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 SUBSECTION MODIFIED.** Chapter 107, Article VI, Section 107-117 § (h) is hereby repealed and replaced to read as follows: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

- (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.

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.

- 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.

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.

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

(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.

- 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



- 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

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

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

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

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.

**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.

- 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.

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.



- (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.*

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.

- (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.

**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.

- (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

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

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Louis J. Zumbach, Chair

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Ben Rogers, Vice Chair

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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.

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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.

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Notary Public, State of Iowa

Planning & Zoning Commission on the 16<sup>TH</sup> day of AUGUST, 2023.

Public hearing and First consideration on the 5<sup>TH</sup> day of SEPTEMBER, 2023.

Second consideration on the 13<sup>TH</sup> day of SEPTEMBER, 2023.

Third consideration and final passage on the 20<sup>TH</sup> day of SEPTEMBER, 2023.

Published in the Gazette on the \_\_\_\_\_ day of \_\_\_\_\_, 2023.