation underground, depending on appropriate soil conditions, shape and topography of the site, distance to the connection, or other conditions or requirements.
 - d. *Grading plan.* A grading plan shall be submitted and shall include all proposed changes to the landscape of the site (e.g., clearing, grading, topographic changes, tree removal, etc.).
 - e. *Glare minimization.* All solar panels must be constructed to minimize glare or reflection onto adjacent properties and adjacent roadways and must not interfere with traffic, including air traffic, or create a safety hazard.
 - f. Compliance with local, state and federal regulations. Utility scale solar installations shall comply with applicable local, state and federal regulations.
 - g. *Appurtenant structures.* All appurtenant structures shall be subject to bulk and height regulations of structures in the underlying zoning district.
 - h. *Floodplain considerations.* Utility scale solar installations are considered to be maximum damage potential structures and facilities for purposes of the floodplain district regulations.
 - i. *Fencing/security.* A security fence must be installed along all exterior sides of the utility scale solar installation and be equipped with a minimum of one gate and locking mechanism on the primary access side. Security fences, gates and warning signs must be maintained in good condition until the utility scale solar installation is dismantled and removed from the site.
 - j. *Panel Height.* To encourage the establishment of a diverse native seed mix, panels shall be installed a minimum of 24" from the lower edge of the panel at maximum tilt to the ground.
- (6) *Avoidance and mitigation of damages to public infrastructure.*
- a. *Roads.* Applicants shall identify all roads to be used for the purpose of transporting solar components, substation parts, cement, and/or equipment for construction, operation or maintenance of the solar installation and obtain applicable weight and size permits from the impacted road authority prior to construction.

Linn County, Iowa - Sample Ordinance Information

- b. *Existing road conditions.* Applicant shall conduct and provide evidence of a pre-construction roadway conditions survey, in coordination with Linn County Secondary Roads, to determine baseline road conditions and authority. The survey shall adequately document all road, road right of way, and public drainage infrastructure conditions requested for use during all phases of construction. Applicants shall enter into a Road Use Agreement with Linn County Secondary Roads that clearly details responsibilities for on-going road maintenance and dust control measures for all identified Linn County jurisdictional roads during all phases of construction. The Road Use Agreement shall require certain applicant and county undertakings, including but not limited to providing financial assurance in the form of an irrevocable letter of credit, bond, cash, escrow or other form of security or guaranty acceptable to Linn County. The form of security shall be posted prior to construction mobilization and remain in effect up to 12 months post construction. At construction completion, Applicant shall conduct and provide evidence of a post construction roadway conditions survey, in accordance with the Road Use Agreement and in coordination with Linn County Secondary Roads, to determine Linn County Road conditions meet the Linn County Secondary Roads Engineer satisfaction.
 - c. *Drainage system.* The applicant shall be responsible repair of damage to public drainage systems stemming from construction, operation or maintenance of the solar installation. Applicant shall acknowledge any damage to public drainage systems and the responsibility for repair in a timely manner within 72 hours of damage discovery.
- (7) *Operation and maintenance plan.* The applicant shall submit a plan for the operation and maintenance of the solar installation including all necessary services, frequency of service, preventative maintenance measures, and monitoring. The operation and maintenance plan should include at a minimum:
- a. Preventative maintenance practices and schedules for all on-site equipment including but not limited to: inverters, panels, equipment pads, tracking systems, transformers, access entrances, internal roads, gates, fencing, security systems, stormwater management installations
 - b. Annual reporting and verification to county on the status or changes to ongoing service schedule
 - c. Schedule of all other monthly, annual, or semiannual reporting requirements for other submittals including: agricultural impact mitigation plan, decommissioning plan, and vegetation management plan.
 - d. *Noise.* No operating solar energy equipment shall produce noise exceeding any of the following limitations, with the exception of initial construction and routine maintenance. Adequate setbacks and effective noise mitigating equipment shall be used to comply with these limitations:
 - 1. An hourly average noise level of fifty-five (55) dBA during the day (between sunrise and sunset), and an hourly average noise level of fifty (50) dBA at night (between sunset and sunrise), as measured at the occupied dwelling of any adjacent property containing an existing residential structure. If the ambient sound pressure level exceeds 55 dBA during the day or 50 dBA at night, the standard shall be the ambient Leq (equivalent continuous sound pressure level) plus 5 dBA.

Linn County, Iowa - Sample Ordinance Information

2. A baseline noise evaluation shall be completed by a board certified professional by the Institute of Noise Control Engineering (INCE), or an appropriately licensed Professional Engineer (PE) prior to construction of the proposed solar site.
 3. A post-construction noise evaluation shall be performed by a third-party board certified professional by the Institute of Noise Control Engineering (INCE), or an appropriately licensed Professional Engineer (PE) following commencement of commercial operation of the project to verify compliance with the County's standards.
 4. The owner(s) of an adjacent property may voluntarily agree, by written and recorded waiver, to a higher noise level.
- e. *Issue resolution protocols.* Contact information for responsible party to address issues that may arise (damaged equipment causing excessive noise, etc)
- f. *Disposal/recycling plan for damaged or obsolete facility equipment or hazardous waste.* No storage of inoperable or obsolete equipment shall be allowed to remain on-site. Site operator shall be responsible for the cleanup of debris related to storm damage.
- g. *Cleaning chemicals and solvents.* During operation of the proposed installation, all chemicals or solvents used to clean photovoltaic panels should be low in volatile organic compounds and the operator should use recyclable or biodegradable products to the extent possible. Any on-site storage of chemicals or solvents shall be referenced.
- h. *Maintenance, repair, or replacement of facility.* Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to emergency response officials. Any retrofit, replacement or refurbishment of equipment shall adhere to all applicable local, state and federal requirements.
- i. *Repowering.* At the discretion of the zoning administrator, proposals to replace more than twenty five percent (25%) of the panels in a facility within a twelve (12) month period may be required to submit a plan for review and approval. A repowering event does not include replacement of panels in previously approved locations due to weather damage, equipment failure, or a force majeure event.
1. The plan shall include updated information for some or all of the reports and plans required by this section, as determined necessary by the zoning administrator.
 2. The zoning administrator shall review and approve, conditionally approve, or deny the repowering plan.
- (8) *Decommissioning, abandonment, and site restoration plan.*
- a. The application must include a decommissioning plan that describes the following:
 1. The anticipated life of the utility scale solar installation.
 2. The anticipated manner in which the project will be decommissioned, including plans to recycle components and dispose of any hazardous materials.

Linn County, Iowa - Sample Ordinance Information

3. The anticipated site restoration activities.
 4. The estimated decommissioning costs in current dollars.
 5. The method for ensuring that funds will be available for decommissioning and restoration of the site.
- b. *Decommissioning cost considerations.* The applicant shall provide the basis for estimates of net costs for decommissioning the site. Site restoration activities as described later in this section.
1. Removal of any hazardous materials at the facility, as determined by a Toxic Characteristic Leaching Procedure (TCLP) or other similar test approved by Linn County and as described in the facility's Operations and Maintenance Plan. TCLP testing shall be performed prior to any ground disturbance at the project site.
 2. Salvage value shall not be included in the cost estimate.
 3. The cost basis shall include a mechanism for calculating adjusted costs over the life of the project.
- c. *Site restoration activities.* Restoration activities shall include, but not be limited to, the following:
1. Removal of all components and equipment.
 2. Soil in project area shall be decompacted and seeded with a cover crop, unless otherwise specified in the approved vegetation plan and/or agricultural impact mitigation plan.
 3. For any part of the energy project on leased property, the plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates or repurposed buildings in place or regarding restoration of agricultural crops or forest resource land. Any use of remaining structures must be in conformance with the regulations in effect at that time.
- d. *Performance agreement and proof of financial surety.* At the time of permitting, the applicant, facility owner, or site operator shall provide a Performance Agreement and accompanying financial surety instrument to cover the cost of decommissioning in accordance with the following:
1. Decommissioning funds shall be an amount equal to the total costs for decommissioning the site, plus a ten percent (10%) contingency.
 2. Decommissioning funds shall be maintained in the form of a performance bond, surety bond, bank letter of credit, stable parent company guarantee, or other form of financial assurance as approved by the County. Any financial document evidencing the maintenance of the decommissioning funds shall include provisions for releasing the funds to the County in the event decommissioning is not completed in a timely manner.
 3. Prior to any ground disturbance, grading or construction activity on the site, twenty-five percent (25%) of total estimated decommissioning costs shall be provided by any of the means listed above. An additional twenty five percent

