8:1.24 Supplemental Conditions

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F. Battery Energy Storage Systems, Tier 2. Tier 2 Battery energy storage systems are allowed as primary uses in the RE district, accessory uses in the ML and MH districts, and are conditionally permitted in the A and CH districts. All Tier 2 Battery Energy Storage Systems are subject to the following conditions regardless of district in which they are located: [1, 2]

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 tall fence with a self-locking gate to prevent unauthorized access unless housed in a dedicated-use building, and not interfering with ventilation or exhaust ports.

3. Roads. The applicant, owners of the facility, and their contractors are expected to avoid damaging public roads and shall be responsible for mitigation of damages to public roads. At the discretion of the approving authority, a Public Roads Damage Avoidance and Mitigation Plan may be required and shall be in accordance with the following standards:[3]

   a. Identification of Potential Roads Usage. The applicant shall identify, with the approval of the Johnson County Engineer, all state and local public roads to be used within Johnson County to transport equipment, parts and material for construction, operation or maintenance of the battery energy storage system and related components.

   b. Documentation of Road Conditions. Prior to construction, the Johnson County Engineer or a third-party consultant selected by the Johnson County Engineer shall document the current conditions of the roads identified for use, with all associated costs paid for by the applicant or owners of the facility. The engineer shall document road conditions again thirty (30) days after construction is complete or as weather permits.

   c. Road Preparation and Damage. Any road preparation or maintenance necessitated by the proposed solar energy system as identified by the County Engineer or the third-party consultant shall be promptly completed at the applicant's expense. Any damage caused by the applicant, owner of the facility, or its contractors during construction or decommissioning shall be promptly repaired at the applicant or owner's expense.

      i. The applicant shall demonstrate that it has appropriate financial assurance to ensure the repair of damaged roads.

      ii. At the discretion of the approving authority, the applicant or owners of the facility may also be required to a financial surety instrument to cover all costs of potential damage to roads at the time of permitting or rezoning consideration.[4]

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[1] Ordinance 08-24-21-02 (added the BESS regulations of subsection F).
[2] Ordinance 05-19-22-01 (made specific changes to the language added in Ordinance 08-24-21-02. Specific changes from ordinance 05-19-22-01 are noted throughout by footnotes at the end of affected paragraphs).
[3] Ordinance 05-19-22-01
[4] Ordinance 05-19-22-01

4. Areas within ten (10) feet on each side of battery energy storage systems shall be cleared of combustible vegetation and other combustible growth.

5. 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 create a visual screen from neighboring properties. Landscaping shall be installed within a planting area around the facility, in accordance with the following standards:

   a. The landscaping buffer shall preferably use trees, shrubs, grasses and forbs that are native to Iowa, or where appropriate may include naturalized and non-invasive species.

   b. 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.

   c. Landscaping screening shall be evaluated under leaf-on conditions.

   d. 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.[5]

   e. 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.[6]

   f. If the battery energy storage system is being constructed within the landscaping buffer of a larger project, the approving authority may waive or modify the requirements in this subsection specific to battery energy storage systems.[7]

6. Signage. Signage shall be in compliance with ANSI Z535 and shall include the following information: the type of technology associated with the battery energy storage systems; any special hazards associated; the type of suppression system installed in the area of the battery energy storage systems; 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.

7. Noise. The 1-hour average noise generated from the battery energy storage systems, 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. Applicants may submit equipment and component manufacturer noise ratings at the time of application to demonstrate compliance.

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[5] Ordinance 05-19-22-01
[6] Ordinance 05-19-22-01
[7] Ordinance 05-19-22-01

a. At the discretion of the approving 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.[8]

b. 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 outside wall of any non-participating residence or occupied community building or the property line to demonstrate compliance with this standard.

8. 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 Zoning Administrator. After approval 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:[9]

   a. Power and Communications Lines.

      i. On-site power and communications lines between battery energy storage system 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 communications lines running from the on-site system(s) to interconnections with structures off-site shall be buried underground to the extent feasible and as permitted by the serving utility.

      iii. At the discretion of the approving authority, power and communications lines may be allowed to be unburied in the following cases:[10]

         a) Elements of the natural landscape, such as but not limited to shallow bedrock and water courses, interfere with the ability to bury lines;

         b) Elements of existing infrastructure interfere with the ability to bury lines;

         c) Or distance makes undergrounding infeasible.

   b. An electrical diagram detailing the battery energy storage system 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.

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[8] Ordinance 05-19-22-01
[9] Ordinance 05-19-22-01
[10] Ordinance 05-19-22-01

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 of the final system installer shall be submitted prior to issuance of the building permit.

9. 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. At a minimum the plan shall comply with NFPA 855 Standard for Installation of Stationary Energy Storage Systems.[11]

10. 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.

11. Emergency Operations Procedures. A copy of the approved Emergency Operations Procedures shall be given to the system owner, the local fire department, and Johnson County Emergency Management. A permanent copy shall also be placed in an approved location to be accessible to facility personnel, fire code officials, and emergency responders. 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.

12. Decommissioning and Site Reclamation Plan. The Decommissioning and Site Reclamation 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.[12]

    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.

[11] Ordinance 09-26-24-01
[12] Ordinance 05-19-22-01

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.

   i. Decommissioning shall be completed in accordance with the approved decommissioning plan.

   ii. 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.[13]

13. The application shall comply with all Environmental Standards in Chapter 8.3.

14. The application shall comply with all applicable federal, state, and local regulations.

[13] Ordinance 05-19-22-01