

Section 11.10 Battery Energy Storage Systems

A. Intent.

It is the intent of Saline Township to regulate the siting, design, installation, and operation of Battery Energy Storage Systems (BESS). These standards permit the efficient and effective operation of BESS within the Township while mitigating their potential negative impacts and ensuring their compatibility with adjacent land uses in order to protect public health, safety, and welfare. Battery energy storage systems, as defined herein, are only permitted as authorized by this Section.

B. Definitions.

As used in this Section the following terms shall have the meanings indicated:

ANSI: American National Standards Institute

BATTERY(IES): A single cell or a group of cells connected together electrically in series, in 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 MANAGEMENT SYSTEM: An electronic system that protects energy storage systems from operating outside their safe operating parameters and disconnects electrical power to the energy storage system or places it in a safe condition if potentially hazardous temperatures or other conditions are detected.

BATTERY ENERGY STORAGE SYSTEM (BESS): One or more devices, assembled together, capable of storing energy in order 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 (BESS) is classified as a Type 1 or Type 2 Battery Energy Storage System as follows:

- A. Type 1 Battery Energy Storage Systems have an aggregate energy capacity less than or equal to 600kWh and, if in a room or enclosed area, consist of only a single energy storage system technology.
- B. Type 2 Battery Energy Storage Systems have an aggregate energy capacity greater than 600kWh or are comprised of more than one storage battery technology in a room or enclosed area.

BUILDING CODE: Stille-DeRossett-Hale Single State Construction Code Act (Act No. 230, P.A. 1972, as amended)

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 battery energy storage system 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, is classified as Group F-1 occupancy as defined in the Building Code, and complies with the following:

1. The building's only use is battery energy storage, energy generation, and other electrical grid-related operations.
2. No other occupancy types are permitted in the building.
3. Occupants in the rooms and areas containing battery energy storage systems are limited to personnel that operate, maintain, service, test, and repair the battery energy storage system and other energy systems.
4. Administrative and support personnel are permitted in areas within the buildings that do not contain battery energy storage system, provided the following:
 - a. The areas do not occupy more than 10 percent of the building area of the story in which they are located.
 - b. A means of egress is provided from the administrative and support use areas to the public way that does not require occupants to traverse through areas containing battery energy storage systems or other energy system equipment.

FIRE CODE: 2021 Edition of the International Fire Code, the Appendix chapters, including the reference standards" as published by the International Code Council, as adopted by the Township of Saline in the State of Michigan.

NAMEPLATE CAPACITY: The designed full-load sustained generating output of an energy facility. Nameplate capacity shall be determined by reference to the sustained output of an energy facility even if components of the energy facility are located on different parcels, whether contiguous or noncontiguous.

NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL): A U.S. Department of Labor designation recognizing a private sector organization to perform certification for certain products to ensure that they meet the requirements of both the construction and general industry OSHA electrical standards.

NEC: National Electric Code.

NFPA: National Fire Protection Association.

NON-PARTICIPATING PROPERTY: A property that is adjacent to a battery energy storage facility and that is not a participating property.

OUTDOOR INSTALLATIONS: Outdoor installations are battery energy storage systems that are not Dedicated Use-Buildings.

PARTICIPATING PROPERTY: Real property that either is owned by an applicant or that is the subject of an agreement that provides for the payment by an applicant to a landowner of monetary compensation related to a battery energy storage facility regardless of whether any part of that energy facility is constructed on the property.

C. Applicability

1. The requirements of this Section shall apply to all battery energy storage systems (BESS) permitted, installed, or modified in Saline Township after the effective date of this Section, excluding general maintenance and repair.
2. Modifications to, retrofits or replacements 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.