Linn County, Iowa - Sample Ordinance Information

(25%) shall be provided within five (5) years and ten (10) years of the date of initial approval, and the remaining twenty five percent (25%) of the total re-estimated decommissioning costs shall be provided within fifteen (15) years of the date of initial approval. From that point forward, 100% of the total estimated decommissioning costs as determined by the most recent re-estimation shall be maintained in the decommissioning fund until the end of the functional life of the project.

4. Financial surety shall be maintained for the life of the project.
 5. Proof of recertification of the financial surety instrument must be submitted to the County annually.
 6. Every five (5) years, the facility owner or operator shall retain an independent Licensed Iowa Engineer approved by the County to re-estimate the total cost of decommissioning and attest that the value of the financial surety instrument is appropriate. This report shall be filed with the County and shall incorporate any new industry information learned since the last cost determination.
 7. The required amount of the decommissioning fund shall match the re-estimated cost of decommissioning. Within ninety (90) days of filing the re-estimation report with the County, the facility owner or operator shall cause the fund balance of the financial surety instrument to be adjusted to ensure that it matches the re-estimated decommissioning cost.
- e. *Commencement of site decommissioning.* Decommissioning of the site shall commence at the time identified in the project decommissioning plan or performance agreement, or when the facility is determined to have been abandoned.
1. Decommissioning shall be completed in accordance with the approved decommissioning plan.
 2. The landowner or tenant shall notify the Zoning Administrator both when the project is discontinued and when decommissioning is complete.
 3. Third-party verification, as well as County verification of completed decommissioning will be required before the financial surety may be released.
 4. The facility will be considered abandoned in the following circumstances:
 - (i) Upon termination or expiration of the solar farm leases/easements or
 - (ii) After one year without production, storage of energy, or use as a backup facility.
 - (iii) Exceptions could be made for:
 - A. A force majeure event that has occurred or is occurring, which will prevent the facility from resuming operation within 12 months.

Linn County, Iowa - Sample Ordinance Information

- B. If the facility is in the process of being repowered.
- C. The project is pending completion of construction of the facility due to a backlog of cases or service requests in the MISO queue.
- D. A situation in which the project owner can provide evidence to the county board of supervisors, that the facility's period of continuous inactivity is due to circumstances beyond the project owner's control and that the facility has not been abandoned.
- E. Appeal of the notice of abandonment from the county within a set time of the project owner's receipt of the notice in which the project owner explains the reasons for operational difficulty and provides a timeframe for corrective action that the county deems reasonable.

(9) Agricultural Impact Mitigation Plan (AIMP)

- a. The applicant shall submit an AIMP detailing strategies to avoid or mitigate detrimental impact to agricultural land resulting from the construction, operation, maintenance and/or decommissioning of the solar project. The primary goal of the AIMP is long-term protection of soil health to ensure the project area can be used for productive agricultural use both during, and at the end of the functional life of the project.
- b. The AIMP shall include, but not be limited to, the following information:
 - 1. Project overview. Provide general background, list of project components, and construction timeline.
 - 2. Environmental/Agricultural Monitoring
 - (i) On-site monitoring to be conducted by third party environmental/agricultural professional during construction.
 - (ii) Report of findings to be submitted to county every 30 days during construction.
 - (iii) Responsible for verification and monitoring during and post construction of:
 - A. Soil segregation, stockpiling, backfilling, respreading methods
 - B. Trenching, & foundation installation
 - C. Compaction avoidance and decompaction practices
 - D. Grading Plan adherence
 - E. Wet weather conditions planning
 - F. Drain tile system
 - G. Erosion and sediment control measures

Linn County, Iowa - Sample Ordinance Information

- H. Installation and effectiveness of stormwater management structures
 - I. Invasive species prevention and mitigation
3. *Best Management Practices During Construction and Operation*
 - (i) Best Management Practices (BMPs) shall be included that demonstrate Low Impact Development (LID) measures the applicant will take during construction to minimize negative impact to long-term soil health and future agricultural viability. BMPs should preserve topsoil, reduce or eliminate compacted soils, test and design the project with regard for protection of existing soil profile below 12 inches, include robust long-term soil health monitoring protocols, invasive species prevention, and establish and maintain native, deep-rooted vegetative ground cover.
 4. *Subsurface Drain Tile Survey, Avoidance & Mitigation Plan*
 - (i) Documentation and mapping of existing drain tile systems within the entire project area including elevation, location, and size of tile inlet and outlets
 - (ii) Plan for relocation, removal or restoration of tile damaged during construction
 - (iii) Description of long-term maintenance and plan for ongoing review of existing and newly constructed tile systems (if applicable).
 5. *Pre-construction Soil Health Analysis and Long-Term Soil Monitoring Plan*
 - (i) Prior to construction, a soil analysis shall be conducted and assessed by a third-party professional to establish baseline soil health.
 - (ii) Required sampling protocol:
 - A. *Pre-Construction and Post- Construction Baseline Surveys*
 - 1) One sampling location per zone shall be created based on random sample method or soil type, with each zone not to exceed 20 acres.
 - 2) Two samples shall be collected from each sampling location (for example, the plow layer from 0 to 8 inches and subsoil from 8 to 16 inches).
 - 3) Each sample shall consist of a minimum of 10 subsamples collected from disparate locations surrounding the sample location in each zone. Samples shall be analyzed for soil health and soil chemical parameters during the same seasonal period and at the same sampling locations once prior to construction and once post-construction to establish a baseline.
 - 4) In-field assessment resource evaluations shall be performed in conjunction with soil health testing for the purpose of tracking compaction, soil organic matter and aggregate stability indicators.
 - 5) Soil sample analyses shall utilize a laboratory testing program that includes standard chemical analysis for Phosphorous, Potassium, Calcium, Sulfur, pH, Cation Exchange Capacity (CEC), base saturation, and organic matter, and soil health analyses for soil

Linn County, Iowa - Sample Ordinance Information

respiration, wet aggregate stability, and active (permanganate oxidizable) carbon.

B. Year 5 through end of project life

- 1) Same sampling protocol as above except frequency shall occur once every five years.
- 2) Third-party evaluation and report on soil condition changes against baseline data throughout the lease period. Frequency of reporting shall match sampling protocol.

6. *Soil Protection and Compaction Avoidance*

- (i) Plan should include, at a minimum, a narrative or plan for LID construction practices and methods to be used during each stage of construction for protecting and preserving topsoil. Practices and methods should address, at a minimum, topsoil removal, segregation, stockpiling, replacement during backfill, and respreading, grading minimization, compaction prevention, wet weather conditions, and post-construction decompaction.

- A. All project areas in agricultural production at the time of permit issuance, shall be seeded with temporary cover within three months of commencement of pre-construction/civil activities (mobilization) if disturbance is not intended to occur within two months.

7. *Erosion and Sediment Control*

- (i) The applicant agrees to conduct all roadwork and other site development work in compliance with a national pollutant discharge elimination system (NPDES) permit as required by the state department of natural resources and comply with requirements as detailed by local jurisdictional authorities during the plan submittal. If subject to NPDES requirements, the applicant must submit the permit for review and comment, and an erosion and sediment control plan before beginning construction. The plan must include both general "best management practices" for temporary erosion and sediment control both during and after construction and permanent drainage and erosion control measures to prevent damage to local roads or adjacent areas and to prevent sediment-laden run-off into waterways.

8. *Stormwater Management Plan*

- (i) For the purposes of pollutant removal, stormwater rate and runoff management, flood reduction and associated impacts, the applicant shall provide a detailed analysis of pre- and post-development stormwater runoff rates for review by local jurisdictional authorities. Such review may incorporate stormwater management criteria as set forth in the Cedar Rapids Metropolitan Area Engineering Design Standards Manual for detention of specified rainfall events, and infiltration components consistent with practices as detailed in the state stormwater management manual.

- (10) *Vegetation Management Plan*. The application must include a vegetation management plan with the primary function of promoting long term soil health, through plant stand

Linn County, Iowa - Sample Ordinance Information

persistence, plant diversity, and use of deep-rooted perennials by utilizing recognized establishment and maintenance practices for native vegetation. The Vegetation Management Plan shall include:

- a. A description of the site characteristics including project location, size of the project in terms of acres, existing vegetation, current land uses, soils on and adjacent to the site using, topography with and adjacent to project site using 2' contours, and a description of the general hydrologic conditions of the site and adjoining areas noting any significant features (public waters, water bodies, drainage ways, wetlands, farmed wetlands, restorable wetlands, sinks, hydric soils, etc.).
- b. A description of the management areas with maps including but not limited to the following: areas under the arrays, perimeter plantings, and any other designated management areas within or adjacent to the site.
- c. A description of the management objectives for each management area including:
 1. Short-term management objectives for each area (seed establishment 0-5 years). The emphasis will be on management strategies used during the vegetation establishment phase such as: cover crop and soil stabilization, weed and non-native species management, targeted re-seeding, etc.
 2. Long term management objectives for each area (5 years after establishment to end of permit) such as: target goals such as the percentage of the site covered by native species, development of a monitoring plan, and management strategies such as supplemental seeding.
- d. Establishment and management practices including:
 1. Site preparation (schedules/sequence of planned construction, planting, and management activities).
 2. Eliminating soil compaction prior to seeding.
 3. Seedbed preparation.
 4. Invasive species prevention.
 5. Cover crop planting and temporary covers.
 6. Establishment methods in years 0-5.
 7. Management methods in year 6 and beyond.
 8. Grazing practices (if applicable).
- e. Seeding and planting practices including:
 1. Seed mixes (names, ounces/acre in Pure Live Seed), seeds per sq ft., % of mix based on seeds per sq ft). A complete list of seeds shall be provided as well as a map denoting the seed mix areas. Prior to seed procurement, seed origin shall be added to the list of seeds.
 - I. At a minimum, ground under and around the solar array shall be planted with a perennial vegetated ground cover that includes a mix of perennial grasses and wildflowers that will preferably result in short stature prairie with a diversity of forbs and flowering plants that bloom throughout the

Linn County, Iowa - Sample Ordinance Information

growing seasons. Perennial vegetation (grasses and forbs) used shall be native on a regional basis (preferably to Iowa) but where appropriate to the ground cover plan goals, may also include other naturalized and non-invasive species which limit noxious and invasive species encroachment, provide habitat for pollinators and wildlife, build soil health, and/or provide other ecosystem services (i.e. clovers). Non-native species shall be limited to the following: legumes, not exceed 20 seeds per square foot and grasses, not to exceed 15 seeds per square foot.

- II. Wherever native vegetation is discussed, including in the Linn County Utility Scale Solar Scorecard, native vegetation shall be defined as seed mix plan that meet criteria as described within the United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Iowa 327 Conservation Cover Standard and supporting reference documents developed through the use of the Iowa NRCS Native Seed Calculator, or any other similar standard as approved.
 - III. Cover Crop and other short-term seeding methods shall be utilized for the purpose of site stabilization for all areas in agricultural production *within* three months of commencement of pre-construction/civil activities (mobilization), if planned disturbance is not intended to occur within 2 months of the time of permit issuance, preventing growth of noxious and invasive species, and aid in long term vegetative establishment. In addition to seed criteria specified above cover crop choice(s) shall meet or exceed 80% by volume of Pure Live Seed at time of use, be seeding date and zone appropriate for the selected species and be based on minimum thresholds as described within the USDA – NRCS Iowa 340 Cover Crop Standard, or other similar standard as approved.
2. If visual screening is part of the project, provide a complete list of plantings as well as the size of the plantings.
 3. Summarize steps taken to ensure that any pesticides used at or near the site will not drift and impact native vegetation.
 4. Describe how planting will be conducted in each area (array, perimeter, detention area, etc.) including the sequence of planting, time of planting, and planting method.
- f. Vegetation monitoring and adaptive management practices to be used on site including:
1. Construction monitoring. For compliance with the Agricultural Impact Mitigation Plan, a third-party qualified site monitor shall be required to be present on site during construction to ensure soil health is maintained.
 2. Vegetation establishment and monitoring plan. A qualified third-party independent monitor shall complete vegetation monitoring activities and provide reports to Linn County staff. Reports shall be submitted annually during the establishment phase (first 5 years) and every three years afterwards. Reports shall include: summary of site conditions and management activities, description of adaptive management actions

Linn County, Iowa - Sample Ordinance Information

implemented, description of any management challenges, an evaluation on whether the project is meeting stated management objectives.

3. Adaptive management practices. Adaptive management approach shall use the results of the annual report and other site visits to determine measures necessary to achieve the stated management objectives.

(11) Wildlife and Habitat Assessment and Mitigation Plan

- a. The applicant shall submit a Wildlife and Habitat Assessment and Mitigation Plan detailing strategies to avoid, or mitigate for, detrimental impact to existing habitat and wildlife resulting from the construction, operation, maintenance and/or decommissioning of the solar project. Consideration of established migration patterns, emphasis on habitat fragmentation avoidance, and allowance for limited wildlife movement into and through the array zones via wildlife friendly fencing design shall be considered.
- b. Fenced array areas are limited to 160 acres before establishment of a wildlife corridor shall be required.
- c. Solar panels, structures, electrical equipment, and fencing, excluding power lines for interconnection, through established drainageways. Drainageways shall be defined as stream corridors and open ditches containing perennial flow throughout the majority of the growing season.

(12) Emergency Response Plan.

- a. The applicant shall submit an emergency response plan prior to any ground disturbance at the project site detailing the planned response actions that will be taken by the solar facility operator, including any battery energy storage systems in the event of an emergency situation. These actions are intended to minimize health risks to personnel and people in the surrounding community, as well as minimize adverse impacts to the environment.
 1. The plan shall include, but is not limited to, a detailed narrative of response procedures and the facility representatives responsible for management of the following plausible contingencies that could occur at the facility: natural disaster/severe weather, fire, security incident, capacity/transmission, environmental, chemical, pipeline (if applicable), and medical. It shall include procedures for a site evacuation, designated egress routes and emergency staging areas.
 2. The plan shall include a stand-alone section detailing the emergency response protocols specific to battery energy storage areas (if applicable).
 3. The plan shall be developed in coordination with local first responders, Linn County Emergency Management & Linn County Public Health personnel.

- (13) *Future Operators.* Future operators, successors, assignees, or heirs shall agree in writing to accept and to conform to all conditions of approval in the staff report. Prior notice to the County of the intent to sell or transfer ownership shall be done in a timely manner. Such agreement shall be filed with and accepted by the County before the transfer to a new operator, successor, assignees, or heirs shall be effective.

Linn County, Iowa - Sample Ordinance Information

SECTION 2. SUBSECTION ADDED. Chapter 107, Article VI, Section 107-117 (i) is hereby added including language related to consumer scale battery energy storage systems, to read as follows:

- (i) *Utilities, consumer scale battery energy storage systems.* Consumer scale battery energy storage systems that are accessory to a principal use and are meant to store energy to be primarily used on-site. A complete application shall include the following:
- (1) *Minor site plan and permits.* A minor site plan shall be submitted and reviewed prior to approval.
 - (2) All required permits shall be obtained prior to construction.
 - (3) *Setbacks.* These installations must adhere to the minimum setback standards for the zoning district where the project is located, and any applicable buffer requirements.

SECTION 3. SUBSECTION ADDED. Chapter 107, Article VI, Section 107-117 (j) is hereby added including language related to utility scale battery energy storage systems, to read as follows:

- (j) *Utilities, utility scale battery energy storage systems.* Utility scale battery energy storage systems that are meant to store and/or supply energy for the primary purpose of wholesale or retail sales of generated electricity, and that are proposed either as part of a utility scale solar project or wind farm or as a standalone project that requires rezoning to the Renewable Energy overlay zoning district. A complete application shall include the following:
- (1) *Major site plan required.* A major site plan shall be submitted and reviewed prior to the approval of a utility scale battery energy storage system. This site plan shall also include the following in addition to requirements set forth in Section 107-71.
 - a. Power and communications lines.
 - b. A preliminary equipment specification sheet that documents the proposed battery energy storage system components, inverters and associated electrical equipment that are to be installed. A final equipment specification sheet shall be submitted prior to the issuance of building permit.
 - (2) Additional information. In addition to all submittal requirements of a major site plan and rezoning application, the application for the battery energy storage system shall include the following:
 - a. Property legal descriptions. Legal descriptions shall be submitted for the subject property (leased and/or owned) on which the battery energy storage system will be located.
 - b. Pre-construction survey of nearby roads that may be impacted by construction of the facility.
 - c. Interconnection agreement.
 - d. Operation and maintenance plan.
 - e. Title investigation report.
 - f. Emergency response plan.

Linn County, Iowa - Sample Ordinance Information

- g. Decommissioning plan.
 - h. Setback analysis showing the minimum setback requirements, or any agreed on greater setback provisions, are met by the project.
- (3) *Site and structure requirements.*
- a. *Setbacks.*
 - 1. All components of the battery energy storage system shall be setback at least two hundred (200) feet from a property line or right-of-way.
 - 2. All components, except the interconnection point, installed as part of the battery energy storage system shall be setback at least five (500) hundred feet from the nearest property line including an occupied structure not located on the subject property. However, if the developer of the facility can obtain and record with the County Recorder a written, signed, and notarized statement from the owner of the property containing said structure waiving this setback, the minimum setback from may be reduced to two hundred (200) feet.
 - 3. If the battery energy storage system is to be installed in conjunction to a new utility-scale solar facility, the battery energy storage system shall be sited so as to be located within the interior of said facility, with the banks of solar panels lying between the battery energy storage system and the edges of the facility.
 - 4. All components of the battery energy storage systems shall be setback a minimum of one hundred and twenty (120) feet from the centerline of all stream corridors and open ditches containing perennial flow throughout the majority of the growing season.
 - b. *Height.* Battery energy storage system shall not exceed the maximum height for the zoning district in which it is located.
 - c. *Fencing Requirements.* The battery energy storage system including all mechanical equipment, shall be enclosed in fencing, with a self-locking gate, and shall be a primarily woven wire or agricultural style fencing. The fence shall contain appropriate warning signage that is posted such that is clearly visible on the site. The warning signage shall include the type of technology associated with the battery energy storage system, any special hazards associated, the type of suppression system installed in the area of the battery energy storage system, and 24-hour emergency contact information, including reach-back phone number. Security fences, gates and warning signs must be maintained in good condition until the installation is dismantled and removed from the site.
 - d. *Landscape buffer and screening.* In an effort to mitigate any potential negative effects and reduce the visual impact of the facility, the perimeter of the facility shall be landscaped to create a visual screen from neighboring properties. Landscaping shall be installed within a planting area around the facility, in accordance with the following standards:
 - 1. The landscaping buffer shall preferably use trees, shrubs, grasses and forbs that are native to Iowa, or where appropriate may include naturalized and non-invasive species.

Linn County, Iowa - Sample Ordinance Information

2. The landscaping buffer shall use a combination of trees and plants to provide a vegetative screen. Trees shall be at least six (6) feet tall within three (3) years of installation and shall have a minimum mature height of twelve (12) feet or the height of any fencing, whichever is taller.
 3. The planting area shall be located immediately adjacent to and outside the use area and shall extend no further than fifty (50) feet beyond the outside of the use area, which includes the security fence, required parking areas, required stormwater infrastructure, or other structures or infrastructure required or proposed with the development.
 4. At the discretion of the approving authority, the minimum mature height of vegetative screening may be modified where the applicant can show good cause or practical difficulty.
 5. If the battery energy storage system is being constructed within the interior of a utility-scale solar facility, Planning and Zoning staff may waive or modify the requirements in this subsection specific to battery energy storage systems.
- e. *Floodplain considerations.* Utility scale battery energy storage systems are considered to be maximum damage potential structures and facilities for purposes of the floodplain district regulations.
- (4) *Avoidance and Mitigation of Damages to Public Infrastructure.*
- a. *Roads.* Applicants shall identify all roads to be used for the purpose of transporting solar components, substation parts, cement, and/or equipment for construction, operation or maintenance of the solar installation and obtain applicable weight and size permits from the impacted road authority prior to construction.
 - b. *Existing road conditions.* Applicant shall conduct and provide evidence of a pre-construction roadway conditions survey, in coordination with Linn County Secondary Roads, to determine baseline road conditions and authority. The survey shall adequately document all road, road right of way, and public drainage infrastructure conditions requested for use during all phases of construction. Applicants shall enter into a Road Use Agreement with Linn County Secondary Roads that clearly details responsibilities for on-going road maintenance and dust control measures for all identified Linn County jurisdictional roads during all phases of construction. The Road Use Agreement shall require certain applicant and county undertakings, including but not limited to providing financial assurance in the form of an irrevocable letter of credit, bond, cash, escrow or other form of security or guaranty acceptable to Linn County. The form of security shall be posted prior to construction mobilization and remain in effect up to 12 months post construction. At construction completion, Applicant shall conduct and provide evidence of a post construction roadway conditions survey, in accordance with the Road Use Agreement and in coordination with Linn County Secondary Roads, to determine Linn County Road conditions meet the Linn County Secondary Roads Engineer satisfaction.
 - c. *Drainage system.* The applicant shall be responsible for repair of damage to public drainage systems stemming from construction, operation or maintenance of the installation.

Linn County, Iowa - Sample Ordinance Information

- (5) *Operation and maintenance plan.* The applicant shall submit a plan for the operation and maintenance of the battery energy storage system, including all necessary services, frequency of service, preventative maintenance measures, and monitoring. The operation and maintenance plan should include at a minimum:
- a. Preventative maintenance practices and schedules for all on-site equipment.
 - b. Annual reporting and verification to county on the status or changes to ongoing service schedule
 - c. *Noise.* The one (1) hour average noise generated by from the battery energy storage system, components, and associated ancillary equipment shall not exceed a noise level of fifty-five (55) dBA as measured from the occupied dwelling of any adjacent property containing an existing residential structure. Applicants may submit equipment and component manufacturer noise ratings at the time of application to demonstrate compliance. If the ambient sound pressure level exceeds 55 dBA, the standard shall be the ambient Leq (equivalent continuous sound pressure level) plus 5 dBA.
 1. At the discretion of the approving authority, the applicant may be required to provide a baseline noise evaluation study completed by a board certified professional by the Institute of Noise Control Engineering (INCE), or an appropriately licensed Professional Engineer (PE) prior to construction of the proposed solar site.
 2. To document decibel level if there is a complaint on an operational system, at the discretion of the Zoning Administrator, the owner shall commission a report providing Operating Sound Pressure Level measurements from a reasonable number of sampled locations at the property line of any adjacent property containing an existing residential structure or any property zoned residential to demonstrate compliance with this standard. Report shall be completed by a board certified professional by the Institute of Noise Control Engineering (INCE), or an appropriately licensed Professional Engineer (PE).
 3. The owner(s) of an adjacent property may voluntarily agree, by written waiver, to a higher noise level.
 - d. *Issue resolution protocols.* Contact information for responsible party to address issues that may arise (damaged equipment causing excessive noise, etc)
 - e. *Disposal/recycling plan for damaged or obsolete facility equipment or hazardous waste.* No storage of inoperable or obsolete equipment shall be allowed to remain on-site. Site operator shall be responsible for the cleanup of debris related to storm damage.
 - f. *Fire safety compliance.* The applicant shall document and describe how the fire safety system and its associated controls will function and be maintained in proper working order.
 - g. *Stormwater management considerations.*

Linn County, Iowa - Sample Ordinance Information

1. A run-off catch basin or other similar facility may be required to prevent contaminants from leaving the project area. If required, the applicant shall describe how the basin will be maintained for the life of the project.
 2. Applicant shall contact the Iowa Department of Resources and Linn Soil and Water Conservation District to request recommendations for stormwater management practices to be used on the site. These recommendations may be considered by the Planning & Zoning Commission and the Board.
- (6) *Tile Investigation Report.* The applicant must submit a tile investigation report for the entire project area, identifying all drain tiles located therein. The applicant shall maintain and protect all drain tiles located within the project area and shall repair or replace any drain tiles damaged as a consequence of the installation or removal of the battery energy storage system and/or associated components.
- (7) *Emergency Response Plan.* A copy of the approved emergency response plan shall be given to the system owner, the local fire department, and local fire code official. A permanent copy shall also be placed in an approved location to be accessible to facility personnel, fire code officials, and emergency responders. The emergency operations plan shall include the following information:
- a. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.
 - b. Procedures for inspection and testing of associated alarms, interlocks, and controls.
 - c. Procedures to be followed in response to notifications from the battery energy storage system, when provided, that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.
 - d. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department and Linn County Emergency Management, de-energizing equipment, and controlling and extinguishing the fire.
 - e. Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility.
 - f. Other procedures as determined necessary by the County to provide for the safety of occupants, neighboring properties, and emergency responders.
 - g. Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.

Linn County, Iowa - Sample Ordinance Information

- (8) Decommissioning and site restoration plan. The decommissioning and site restoration plan shall address and/or ensure the following standards:
- a. Disposal of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations.
 - b. The anticipated life of the battery energy storage system.
 - c. The estimated decommissioning costs and method of ensuring funds will be available. Estimates for the total cost for decommissioning the site shall be determined by a Licensed Engineer. Salvage value shall not be included in the cost estimate. Cost estimate shall include a mechanism for calculating adjusted costs over the life of the project.
 - d. The manner in which the site will be restored, including a description of how any changes to the surrounding areas and other systems adjacent to the battery energy storage system, such as, but not limited to, structural elements, building penetrations, means of egress, and required fire detection suppression systems, will be protected during decommissioning and confirmed as being acceptable after the system is removed.
 - e. A listing of any contingencies for removing an intact operational energy storage system from service, and for removing an energy storage system from service that has been damaged by a fire or other event.
 - f. Following a continuous one-year period in which no energy is stored, or if substantial action on construction or repairs to the project is discontinued for a period of one year, the permit holder will have one year to complete decommissioning of the battery energy storage system. At the discretion of the zoning administrator, the continuous one-year period that triggers decommissioning may be extended if the applicant demonstrates ongoing commitment to the project through activities such as but not limited to making lease payments or documentation of ongoing maintenance or repairs.
 1. Decommissioning shall be completed in accordance with the approved decommissioning plan.
 2. The landowner or tenant shall notify the zoning administrator both when the project is discontinued and when decommissioning is complete.
 - g. At the discretion of the approving authority, financial surety may also be required.
- (9) *Future Operators*. Future operators, successors, assignees, or heirs shall agree in writing to accept and to conform to all conditions of approval in the staff report. Prior notice to the County of the intent to sell or transfer ownership shall be done in a timely manner. Such agreement shall be filed with and accepted by the County before the transfer to a new operator, successor, assignees, or heirs shall be effective.
- (10) *Compliance with local, state and federal regulations*. Utility scale battery energy storage systems shall comply with applicable local, state and federal regulations.

Linn County, Iowa - Sample Ordinance Information

SECTION 4. SECTION MODIFIED. Chapter 107, Article VII, Section 107-147 Use Table, Table 107-147-1 is hereby amended adding consumer and utility scale battery energy storage system uses, to read as follows:

Transportation and Utility Uses		STD	AG	RR 1/2/ 3	VR	VM	USR	USR -MF	HC	GC	I	CN R	MH
Utilities	Battery energy storage system – consumer scale	107-117(i)	P/A	P/A	P/A	P/A	P/A	P/A	P/A	P/A	P/A	P/A	P/A
	Battery energy storage system – utility scale	107-117(j)	P									P	

SECTION 5. SECTION MODIFIED. Chapter 107, Article VII, Section 107-149 Renewable Energy Overlay District is hereby amended to read as follows:

- (a) *Purpose.* The county has determined that establishing a renewable energy overlay district is appropriate in order to allow for the orderly development of utility scale solar and wind farm energy projects. This section establishes an overlay district that serves the following purposes:
 - (1) To encourage and support the development and use of alternative and renewable energy resources.
 - (2) To encourage development that conforms to the goals, objectives, and strategies in the county's comprehensive plan, and/or any approved fringe area plan (formerly known as city/county strategic growth plan) that pertains to the area in which the development is proposed.
 - (3) To encourage sustainable and energy efficient development as outlined by the Linn County Board of Supervisors Resolution in support of the objectives of the Paris Agreement, which aims to strengthen the global response to the threat of climate change.
 - (4) To advance the seven targets identified by the Linn County Board of Supervisors in the Resolution Declaring a Climate Crisis and Committing to Accelerated Efforts to Limit the Global Average Temperature Increase.
 - (5) To maintain or enhance soil health for future agricultural use after project decommissioning.
- (b) *Geographic location.* The renewable energy overlay district shall be geographically located in those areas currently zoned AG (Agricultural) or CNR (Critical Natural Resources).
- (c) *Permitted uses.* Uses allowed in the renewable energy overlay district include wind farms, utility scale solar installations, and/or utility scale battery energy storage systems.
- (d) *Signage.* Signage shall conform to the requirements in Section 107-94(j) for the underlying zoning district.

Linn County, Iowa - Sample Ordinance Information

- (e) *Additional requirements.* Additional requirements within this chapter and other county ordinances apply to development in the renewable energy overlay district, including but not limited to, the general regulations in article V of this chapter. Other requirements apply to this overlay district, including:
 - (1) *Protection of critical natural resources.* Rezoning proposals in CNR (Critical Natural Resources) zoning districts must meet the General Performance Standards outlined in article VII of this chapter, which are designed to protect delineated critical natural resources.
- (f) *Setbacks.* Setbacks within the renewable energy overlay district shall be subject to a minimum setback of fifty (50) feet from property lines. Setbacks may be reduced to zero when property abuts another property used for a use permitted in this overlay district as described in this section.
- (g) *Outlots and nonbuildable lots.* Platted outlots or parcels that have been determined to be nonbuildable (not a legal lot of record) may be included in the overall site proposed to be used for a wind farm or utility scale solar energy installation.
- (h) *Notification requirements.* To assist in providing adequate notice to interested parties, the applicant for a rezoning to the renewable energy overlay district shall:
 - (1) Within 14 days of filing the rezoning application with the planning and development department, mail a notice via first class mail to property owners and tenants within 1000 feet of the subject site explaining the request and identifying the subject property.
 - (2) Prior to the application being heard at the planning and zoning commission meeting, the applicant shall host a public informational meeting held at a location reasonably accessible to all identified property owners. Applicants must mail a notice of the public informational meeting via first class mail to property owners and tenants within 1000 feet of the subject site.
 - a. Applicants must submit a list of the property owners and tenants contacted, a copy of the notice sent, and a notarized affidavit stipulating to the mailing to the planning and development department.

SECTION 6. SECTION MODIFIED. Chapter 107, Article IX, Section 107-180 is hereby amended by adding thereto new definitions, to read as follows:

Agrivoltaics means the practice of combining solar energy generation with agricultural activities on the same land parcel.

Consumer scale battery energy storage system, (accessory use) means one or more devices attached to or located inside or outside of the principal building footprint, assembled together, capable of storing energy in order to supply electrical energy to serve primarily the energy needs on-site.

Utility scale battery energy storage system means one or more devices, assembled together, capable of storing energy in order to supply electric energy for the primary purpose of wholesale or retail sales of generated electricity, and which is proposed either as part of a utility scale solar project or wind farm or that is proposed as a standalone project that requires rezoning to the Renewable Energy overlay zoning district. This includes all accessory equipment necessary for

Linn County, Iowa - Sample Ordinance Information

energy storage, including, but not limited to, inverters, transformers, cooling equipment, switching gear, metering equipment, transmission tie-lines, other power interconnection facilities and/or a project substation.

SECTION 7. REPEALER. All ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

SECTION 8. SEVERABILITY. If any section, provision or part of this ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

SECTION 9. SAVING. The Code of Ordinances, Linn County, Iowa, shall remain in full force and effect, save and except as amended by this ordinance.

SECTION 10. EFFECTIVE DATE. This ordinance shall be in effect after its final passage, approval and publication as provided by law.

LINN COUNTY BOARD OF SUPERVISORS

Louis J. Zumbach, Chair

Ben Rogers, Vice Chair

Kirsten Running-Marquardt, Supervisor

I, Linn County Auditor, hereby certify that the above and foregoing is a true copy of an ordinance passed by the Linn County Board of Supervisors.

Joel D. Miller, Linn County Auditor

STATE OF IOWA
COUNTY OF LINN

This instrument was acknowledged before me on the _____ day of _____, 2023, by Joel Miller as Linn County Auditor.

Notary Public, State of Iowa

Linn County, Iowa - Sample Ordinance Information

Planning & Zoning Commission on the 16TH day of AUGUST, 2023.

Public hearing and First consideration on the 5TH day of SEPTEMBER, 2023.

Second consideration on the 13TH day of SEPTEMBER, 2023.

Third consideration and final passage on the 20TH day of SEPTEMBER, 2023.

Published in the Gazette on the _____ day of _____, 2023.



Linn County Utility Scale Solar Scorecard

Planned percent of native species of the entire site's vegetative cover		
	25-35%	+12 points
	36-50%	+20 points
	51-65%	+28 points
	66-80%	+36 points
	>80%	+44 points
	<25%	+0 points

Number of agrivoltaic practices on site		
	1 practice	+5 points
	2 practices	+10 points
	>2 practices	+15 points
	No practices	0 points

Planned number of species in entire site's vegetative cover		
	5-9 species	+8 points
	10-15 species	+12 points
	16-19 species	+16 points
	>20 species	+20 points

Planned percentage of the entire site's vegetative cover that includes flowering plants		
	10-25%	+4 points
	26-50%	+8 points
	51-75%	+12 points
	>75%	+16 points
	No flowering plants	-15 points

Site Planning and Management		
	Site has approved vegetation management plan	+20 points
	Site has approved agricultural impact mitigation plan	+20 points

Planned seasons with at least three blooming species present		
	Spring (April - May)	+5 points
	Summer (June - August)	+5 point
	Fall (September - October)	+5 points

Percent of site in a medium (65-82) CSR area		
	10-25%	-2 points
	26-50%	-3 points
	51-75%	-4 points
	>75%	-5 points

Percentage of site that is graded		
	0-10%	+20 points
	10-30%	+10 points
	30-50%	+0 points
	>50%	-10 points

Percent of site in a high (83-100) CSR area		
	10-25%	-3 points
	26-50%	-4 points
	51-75%	-5 points
	>75%	-6 points

Increased Setbacks		
	No non-participating dwellings within 300' of project boundaries	+0 points
	No non-participating dwellings within 500' of project boundaries	+30 points
	No non-participating dwellings within 750' of project boundaries	+35 points
	No non-participating dwellings within 1,000' of project boundaries	+40 points
	No non-participating dwellings within 1,250' of project boundaries	+45 points

Percent of site in a low (<65) CSR area		
	10-25%	+6 points
	26-50%	+8 points
	51-75%	+10 points
	>75%	+12 points



Linn County Utility Scale Solar Scorecard

Average Solar Panel Height		
	>24"	+5 points
	>26"	+10 points
	>28"	+15 points
	>30"	+20 points
	>32"	+25 points

Exceptional Good Neighbor Practices		
	Good neighbor payments for adjacent non-participating landowners	+10 points
	Good neighbor payments for tenant farmers displaced by the project	+10 points
	Agreement to source labor locally	+15 points

Scott County, Iowa - Sample Ordinance Information

SCOTT COUNTY ORDINANCE NO.22 -04

AN ORDINANCE TO AMEND PORTIONS OF THE ZONING ORDINANCE FOR UNINCORPORATED SCOTT COUNTY TO CREATE REGULATIONS FOR A NEW ZONING DISTRICT, UTILITY SOLAR-FLOATING "US-F". DISTRICT.

BE IT ENACTED BY THE BOARD OF SUPERVISORS OF SCOTT COUNTY IOWA:

Section 1. Amend Section 6-5 DEFINITIONS of the Zoning Ordinance for Unincorporated Scott County by editing:

Section 6-5(20) The most current official index for ranking the productivity of soils and their suitability for row-crop production in Iowa. The CSR2 index has replaced CSR as the system that rates soils from five (5) to one hundred (100), with one hundred (100) reserved for those soils a) located in areas of the most favorable weather conditions in Iowa, b) that have high yield potential, and c) that can be continuously row cropped. (A detailed description of the CSR2 system, including methodology and CSR2 estimates for various soil types, may be found in publications of the Agricultural Extension Service, Iowa State University.)

and adding:

Section 6-5(106) SOLAR ACCESS EASEMENT: A recorded easement which provides continued access to incident sunlight necessary to operate a solar collector.

