

AN ORDINANCE FOR BATTERY ENERGY STORAGE SYSTEMS

SECTION 1.

Purpose. The Purpose of this ordinance is to further the stated purpose to the Comprehensive Plan for Hardin County by adding certain requirements for battery energy storage systems.

Battery Energy Storage System (BESS). One of more devices, assembled together, capable of storing energy in order to supply electrical energy at a future time, or are comprised of more than one energy storage system technology in a room or enclosed area, excluding a stand-alone 12-volt car battery or an electric motor vehicle or other portable and detachable battery for a hand tool.

SECTION II.

Onsite Battery Energy Storage Systems. Where an applicant proposes to include a BESS in conjunction with another utility scale renewable energy system, the applicant shall obtain a separate Conditional Use Permit and comply with the applicable standards in the applicable Hardin County Zoning Ordinance.

Battery energy storage systems are allowed only as accessory uses to permitted utility scale renewable energy, provided the BESS is issued a Conditional Use Permit subject to the following conditions:

1. **Height.** Battery energy storage systems shall comply with the building height limitations for principal structures of the underlying zoning district.
2. **Fencing Requirements.** Battery energy storage systems, including all mechanical equipment, shall be enclosed by an eight (8) foot ball fence with a lockable gate to prevent unauthorized access unless housed in a dedicated-use building and not interfering with ventilation or exhaust ports. The perimeter fence shall be placed at a minimum of fifty (50) feet from the nearest battery system.
3. **Roads.** Applicants are expected to avoid damaging public roads and shall be responsible for mitigation of damages to public roads. At the discretion of the Zoning Board of Adjustment, 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 Hardin County Engineer, all state and local public roads to be used within Hardin County to transport equipment, parts and material

for construction, operation or maintenance of the battery energy storage system and related components.

- b. Documentation of Road Conditions. Prior to construction, the Hardin County Engineer shall document the current road conditions of the roads identified for use, with all associated costs paid for by the applicant. The engineer shall document road conditions again thirty (30) days after construction is complete or as weather permits.
- c. Road Preparation and Damage. Any road preparation or maintenance necessitated by the proposed battery energy storage system or damage caused by the applicant or its contractors during construction or decommissioning shall be promptly completed or repaired, to the satisfaction of Hardin County Engineer and approval of the Hardin County Supervisors, at the applicant's expense.
 - i. The applicant shall demonstrate prior to issuance of a permit, to the satisfaction of the Hardin County Engineer, that applicant has sufficient financial assurance to ensure the repair of damaged roads.
 - ii. The Hardin County Engineer may require financial surety to cover all costs of potential damage to roads.

4. **Landscaping Buffer.** 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 the satisfaction of Hardin County Conservation and the Hardin County Engineer after reasonable efforts to consult with owners and occupants of all neighboring properties, to create visual screening from neighboring properties. Landscaping shall be installed within a planting area around the facility, in accordance with the following standards:

- a. Areas within fifty (50) feet on each side of battery energy storage systems shall be cleared of combustible vegetation and other combustible growth.
- b. 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.
- c. 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 at time of planting and shall have a minimum mature height of twelve (12) feet or the height of any fencing, whichever is taller.
- d. Landscaping screening shall be evaluated under leaf-on conditions.
- e. The planting area 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.

- f. The applicant will be responsible for the lifetime maintenance of all trees and plants in the landscaping buffer and shall replace any dead or dying trees.
 - a. If the BESS is constructed within the landscaping buffer of a larger project, the permitting authority may waive or modify the requirements in this subsection specific to battery energy storage systems after notice and 30-day opportunity for comment by owners and occupants of neighboring properties.
- 5. **Signage.** Signage shall be in compliance with ANSI Z53 and shall include the following information: the type of technology associated with the BESS; any special hazards associated; the type of suppression system installed in the area of the BESS; and 24-hour emergency contact information, including reach-back phone number.
 - a. As required by the National Electric Code (NEC), disconnect and other emergency shutoff information shall be clearly displayed on a light reflective surface. A clearly visible warning sign concerning voltage shall be placed at the base of all pad-mounted transformers and substations.
 - 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.
- 6. **Noise.** The 1-hour average noise generated from the BESS, components, and associated ancillary equipment shall not exceed a noise level of sixty decibels (60 dBA) as measured at the outside wall of any non-participating residence or occupied community building or the property line of any non-participating residence or occupied community building. Applicants may submit equipment and component manufacturer noise ratings at the time of application to demonstrate compliance.
 - a. At the discretion of the Hardin County permitting authority, the applicant may be required to provide Operating Sound Pressure Level measurements from a reasonable number of sampled locations at the perimeter of comparable existing battery energy storage systems to demonstrate compliance with this standard.
 - b. To document decibel level if there is a complaint on an operational system, at the discretion of the Hardin County permitting authority, the owner