D. General Requirements

1. **System Certification** System Certification. Battery energy storage systems and equipment shall be listed by a Nationally Recognized Testing Laboratory to UL 9540 (Standard for battery energy storage systems and Equipment) or approved equivalent, with subcomponents meeting each of the following standards as applicable:
 - a. UL 1973 (Standard for Batteries for Use in Stationary, Vehicle Auxiliary Power and Light Electric Rail Applications),
 - b. UL 1642 (Standard for Lithium Batteries),
 - c. UL 1741 or UL 62109 (Inverters and Power Converters),
 - d. Certified under the applicable electrical, building, and fire prevention codes as required.
 - e. Alternatively, field evaluation by an approved testing laboratory for compliance with UL 9540 (or approved equivalent) and applicable codes, regulations and safety standards may be used to meet system certification requirements.
2. **Battery Maintenance.** Battery energy storage systems shall be maintained in good working order and in accordance with industry standards.
3. **Site Maintenance.** Site access shall be maintained, including snow removal at a level acceptable to the Township and the Saline Area Fire Department.
4. **Visual Impact.** The Battery Energy Storage System shall not have a significant adverse impact on the natural features or neighborhood character of the surrounding area and shall be located to maximize its distance and visibility from adjacent properties and roadways.

5. **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 55 dBA as measured at any property line where the system is located. Applicants may submit equipment and component manufacturers noise ratings to demonstrate compliance. The Zoning Inspector or Planning Commission may require an applicant to provide an acoustic assessment or sound study prepared by a licensed engineer from a reasonable number of sampled locations at the perimeter of the battery energy storage system to demonstrate compliance with this standard.
6. **Code Compliance.** All Battery Energy Storage Systems, all Dedicated Use Buildings, and all other buildings or structures that (1) contain or are otherwise associated with a Battery energy storage system and (2) subject to the Building Code shall be designed, erected, and installed in accordance with all applicable provisions of the Building Code, all applicable state and federal regulations, and industry standards as referenced in the Building Code and the Saline Township Zoning Ordinance.
7. **Compliance with Additional Codes.** Battery Energy Storage Systems, and the installation and use thereof, shall comply with the Building Code, Fire Code, and other applicable Township, County, and State codes. Installation of a Battery Energy Storage Systems shall not commence until all necessary permits have been obtained.

E. Type 1 Battery Energy Storage Systems

Type-1 Battery Energy Storage Systems shall be permitted as an accessory use/structure in all zoning districts, subject to the following standards:

1. Application for Certificate of Zoning Compliance

A property owner shall obtain a certificate of zoning compliance prior to constructing a Type 1 Batter Energy Storage System, unless otherwise exempted by this Ordinance. Applications shall include the following information:

- a. Photographs of the property's existing conditions.
- b. Product specifications of the proposed Battery Energy Storage System.
- c. Plot/sketch plan to indicate where the battery energy storage system is to be installed on the property (or, if building-mounted, the system's location on a permanent building), including its setbacks from the property lines.
- d. Elevations of the battery energy storage system, including the associated building wall or support structure if building mounted.

2. Exemptions from Certificate of Zoning Compliance for Type 1 Battery Energy Storage Systems.

The following situations do not require a certificate of zoning compliance, but shall still comply with all other standards of this Section:

- a. Repair and replacement of existing Type 1 Battery Energy Storage Systems, provided that there is no expansion of the size or capacity of the existing system. This Section does not exempt applicants from obtaining building permits as applicable.

3. Standards for Type 1 Battery Storage Systems

- a. Where feasible, Type 1 Battery Storage Systems shall be located inside of a building. All Type 1 Battery Storage Systems that are located outside of a building shall be screened to the maximum extent possible without posing a fire risk. All Type 1 Battery Storage Systems must be placed in a secure container or enclosure meeting the requirements of the Building Code and, when no longer in use, shall be disposed of in accordance with applicable laws and regulations.
- b. **Installation and Maintenance.** Type 1 Battery Energy Storage Systems shall be installed, maintained, and used only in accordance with the manufacturer's directions. A copy of such directions shall be submitted with the application for the certificate of zoning compliance.
- c. **Setbacks.** In all zoning districts, ground-mounted Battery Energy Storage Systems shall be located only in the rear or side yard and shall conform to the setback requirements of Article 3 (Dimensional Standards).
- d. **Height.** Ground-mounted Battery Energy Storage Systems shall not exceed sixteen (16) feet in height, measured from the ground at the base of the system to its highest point.
- e. **Ground-Mounted Systems.** Battery Energy Storage Systems shall be permanently and safely attached to the ground. Proof of the safety and reliability of the means of attachment shall be submitted to the Zoning Inspector prior to installation. The Township Zoning Inspector may require an additional certification by a professional engineer or other qualified person prior to installation.
- f. **Building-Mounted Systems.** Building-mounted Type 1 Battery Energy Storage Systems shall only be installed if they can be safely supported by the structure. Proof of the safety and reliability of the means of attachment shall be submitted to the Zoning Inspector prior to installation. The Township Zoning Inspector may require an additional certification by a professional engineer or other qualified person prior to installation.

F. Type 2 Battery Energy Storage Systems

Type 2 Battery Energy Storage Systems may be permitted as a special use subject to the following standards.

1. Prior to the construction of a Type 2 Battery Energy Storage System, an application for a special use permit must be filed and approved according to the procedures established in Section 12.02.
2. The construction and operation of all Type 2 Battery Energy Storage Systems shall comply with all applicable local, state and federal requirements.
3. No Type 2 Battery Energy Storage System shall be constructed, installed, or modified as provided in this section without first obtaining all applicable permits.
4. Applications to build a Type 2 Battery Energy Storage System in Saline Township must be accompanied by the fees required for a special use permit and site plan review.
5. Type 2 Battery Energy Storage Systems shall not be approved until evidence has been provided to the Planning Commission that the property owners and applicable utility authorities have authorized the proposed system.

6. Application Requirements

Applications for the installation, replacement or renewal, or commissioning of a Type 2 Battery Energy Storage system shall be accompanied by the following information, in addition to all of the information required for special uses and site plans. The Planning Commission shall have the authority to modify any of the following requirements based on information provided by applicants or recommendations of the Township Engineer, Saline Area Fire Department, or staff. All of the following documents must be prepared by an engineer licensed by the State of Michigan.

- a. **Construction documents.** Construction documents shall include the following plans, manuals, and specifications:
 - i. Location and layout diagram of the room or area in which the BESS is to be installed.
 - ii. Details on the hourly fire-resistance ratings of assemblies enclosing the BESS.
 - iii. The quantities and types of BESS to be installed.
 - iv. Manufacturer’s specifications, ratings and listings of each BESS.
 - v. Description of energy (battery) management systems and their operation.
 - vi. Location and content of required signage.

- vii. Details on fire suppression, smoke or fire detection, thermal management, ventilation, exhaust and deflagration venting systems, if provided.
 - viii. Support arrangement associated with the installation, including any required seismic restraint.
 - ix. **Commissioning Plan.** Such 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 the Fire Code, Building Code, or applicable standard.
- b. **Decommission plan.** A decommissioning plan that is consistent with agreements reached between the applicant and other landowners of participating properties and that ensures the return of all participating properties to a useful condition similar to that which existed before construction, including removal of above-surface facilities and infrastructure that have no ongoing purpose. The decommissioning plan shall include, but is not limited to, financial assurance in the form of a bond, a parent company guarantee, or an irrevocable letter of credit, but excluding cash. The amount of the financial assurance shall not be less than the estimated cost of decommissioning the energy facility, after deducting salvage value, as calculated by a third party with expertise in decommissioning, hired by the applicant.
- c. **Hazard Mitigation Analysis.** An analysis that evaluates the consequences of BESS failure modes according to the procedures established in the Fire Code or other applicable standards as determined by the Saline Area Fire Department or Township Engineer.
- d. **Sound Study.** An acoustic assessment prepared by a licensed engineer from a reasonable number of sampled locations at the perimeter of the battery energy storage system to demonstrate compliance with Section 11.10.D.
- e. **Fire Safety Compliance Plan.** Such plan shall document and verify that the system and its associated controls and safety systems are in compliance with the Fire Code.
- f. **Operation and Maintenance Manual.** Such plan shall describe continuing battery energy storage system maintenance and property upkeep, as well as design, construction, installation, testing and commissioning information and shall meet all requirements set forth in the Fire Code and Building Code.
- g. **Emergency Operations Plan.** A copy of the approved Emergency Operations 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:

- i. 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.
- ii. Procedures for inspection and testing of associated alarms, interlocks, and controls.
- iii. Procedures to be followed in response to notifications from the Battery Energy Storage Management 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.
- iv. 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.
- v. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment when an SDS is not required.
- vi. 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.
- vii. