

BOARD OF SUPERVISOR BOONE COUNTY, IOWA

ORDINANCE NO. 158

Prepared by: Boone Co. Planning & Development, 201 State St, Boone, IA 50036 515-433-0550

Return to: Boone Co. Auditor's Office, 201 State St, Boone, IA 50036 515-433-0502

8.14 Utility-Scale Solar Energy Systems

8.14.01 Standards

- (1) The following standards and requirements shall govern the design, development, and placement of utility-scale solar energy systems in the County. A utility scale solar energy system shall be defined as a system which is not accessory to another permitted use.
- (2) In addition to other applicable sections of this Ordinance, utility-scale solar energy systems shall comply with the National Electrical Code.
- (3) All applicants shall obtain all required state and federal permits prior to construction activities.

8.14.02 Locations of Permitted Uses.

- (1) Utility-scale solar energy systems are prohibited in the County except as a permitted conditional use in the following districts:
 - a. Agricultural Districts;
 - b. Commercial Districts;
 - c. Industrial Districts;
- (2) The combined horizontal surface area of all structures contained within a single utility-scale solar energy system, excluding transmission lines and collection lines, shall not exceed one thousand (1,000) acres in size.
- (3) Except as provided in subsection (4), a conditional use permit shall not be issued for a proposed utility-scale solar energy system when the fence or wall surrounding the system would be located within two (2) miles of:
 - a. The fence or wall surrounding any existing utility-scale solar energy system; or
 - b. The proposed location of the fence or wall surrounding any future utility-scale solar energy system for which a conditional use permit has previously been issued.
- (4) The limitation on the location of utility-scale solar energy systems contained in subsection (3) shall not apply to the construction of additional solar generating capacity by the holder of an existing conditional use permit for a utility-scale solar energy system, but a separate conditional use permit shall be obtained prior to such construction, the total combined horizontal surface area of all structures contained within the new construction and the existing utility-scale solar energy system shall not exceed one thousand (1,000) acres in size as required in section 8.14.02(2), and the fence or wall surrounding the additional solar generating capacity shall not extend within two (2) miles of the fence or wall surrounding any other existing utility-scale solar

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energy system or the proposed location of the fence or wall surrounding any future utility-scale solar energy system for which a conditional use permit has previously been issued.

8.14.03 Community Information Open House

- (1) Prior to the submission of an application for a conditional use permit for a utility-scale solar energy system, a community information open house shall be organized and hosted by the project developer or applicant.
- (2) The purpose of the open house is outreach, with the intent of providing complete information to the community in an informal setting.
- (3) The open house shall not be construed to be a local government meeting or a formal public hearing.
- (4) The open house shall be conducted according to the following protocol:
 - a. Notification. The applicant shall notify the County Board of Supervisors, the Zoning Administrator, and all property owners within one thousand (1,000) feet of the proposed utility-scale solar energy system at least ten (10) days prior to the open house by regular mail.
 - b. Meeting Date, Time, and Location. The open house shall be held on a Monday, Tuesday, or Thursday evening at 6 pm or later at an accessible location approved by the Zoning Administrator.
 - c. Content of Open House. The open house shall be arranged and hosted by the project developer, the applicant, or a qualified representative and shall at a minimum include a detailed explanation of the project, the site plan for the proposed project, anticipated construction schedule, landscape plan, and decommissioning plan.
 - d. Community Representation. The Zoning Administrator or his or her designee shall be present at the open house to monitor proceedings and provide guidance as needed.
 - e. Response to Concerns. The applicant shall solicit and accept all written comments, questions, and concerns of all attendees and attempt to mitigate concerns in the project design.
 - f. Report. A report on the open house shall be submitted concurrent with the applicant's conditional use permit application. The report shall include the date, time, and location of the open house; a list of real property owners who were invited to the open house; and copies of any written comments received. This report may be used by the Board of Adjustment to establish conditions of approval for the conditional use permit.

8.14.04 Site Plan.

- (1) A site plan shall be submitted concurrent with a conditional use permit application and shall be subject to the following development and design standards:
 - a. Physical access to the utility-scale solar energy system shall be restricted by fencing or walls in accordance with the National Electrical Code. Razor wire is discouraged.
 - b. All fencing or wall details shall be provided as part of a conditional use permit application.
 - c. Emergency access information to the site shall be provided to the applicable emergency management personnel.

8.14.05 Setbacks

- (1) Above-ground structures other than fences in a utility-scale solar energy system shall adhere to the following minimum setbacks; provided, however, that participating and non-participating landowners may sign a waiver consenting to placement within the minimum setback, in which case the solar energy system must instead comply with the principal structure setbacks in the zoning district in which the system is located:
 - a. Seventy-five (75) feet from property lines, except where the property lines nearest to the utility-scale solar energy system define and separate properties belonging to two or more participating landowners.
 - b. Six hundred (600) feet from dwelling units.
 - c. Fifty (50) feet from right-of-way lines, including future right-of-way lines if known at the time of application.
 - d. One hundred fifty (150) feet from wildlife management areas and state recreation areas.
 - e. One hundred fifty (150) feet from cemeteries.