shall commission a report providing Operating Sound Pressure Level measurements from a reasonable number of sampled locations at the outside wall of any non-participating residence or occupied community building or the property line of non-participating residence or occupied community building to demonstrate compliance with this standard.

7. **Site Plan.** A site plan shall be submitted showing preliminary structure details and location, fencing details and location, landscaping plan, signage, location of underground and above ground transmission facilities, project development timeline, and any other pertinent information as required by the Hardin County permitting authority. After a Conditional Use Permit 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 Communication Lines.
 - i. On-site power and communication lines between BESS units 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 communication 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 Hardin County permitting authority, power and communication lines may be allowed to be unburied in the following cases:
 1. Elements of the natural landscape, such as but not limited to shallow bedrock and water courses, interfere with the ability to bury lines;
 2. Elements of existing infrastructure interfere with the ability to bury lines;
 3. Or the distance makes undergrounding infeasible.
- b. An electrical diagram detailing the BESS layout, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices.
- c. 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 the building permit.

- d. Name, address, and contact information of proposed or potential system installer and the owner and/or operator of the battery energy storage system. Such information about the final system installer shall be submitted prior to issuance of the building permit.
8. **Fire Safety Compliance Plan.** The applicant shall document and describe how the fire safety system and its associated controls will function and be maintained in proper working condition.
9. **Operations and Maintenance Manual.** The applicant shall describe the ongoing maintenance schedule for the battery energy storage system as well as the general upkeep of the property.
10. **Emergency Operations Procedures.** The applicant shall submit a plan for the safe operation and maintenance of the battery energy storage system. The plan should include, but not be limited to, Emergency Operations Procedures describing the fire safety and response measures. A copy of the approved **Emergency Operations Procedures** shall be given to the system owner, all local fire departments within a sixty (60) mile radius, and Hardin 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. 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 Management System 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. The applicant shall provide annual in-person training available to all emergency first responders within the sixty (60) mile radius of the BESS.

- e. The applicant shall provide all necessary specialized equipment needed for fire and emergency responses to all local fire and ambulance services within a fifteen (15) mile radius of the BESS.

11. Decommissioning and Site Reclamation Plan. The Decommissioning and Site Reclamation Plan shall address and/or ensure the following standards:

- a. Disposal and recycling of all solid and hazardous waste in accordance with local, state, and federal waste disposal regulations. Any disposal or recycling of solid or hazardous waste within Hardin County shall only be allowed in the Hardin County Landfill. This does not prevent disposal outside of Hardin County.
- b. The anticipated life of the BESS.
- c. The estimated decommissioning costs and method of ensuring funds will be available.
- 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. The applicant shall monitor and annually report to the permitting authority on battery cell, stack and pod energy storage and function. Following a continuous one-year period in which a cell, stack or pod has not functioned to store energy, 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.
- g. Decommissioning shall be completed in accordance with the approved decommissioning plan.
- h. The applicant shall notify the Zoning Administrator in writing both when the project is discontinued and when decommissioning is complete.

- i. Financial surety in the amount not less than the cost of installation and equipment shall also be required.
- j. In addition to any other provision herein, 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.

SECTION III.

OTHER CONDITIONS

1. The application shall comply with all local, state, and federal environmental standards. The application shall comply with all applicable federal, state, and local regulations.
2. **Setbacks.** Each and every battery system and the perimeter fence shall be placed to maintain a setback distance from the following:
 - a. 1,500 Feet – Property Line of All Parcels Containing a Dwelling. Distance can be reduced to 200 feet with a written waiver from landowner.
 - b. 200 Feet – Property Line of All Parcels Not Containing a Dwelling.
 - c. 500 Feet – All Streams. Stream is defined as any watercourse that maintains flow throughout the year or contains sufficient pooled areas during intermittent flow periods to maintain a viable aquatic community.
 - d. 1,000 Feet – All Major Water Sources. Major Water Source is defined as a lake, reservoir, river or stream capable of supporting a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major Water Sources in the state are listed by the Iowa Department of Natural Resources.