Section 6-5(107) SOLAR ARRAY: A group of solar panels connected together.

Section 6-5(108) SOLAR ENERGY GENERATION, CONSUMER SCALE A solar energy system of interconnected solar panels/arrays for the primary purpose of meeting electrical demands at that location. These systems are typically intended to offset electrical demands for the owner and are not intended to be net annual generators of electricity.

Section 6-5(109) SOLAR ENERGY GENERATION, UTILITY-SCALE: A group of interconnected solar panels/arrays that convert sunlight into electricity for the primary purpose of wholesale or retail sales of generated electricity. This definition does not apply to consumer scale solar installations that are constructed primarily to provide power for use on-site.

Section 6-5(110) SOLAR GLARE: The effect produced by light reflecting from a solar panel with intensity sufficient to cause annoyance, discomfort or loss in visual performance and visibility.

Section 6-5(111) SOLAR PANEL: A device composed of groups of individual solar cells used to convert solar energy into electrical current.

Section 2. Amend the Zoning Ordinance for Unincorporated Scott County by adding a new Chapter 6-21:

6-21. "US-F" Utility Solar-Floating District

A. General Intent: The US-F Floating District is intended and designed to provide areas for utility-scale solar energy generation sites. The adopted Smart Planning Objectives of the Scott County Comprehensive Plan promote renewable energy use and increased energy efficiency.

Prior to the establishment of any such district, adequate information shall be submitted regarding the effects of the proposed use upon the adjoining property and area, and other matters relating to habitat and natural resource conservation, preservation of prime agricultural land, public safety, public health, and general welfare. It is not the intent of this ordinance to allow Utility-scale solar energy generation sites on prime agricultural land.

B. Principal Permitted Uses: Land, buildings, or other infrastructure may be used for any of the following, in so far as the regulations contained in Sections E, F, and G are met:

1. Any use permitted in the underlying (original) zoning district.
2. Utility-scale solar energy generation sites.

Scott County, Iowa - Sample Ordinance Information

C. Accessory Permitted Uses: Accessory uses, structures, and other infrastructure customarily incidental to any permitted principal use.

D. Special Permitted Uses: None.

E. The Planning and Zoning Commission and Board of Supervisors shall consider the following characteristics of any land being petitioned for a rezoning to a "US-F" Floating District:

1. Present Use.

2. Corn Suitability Rating (CSR2): No land shall be rezoned to the "US-F" district with soil that scores an average CSR2 score of 60.0 or higher. Calculation of Iowa CSR2 ratings of a specific area of land is strictly limited to the following:

a. Average CSR2 is to be calculated using current Soil Survey Geographic Database (SSURGO) data furnished by the United States Department of Agriculture Natural Resources Conservation Service (NRCS).

b. Average CSR2 is to be calculated using the Decision Tool "Calculating a Weighted Average CSR2" available through Iowa State University Extension's website (<https://www.extension.iastate.edu/agdm/wholefarm/html/c2-87.html>).

c. The Area of Interest (AOI) established in "Calculating a Weighted Average CSR2" must be delineated to reflect the precise, contiguous land area being developed with arrays, buildings, and utility and access infrastructure, and shall not include land area set aside for conservation or agriculture, or land otherwise undisturbed by development.

d. The AOI must be established and CSR2 must be calculated prior to the start of site preparation work, including grading or top soil removal or displacement. If site preparation work is completed prior to submitting an application for rezoning, historical CSR2 data may be utilized to reflect pre-development site characteristics.

e. The Planning and Zoning Commission and Board of Supervisors shall consider any AOI with a Weighted Average CSR2 of 60 or greater as Prime Agricultural Land.

3. Access/proximity of existing utility infrastructure or other needed infrastructure, as well as the feasibility of extending such facilities, if necessary.

4. Particular suitability or adaptability of the land to accommodate the proposed use.

F. Site requirements for rezoning land to a "US-F" Floating District:

1. Floodplain/Floodway: No portion of the site proposed to be developed may be located in a mapped 100-year or 500-year floodplain.

2. Habitat and Natural Resource Consideration: The potential impact on any environmentally-sensitive areas such as lakes, ponds, streams, rivers, wetlands, steep slopes, aquifers and recharge areas, natural wooded areas, prairie and other wildlife habitats shall be identified and considered for reasonable mitigation.

3. Setbacks: Setbacks for all structures (including the solar arrays themselves) must adhere to the minimum principal setback standards for the zoning district where the project is located; greater setbacks may be recommended based on the application.

a. All buildings, accessory buildings, and other infrastructure shall be located the following distances from the nearest boundary of each zoning district:

A-P:	500 feet
A-G:	500 feet
R-1:	1,000 feet
R-2:	1,000 feet
CAD-R:	1,000 feet
C-1:	100 feet
C-2:	n/a
CAD-PVC:	100 feet
I:	n/a
I-F:	n/a
SW-F:	n/a

Scott County, Iowa - Sample Ordinance Information

b. All buildings, accessory buildings, and other infrastructure shall be located 1,000 feet from any residential dwelling unit not within in the land area leased or owned by the applicant.

c. When a solar array is to be built on two or more parcels that are abutting, a zero (0) side or rear setback shall be permitted to the property line in common with the abutting parcels.

4. Screening: Adequate safeguards shall be taken to fence or screen any on-site hazards from the public. A landscape buffer may be required to be installed and maintained. The need for screening requirements will be evaluated as part of the review by Staff and the approval process and will be based on the surroundings of the site.

5. Utility connections: All utility connections serving the solar shall be placed underground unless topography, soil quality, or other conditions make this unfeasible.

6. Glare minimization: All solar panels must be constructed to diminish glare or reflection onto adjacent properties and adjacent roadways and must not interfere with traffic, including air traffic, or create a safety hazard.

7. Compliance with local, state, and federal regulations: Utility scale solar installations shall comply with applicable local, state and federal regulations.

8. Accessory structures: All accessory structures shall be subject to bulk and height regulations of structures in the underlying zoning district, unless specified differently in the rezoning ordinance.

9. Signage: No signs other than appropriate warning signs, or standard signs for operation or identification, shall be allowed.

10. Fencing/security: A security fence must be installed along all exterior sides of the utility scale solar installation and be equipped with a minimum of one gate and locking mechanism on the primary access side. Security fences, gates and warning signs must be maintained in good condition until the utility scale solar installation is decommissioned.

11. Disruption to Existing Agricultural Operations: Any development plan must provide documentation that the project will not negatively affect the operation of existing agricultural drainage tiles on adjacent properties.

a. The Commission may recommend to the Board of Supervisors that an agricultural nuisance waiver be included within the application if determined to be applicable. Such waiver would restrict applicants from filing lawsuits for private nuisance against legitimate agriculture operations in the vicinity of the solar installation.

b. Farmers in A-P or A-G districts adjacent to the proposed area to be rezoned may file a written request to the Commission to consider enhanced setbacks from their zoning district boundary of up to 1,000 feet (see Section F(3)a) to prevent disruption to their agricultural operations. The Commission may recommend to the Board of Supervisors that those requests be honored and considered official conditions of rezoning approval, and included in the ordinance to rezone.

G. Procedure for Rezoning Land to "US-F" Floating District: Developer/landowner must apply to the Planning and Zoning Commission for approval of a specific development plan involving one of the principal permitted uses listed in Section B. The development plan must include a site plan for the development in accordance with Section 6-29 (Site Plan Regulations). The standard rezoning procedures contained in Section 6-31 (Zoning Amendment Procedures) shall be followed, beginning with the Planning and Zoning Commission holding a public hearing for rezoning before making a recommendation to the Board of Supervisors.

