

Ordinance 022-09-91

Code Amendment to Article IV General Provisions

**WHEREAS;** it is in the best interests of Stephenson County that the Zoning Code be updated from time to time; and

**WHEREAS;** the following changes are necessary to maintain the Stephenson County Zoning Code in compliance with prevailing code and common law and general practice in the State of Illinois:

**BE IT THEREFORE ORDAINED THAT** Article IV be amended by adding Subsection 400-23.7 (General Standards for Battery Energy Storage Systems (BESS) which shall read as follows:

**A. Applicability:**

1. The requirements of this Section 23.7 shall apply to all BESS permitted, installed, or modified pursuant to the Stephenson County Zoning Ordinance after the effective date of this Section 23.7, excluding general maintenance and repair.
2. Modifications to, retrofits or replacement of an existing battery energy storage system that increase the total battery energy storage system designed discharge duration or power rating shall be subject to this Section 23.7.

**B. General Requirements:**

1. A building permit shall be required for installation of all BESS.
2. All BESS, all Dedicated Use Buildings, and all other building or structures that contain or are otherwise associated with a battery energy storage system shall be designed, erected, and installed in accordance with applicable provisions of the Illinois Law, Federal Law, adopted by the State of Illinois or Stephenson County, and all applicable rules and regulation of the State of Illinois.

**C. Requirements for Tier I Battery Energy Storage Systems.**

1. Tier I BESS shall be permitted in all zoning districts, subject to the issuance of a building certificate by the Director of Stephenson County Building and Zoning.

**D. Requirements for Tier II Battery Energy Storage Systems.**

1. Tier 2 BESS are permitted through the issuance of a Special Use Permit in Zoning Districts as provided in the Attachment 1-Table of Special Uses (Att 400-1) of the Stephenson County Zoning Code and shall be subject to the site plan application requirements as set forth in this Section as well as all applicable provisions of Illinois Law, adopted by the State of Illinois or Stephenson County, and all application rules and regulations of the State of Illinois.
2. Applications for the installation of a Tier 2 BESS shall be reviewed by the Stephenson County Director of Building and Zoning for completeness. An application shall be complete when it addresses all matters listed in this section 23.7 including, but not limited, compliance with all applicable provisions of Illinois Law

Federal Law, adopted by the State of Illinois or Stephenson County and all applicable rules and regulations of the State of Illinois; and matters relating to the proposed BESS and Floodplain, utility lines and electrical circuitry, signage, lighting, vegetation and tree cutting, noise, decommissioning , site plan, special use, ownership changes, safety, and permit time frame and abandonment. Applicants shall be advised within 10 business days of the completeness of their application or any deficiencies that must be addressed.

3. Utility lines and electrical circuitry. All on-site utility lines shall be placed underground to the extent feasible and as permitted by the serving utility, except for the main service connection at the utility company right-of-way.
4. Signage shall be in compliance with ANSI Z35 (American National Standards Institute Specifications for Accident Prevention) and shall include the type of technology associated with the BESS, any special hazards associated, the type of suppression system installed in the area BESS, and 24-hour emergency contact information, including reach-back phone numbers. As required by the NEC (National Electric Code), 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.
5. Lighting of the BESS shall be limited to that minimally required for safety and operational purposes and shall be reasonably shielded and downcast from abutting properties.
6. Vegetation shall be cleared of all combustible vegetation and other combustible growth. Single specimens of tree, shrubbery, or cultivated ground cover such as green grass, ivy, or similar plants used as ground covers shall be permitted to be exempt provided that they do not form a means of readily transmitting fire.
7. The average noise generated from the BESS, components and associated ancillary equipment shall not exceed the recommended noise level of State or Federal recommendations.
8. BESS shall be sited to avoid wetlands, floodplains, and other environmental concerns.
9. No BESS or related structure shall be located closer than 25 feet to the inside of the facility fence line. No BESS shall be located adjacent to or within 500 feet of a residentially zoned district or adjacent residence. All setbacks shall be measured from the fencing surround the BESS that is nearest to the relevant property line, building or highway right-of-way.
10. In the event a BESS ceases to be used as such, the owner or owner operator shall remove the BESS and all related property thereto. The site shall be restored to its original condition. This provision for restoration of the site to its original condition shall be contained in all leases or other similar agreements relating to participating property. Signed copies of all lease or other agreements regarding participating property shall be furnished to the Stephenson County Director of Building and Zoning.

11. Decommissioning plan. Prior to the date of the required hearing, the applicant, owner, and/or operator shall show proof of an Agricultural Impact Mitigation Agreement (AIMA) with the Illinois Department of Agriculture.

**E. Tier 2 site plan application.**

1. Property lines and physical features, including roads for the project site.
2. Proposed changes to the landscape of the site, grading, vegetation clearing and planting, exterior lighting, and screening vegetation or structures.
3. An electrical diagram detailing the battery energy storage system layout, associated components, and electrical interconnection methods, with all NEC compliant disconnects and other current devices.
4. A preliminary equipment specification sheet that documents the proposed BESS components, inverters and associated electrical equipment that are to be installed.
5. Commissioning plan shall document and verify that the system and its associated controls and safety systems are in proper working condition per requirements set forth in all applicable provisions of the Illinois law, Federal Law, and all applicable rules and regulations of the State of Illinois or Stephenson County. Commissioning the BESS shall be conducted by a licensed professional engineer after the installation is complete but prior to final inspection and approval. A report describing the results of the system commissioning shall be provided to the Stephenson County Director of Building and Zoning.
6. Fire safety compliance plan shall document and verify that the system and its associated controls and safety systems are in compliance with the National Fire Protection Association (NFPA) 855
7. Erosion and sediment control and storm water management shall comply with the requirements of all applicable provisions of the Illinois law, Federal law, adopted by the State of Illinois or Stephenson County, and all applicable rules and regulations of the State of Illinois prior to the issuance of and occupancy certificate.
8. Emergency operations plan shall be provided to the system owner, the local fire departments and the local fire code official. A permanent copy shall also be place 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 form the BESS when provide, 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. 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, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire.

- d. Other procedures as determined necessary by the Stephenson County Emergency Management Agency to provide for the safety of the occupants, neighboring properties, and emergency personnel.
- e. 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.

**F. Local fire department training, equipment, and cost of emergency response.**

1. The owner or operator of any BESS approved pursuant to this Section 400-23.7 shall provide at its own expense training to all fire departments whose jurisdiction includes the site of the said BESS. This training shall be for potential fire issues that are site specific and could arise from the BESS or any other related operation on the site. This training shall be provided on an annual basis or when a fire department requests addition training related to the BESS.
2. In addition to training, the owner and/or operator shall provide at its own expense any specialized equipment designed partially or exclusively for use in conditions that exist with respect to BESS to any fire department that has jurisdiction over the site. The owner or operator shall additionally provide at its own expense the training on any such specialized equipment,
3. In the event of a response for prevention, cleanup, containment, or abatement of an actual or potential fire, spill, and/or release of hazardous materials, the owner and/or operator of the site shall pay for all costs and expenses incurred as a result of such response including but not limited to actual labor costs of the response organizations and/or emergency management personnel involved in the response thereto for prevention, mitigation, containment, cleanup or abatement of the actual or potential discharge of hazardous materials, cost of equipment operation, damage and loss, cost of material obtained directly by the response organization and cost of any contract labor an material incurred by any governmental body.

**G. Fencing.**

1. Tier 2 BESS including all mechanical equipment, shall be enclosed by a fence with a self-locking gate to prevent unauthorize access unless house in a dedicated-use building and not interfering with ventilation or exhaust ports.

**H. Site access.**

1. BESS shall be maintained in good working order and in accordance with industry standards. Site access shall be maintained, including snow removal at a level acceptable to the local fire department and, if the Tier 2 BESS is in an ambulance district, the local ambulance district.

**I. Permit time frame and abandonment.**

1. The Special Use Permit and site plan approval for a BESS shall be valid for a period of 24 months from the date of issuance of the Special Use Permit. The BESS shall be considered abandoned when it ceases to operate consistently for more than one year.

**J. Definitions.**

**AIMA:** Agricultural Impact Mitigation Agreement

**ANSI:** American National Standards Institute

**Battery(ies):** A single cell or group of cells connected electrically in a series, in a parallel, or a combination of both, which can charge, discharge, and store energy electrochemically. For the purposes of this law, batteries utilized in consumer products are excluded from these requirements.

**Battery Energy Storage System (BESS):** One or more devices, assembled, capable of storing energy to supply electrical energy at a future time, not to include a stand-alone 12-volt car battery or an electric motor vehicle. A battery energy storage system is classified as a Tier 1 or Tier 2 Battery Energy Storage System as follows:

**Tier 1** - A BESS that has an aggregate energy capacity less than or equal to 600kWh and, if in a room or enclosed area, consists of only a single energy storage system technology. A rechargeable BESS typically used to provide standby or emergency power and/or uninterruptable power supply, load shedding, load sharing, or similar capabilities relating to the energy consumed by a residence, farm operation or other businesses on site. Permitted in all zoning districts and shall be subject to a building certificate.

**Tier 2** – A BESS that has an aggregate energy capacity greater than 600kWh or are comprised of more than one storage battery technology in a room or enclosed area.

**Cell:** The basic electrochemical unit, characterized by an anode and a cathode, used to receive, store, and deliver electrical energy.

**Commissioning:** A systematic process that provides documented confirmation that a BESS functions according to the intended design criteria and complies with applicable code requirements.

**Dedicated-Use Building:** A building that is built for the primary intention of housing battery energy storage system equipment.

**Fire Code:** The fire code of the State of Illinois as currently in effect and as hereafter amended from time to time.

**NEC:** National Electric Code.

**NFPA:** National Fire Protection Association.

**Non-Dedicated -Use Building:** All buildings that contain a BESS and do not comply with the dedicated-use building requirements.

**Non-Participating Property:** Any property that is not a participating property.

**Non-Participating Residence:** Any residence located on non-participating property.

**Owner:** An individual, organization, association, or entity of any kind that owns a BESS.

**Operator:** An individual, organization, association, or entity of any kind that operates a BESS.

**Participating Property:** A BESS host property or any real property that is the subject of an agreement that provides for the payment of monetary compensation to the landowner from the BESS owner (or affiliate) regardless of whether any part of a BESS is constructed on the property.

**BE IT ALSO ORDAINED THAT 400 Attachments 1 "Table of Special Uses" be amended by adding alphabetically the following use:**

*400 Attachment 1*

**Stephenson County Table of Special Uses**

Note: Additional special uses may be permitted by the provisions of Articles VII through

The following uses may be allowed as special uses in the indicated checked districts, and in accordance with Chapter 400	A-1	A-2	E-1	E-2	E-3	R-1	R-2	R-3	R-4	R-5	R-6	B-1	B-2	B-3	T-1	M-1	M-2		
Battery Energy Storage Systems (BESS) Stand Alone System Only	X	X																	

PASSED this 22<sup>nd</sup> day of September, 2022

W. N. Hurdley  
Chairperson of the Stephenson County Board

ATTEST:  
Neil P. Otte  
Clerk of the Stephenson County Board