8.14.06 Height

- (1) The design of a utility-scale solar energy system shall adhere to the structural height requirements of the district in which the utility-scale solar energy system will be located; provided, however, that gen-tie lines, transmission lines, communication poles, and similar structures are exempt from the district's height regulations.
- (2) If the utility-scale solar energy system requires roof-mounting on buildings on the property, the roof-mounted installation may not exceed the maximum height permitted in the district.

8.14.07 Advertising

- (1) A utility-scale solar energy system shall not be used to display advertising, including signage, streamers, pennants, spinners, reflectors, ribbons, tinsel, balloons, flags, banners, or similar materials.

8.14.08 Glare

- (1) Utility-scale solar energy systems shall be designed to minimize glare on adjacent property and roadways.

8.14.09 Utilities

- (1) Reasonable efforts shall be made to place alternating current (AC) power lines underground, depending on appropriate soil conditions, the shape and topography of the site, and other conditions or requirements.
- (2) The applicant shall immediately repair damage to private or public drainage systems caused by the construction, operation, or maintenance of a utility-scale solar energy system.

8.14.10 Cleanup

- (1) The applicant shall be responsible for on-site cleanup of all waste and scrap that is the product of construction, as well as ongoing maintenance of project property, including the disposal of trash, waste, and other detritus, for the life of the project.
- (2)
- (3) Any required buffers and landscaping shall be maintained as appropriate to maintain the health of the vegetation.

8.14.11 Landscape Plan

- (1) The applicant shall provide a landscape plan, which shall be submitted concurrent with the conditional use permit application.
- (2) The landscape plan shall be prepared by a licensed landscape architect or a certified arborist.
- (3) Existing forestation, foliage, and native flora within, near, and surrounding the project shall be preserved insofar as is practical.
- (4) Landscaping may be required to address or mitigate visual impacts.

8.14.12 Screening and Planting

- (1) Any new, installed, vegetative screening may be located within the setbacks required under section 8.14.05. Trees shall be a minimum of four (4) feet in height when planted. Installed screening shall be maintained or replaced as necessary for the life of the project.
- (2) Grounds around and under solar arrays and in the project site buffer areas shall be planted and maintained in perennial vegetated ground cover and meet the following standards:
- (3) Topsoil shall not be permanently removed during development, unless part of a remediation effort.
- (4) Soils shall be planted and maintained with perennial vegetation to prevent erosion and to manage run off. Seeds should include a mix of grasses and wildflowers which are naturalized and noninvasive to the region of the project site and will result in a short stature pollinator friendly habitat.
- (5) Seed mixes and maintenance practices should be consistent with recommendations made by qualified natural resource professionals such as those from the Iowa Department of Natural Resources, the Boone County Soil and Water Conservation District, or Boone County Conservation.
- (6) Plant material must not have been treated with systemic insecticides, particularly neonicotinoids.

8.14.13 Emergency Response Plan

- (1) The applicant shall provide a preliminary emergency response plan, which shall be submitted concurrent with the conditional use permit application.
- (2) The preliminary emergency response 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 the safe start-up following cessation of emergency conditions;
 - b. Procedures for inspection and testing of associated alarms, interlocks, and controls; and
 - c. Procedures to be followed in response to notifications from the utility-scale solar energy system or any of its components of potentially dangerous conditions, including procedures for shutting down equipment, summoning service and repair personnel, and providing notification to fire department personnel for potentially hazardous conditions.

- d. Copies of a final, site-specific, emergency response plan shall be approved by , the local Fire Chief , and the Boone County Emergency Management Coordinator for approval prior to the construction of the utility-scale solar energy system.

8.14.14 Roadway Use and Repair Agreement

- (1) A proposed roadway use and repair agreement between the applicant and Boone County shall be submitted concurrent with a conditional use permit application.
- (2) Construction of the utility-scale solar energy system may not commence until a final roadway use and repair agreement has been negotiated and approved by the Boone County Board of Supervisors.
- (3) Among the terms contained in the roadway use and repair agreement, the applicant must agree:
 - a. Prior to the start of construction, to identify all county, municipal, or township roads to be used to transport utility- scale solar energy system parts, cement, or equipment for the construction, operation, or maintenance of the system and to obtain all required weight and size permits.
 - b. To conduct a preconstruction survey to determine existing road conditions in order to allow for the assessment of potential future damage due to development-related traffic; the survey shall include photographs to document the conditions of the public roads.
 - c. To restore affected roads and bridges to preconstruction conditions, with ordinary wear and tear excepted and not considered damage.

8.14.15 Public Drainage System Protection Agreement

- (1) A proposed public drainage system protection agreement between the applicant and the Trustees of each and every affected drainage district shall be submitted concurrent with a conditional use permit application.
- (2) Construction of the utility-scale solar energy system may not commence until a final public drainage system protection agreement has been negotiated and approved by the Boone County Board of Supervisors.
- (3) Among the terms contained in the public drainage system protection agreement, the applicant must agree to use commercially reasonable efforts to repair damage to private or public drainage systems caused by the construction, operation, or maintenance of the utility-scale solar energy system.

8.14.16 Abandonment

- (1) 16.14.1 A utility-scale solar energy system will be deemed abandoned:
 - a. If the owner or operator of the utility-scale solar energy system notifies Boone County of its intention to discontinue use of the system, in which case the system will be deemed abandoned on the date of the system's discontinued use; or
 - b. If use of the system has been discontinued for a period of one hundred eighty (180) consecutive days.
- (2) Determination of the date of abandonment shall be made by the Zoning Administrator.
- (3) Upon such abandonment, the owner of the utility-scale solar energy system shall have two hundred seventy (270) days within which either to reactivate the use of the utility-scale solar energy system or to remove all above-ground and below-ground system facilities and structures (the "decommissioning period").
- (4) The owner of a utility-scale solar energy system may apply to the Zoning Administrator for an extension of the decommissioning period for up to ninety (90) days to complete either the reactivation or the removal of the system as required under section 16.14.3; such an extension may be granted or denied at the discretion of the Zoning Administrator.
- (5) If the owner of a utility-scale solar energy system fails during the decommissioning period either to reactivate the use of the system or to remove it pursuant to subsection 3, Boone County may remove the system and assess the costs against the owner in the same manner as a property tax, pursuant to Iowa Code section 331.384.
 - a. As an alternative, the owner may prepare and submit a plan for the "banking" of the system for future reactivation and use. Said plan must be submitted to the Zoning Administrator within one hundred eighty (180) days of the abandonment of the system and shall be updated and submitted every one hundred eighty (180) days thereafter for a maximum of two (2) years, at which time the system must be reactivated or removed.

8.14.17 Decommissioning Plan

- (1) Each utility-scale solar energy system shall have a decommissioning plan outlining the anticipated means and cost of removing the utility-scale solar energy system at the end of its serviceable life or upon its abandonment.
- (2) Such plan shall be submitted concurrent with the applicant's conditional use permit application.

- (3) The cost estimates contained in the decommissioning plan shall be made by a competent party, such as a professional engineer, a contractor capable of decommissioning, or a person with suitable expertise or experience with decommissioning.
- (4) The decommissioning plan shall also identify the financial resources that will be available to pay for decommissioning and removal of the utility- scale solar energy system and any accessory facilities.
- (5) The applicant shall continuously maintain a financial assurance mechanism in the form of a performance bond and/or other security approved by the County Attorney, for the period of the life of the facility.
 - a. The amount of the security shall be 130 percent of the total decommissioning cost identified in the decommissioning plan.
 - b. The financial assurance mechanism must ensure that funds will be available upon discontinuation.
 - c. If a bond is posted to meet this requirement, the bond issuing company must be agreed upon by both the applicant and County.
 - d. All decommissioning, removal and remediation fund requirements shall be fully funded before a zoning permit is issued.
 - e. The County shall have sole discretion with regard to the determination of the mechanism of financial assurance.
- (6) 16.15.6 The applicant shall provide an updated cost estimate to the Zoning Administrator for review and approval at least once every 5 years. The Bond or other security amount shall be adjusted to meet or exceed the approved cost estimate.

ACTION UPON FIRST READING

DATE: December 20, 2023

Moved by: Kretzinger

Seconded by: Bryant

Discussion:

AYES (A), NAYES (N), ABSENT (X):

Shawn Bryant A Bill Zinnel A Erich Kretzinger A

ACTION UPON SECOND READING

DATE: December 27, 2023

Moved by: Kretzinger

Seconded by: Bryant

Discussion: Waived 3rd Reading

AYES (A), NAYES (N), ABSENT (X):

Shawn Bryant A Bill Zinnel A Erich Kretzinger A

ACTION ON WAIVING FINAL READING AND APPROVE ADOPTION

Moved by: Kretzinger

Seconded by: Bryant

Discussion:

AYES (A), NAYES (N), ABSENT (X):

Shawn Bryant Bill Zinnel

(s) 

Chairman

Boone County Board of Supervisors

DATE: December 27, 2023

Erich Kretzinger

December 27, 2023

Date

(s) 

ATTEST:

Diane Patrick, County Auditor

December 27, 2023

Date