3. **Water Supply.** Applicant shall install and maintain at the permit site either a water hydrant capable of supplying a minimum of 250 gallons per minute, or a full water tank with a minimum capacity of 30,000 gallons at each BESS facility. Water tanks shall include a gauge for local fire departments to monitor the condition of the water supply. Applicant shall comply with NFPA 42 standards. The water supply must be outside of the fence perimeter, accessible to the local fire departments.
4. **NFPA 855 Compliance.** Applicant shall provide proof of compliance with all fire and safety guidelines, including NFPA 855 in its current version or any subsequent versions, whichever provides a higher safety standard.
5. **Floodplain.** No BESS may be permitted to operate in a flood plain.
6. **Storm Water Runoff Plan.** Applicant shall provide a storm water runoff plan capable of capturing a rainfall amount of thirteen inches over an eight-hour period. The storm water runoff plan also must be reviewed and approved by the Iowa Department of Natural Resources (DNR) and must comply with all applicable DNR regulations, codes, and standards.
7. **Repowering, Replacing.** A new permit is required for any repowering, replacement, or material change to the permitted BESS. The Hardin County permitting authority shall determine what constitutes a material change.
8. **Limitations on Locating BESS.** NO permit shall be issued for any single BESS with a total footprint exceeding twenty (20) acres. The total acres of land zoned agricultural that can be used for BESS in Hardin County shall not exceed eighty (80) acres. Footprint includes buffer zones of the BESS.
9. **Non-Transferability of Permit.** A permit issued under this ordinance may not be transferred, delegated, or assigned without the express written permission of Hardin County after notice and public hearing.
10. **Penalty for Non-Compliance.** An applicant that violates this permit shall pay the maximum civil penalty allowed by law.
11. **Drainage District Permitting Required.** Before a permit can be issued for a BESS within a drainage district, an applicant must obtain a drainage district permit from Hardin County Supervisors as Trustees or other written consent from the Trustees of a private drainage district.
12. **AIMP.** Application shall include an agriculture impact mitigation plan.
13. **Declaration of Emergency.** Whenever Hardin County has been declared to be in a state of emergency/disaster, by either local, state or federal authorities authorized by law to do so, Hardin County shall have exclusive and first right to all stored energy from any and all BESS as deemed needed by the Hardin County Board of Supervisors during the declared state of emergency/disaster to meet

emergency and medical needs in Hardin County for rescue, fire, ambulance, law enforcement and medical care. The BESS shall include a means for Hardin County to draw this energy from the BESS through the use of 200 kW mobile power generators. The applicant shall provide and maintain the mobile power generators at the Applicant's expense.

14. **Local Economical Benefit Analysis.** Application shall include a local economic benefit analysis with deliverable outcomes expected and guaranteed to the satisfaction of Hardin County.
15. **Natural Resources.** Applicant and participating landowner/business shall agree to allow Hardin County, or a designated third party, to perform testing of groundwater and surface water, air quality, and soil testing following a disaster event or whenever local authorities deem such testing necessary. The applicant and participating landowner (or business) shall be responsible for any remediation required by Hardin County, as well as all costs associated with third-party testing or services. All testing, remediation, and associated activities must comply with applicable Iowa Department of Natural Resources (DNR) regulations, codes, and standards.
16. **Lighting.** Outdoor lighting at the BESS site shall point downward.
17. **Development Agreement.** All BESS permits shall include a development agreement between the applicant and the Hardin County Board of Supervisors. The development agreement, among other things, shall include annual payments to Hardin County of one million dollars (\$1,000,000) due January 1st of each year beginning the first January 1st after the permit is issued. Said annual payments shall automatically increase based on the annual rate of inflation as reported by the Social Security Administration's Cost of Living Adjustment or the U.S. Bureau of Labor Statistics' Consumer Price Index, whichever is greater.

SECTION IV.

Repealer. All other ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION V.

Effective Date. This ordinance shall be in effect after its final passage and publication as part of the proceeding of the Hardin County Board of Supervisors.

Date

Lance Granzow, Chair
Hardin County Board of Supervisors

ATTEST: _____

Jolene Pieters
Hardin County Auditor