1. Development Plan must include the following:

a. Site plan: Site plan shall show the location and spacing of every solar panel/array and all other facilities to be constructed

b. Grading plan: This plan shall include all proposed changes to the landscape of the site (e.g., clearing, grading, topographic changes, tree removal, etc.).

c. Utility plan: Planned location of all utilities, including underground or overhead electric lines.

Scott County, Iowa - Sample Ordinance Information

d. Project timeline: Project timeline showing how the site will be developed from beginning to end, including how the applicant will inform adjacent property owners.

e. Landscaping/Screening plan: Planned location of all plants and screening.

f. Road Impact Analysis: An inventory of the existing road network to be utilized for construction and maintenance of the facility and details on how the project will impact those roads over the life of the project, including during installation and decommissioning.

g. Interconnection agreement: Provide the interconnection agreement with the utility company

h. Installation, operation, and maintenance plan:

(1) Maintenance, repair or replacement of facility: Maintenance shall consist of, but not be limited to, repairs to structures or components, part replacement, painting, and maintenance of security measures. All applicable local, state and federal requirements should be followed when maintaining or conducting repairs to the site.

(2) Access: Show location of access easements. Site access shall be maintained to provide access for adequate maintenance and emergency responders.

(3) Soil erosion and sediment control considerations: The applicant agrees to conduct all roadwork and other site development work in compliance with a national pollutant discharge elimination system (NPDES) permit as required by the state department of natural resources and comply with requirements as detailed by local jurisdictional authorities during the plan submittal. If subject to NPDES requirements, the applicant must submit the permit for review and comment, and an erosion and sediment control plan before beginning construction. The plan must include both general "best management practices" for temporary erosion and sediment control both during and after construction and permanent drainage and erosion control measures to prevent damage to local roads or adjacent areas and to prevent sediment-laden run-off into waterways.

(4) Stormwater management: The plan shall include details on stormwater rate and runoff management as well as pollutant removal and flood reduction. The applicant shall include a detailed analysis of pre- and post-development stormwater runoff rates for review. Such review will incorporate appropriate stormwater management practices as required by the County Engineer, the Scott County Code of Ordinances and any State of Iowa best practices. The plan shall include detention of specified rainfall events, and infiltration components consistent with practices as detailed in the state stormwater management manual.

(5) Ground cover and buffer areas: Ground around and under solar arrays and in project site buffer areas shall be planted and maintained in perennial vegetated ground cover, and meet the following standards:

a. Top soils shall not be removed during development, unless part of a remediation effort.

b. Soils shall be planted and maintained in perennial vegetation for the full operational life of the project to prevent erosion, manage runoff and build soil. Seeds should include a mix of grasses and wildflowers native to the region of the project site that will result in a short stature prairie with a diversity of forbs or flowering plants that bloom throughout the growing season. Blooming shrubs may be used in buffer areas as appropriate for visual screening. Non-native or naturalized species may be selectively planted for maintenance purposes as part of an approved site plan.

c. Seed mixes and maintenance practices should be consistent with recommendations made by qualified natural resource professionals such as those from the Department of Natural Resources, County Soil and Water Conservation Service, or Natural Resource Conservation Service.

d. Plant material must not have been treated with systemic insecticides, particularly neonicotinoids.

e. Other practices, such as small-scale farming or grazing, may be allowed in the project area as part of the conditions of approval for the project.

(6) Cleaning chemicals and solvents: During operation of the proposed installation, all chemicals or solvents used to clean photovoltaic panels should be low in volatile organic

Scott County, Iowa - Sample Ordinance Information

compounds and the operator should use recyclable or biodegradable products to the extent possible. Any on-site storage of chemicals or solvents shall be referenced.

i. Decommissioning plan:

(1) The application must include a decommissioning plan that describes the anticipated life of the utility scale solar installation; the anticipated manner in which the project will be decommissioned, including plans to recycle components; the anticipated site restoration actions; the estimated decommissioning costs in current dollars; and the method for ensuring that funds will be available for decommissioning and restoration.

(2) The applicant shall provide the basis for estimates of net costs for decommissioning the site (decommissioning costs less salvage value). The cost basis shall include a mechanism for calculating adjusted costs over the life of the project.

(3) Restoration or reclamation activities shall include, but not be limited to, the following:

- a. Restoration of the pre-construction surface grade and soil profile after removal of structures, equipment, graveled areas and access roads.
- b. Re-vegetation of restored soil areas with crops, native seed mixes, native tree species, plant species suitable to the area, consistent with the county's weed control plan.
- c. For any part of the energy project on leased property, the plan may incorporate agreements with the landowner regarding leaving access roads, fences, gates or repurposed buildings in place or regarding restoration of agricultural crops or forest resource land. Any use of remaining structures must be in conformance with the regulations in effect at that time.
- d. Following a continuous one-year period in which no electricity is generated, or if substantial action on the project is discontinued for a period of one year, the permit holder will have one year to complete decommissioning of the utility scale solar installation. Decommissioning shall be completed in accordance with the approved decommissioning plan. The land owner or tenant must notify the county when the project is discontinued.
- e. Any citations and/or fines leveraged by the County in response to a failure to execute the approved decommissioning plan as described in subsection d above shall be leveraged against the applicant.

2. Developer/landowner must apply for all State, federal, and other required permits for the proposed development and provide copies of the applications for review.

3. The Board of Supervisors will receive the Commission's recommendation, as well as information received during the Commission's public hearing process, and will hold a public hearing in accordance with Section 6-31 (Zoning Amendment Procedures). Based on the Commission's recommendation, County staff comments, a review of the required State, federal, and other required permits, and comments from the applicant and the public, the Board may approve or deny the application. If approved, the site plan approval conditions (Section 6-29) will be included with the ordinance changing the zoning. Final County approval is contingent on State, Federal, or other permit approval as may be required.

4. If the application is adopted by the Board of Supervisors, the department staff shall update the zoning map to show the specific location of the "US-F" District, including the required separation spacing to other zoning districts.

H. Minimum Lot Area, Lot Width, Setback, and Maximum Height Requirements: The lot area, building and structure setbacks and heights of buildings, structures, or other infrastructure will be determined and approved through the established site plan review procedures (Section 6-29).

I. Consumer-Scale Solar Energy Generation: Certain smaller-scale solar energy generation projects, such as roof-mounted arrays and small ground-mounted solar fields, are exempt from the regulations established in this section. Solar energy generation projects shall be considered "consumer-scale" and exempt from Section 6-21 when they meet all of the following criteria:

Scott County, Iowa - Sample Ordinance Information

1. Building and structure setbacks and heights of buildings, structures, or other infrastructure meet the requirements established for accessory buildings in the applicable zoning district.

2. The generation system is an accessory use to a permitted principal use in the applicable zoning district.

Section 3. The County Auditor is directed to record this ordinance in the County Recorder's Office.

Section 4. Severability Clause. If any of the provisions of this Ordinance are for any reason illegal or void, then the lawful provisions of the Ordinance, which are separate from said unlawful provisions shall be and remain in full force and effect, the same as if the Ordinance contained no illegal or void provisions.

Section 5. Repealer. All ordinances or part of ordinances in conflict with the provisions of the Ordinance are hereby repealed.

Section 6. Effective Date. This Ordinance shall be in full force and effect after its final passage and publication as by law provided.

Public Hearing / First Consideration: August 18, 2022,

Second Consideration: September 1, 2022,

Third Consideration: September 15, 2022,

Ken Beck, Chair
Scott County Board of Supervisors

Attested by: _____

Kerri Tompkins, County Auditor

Published on _____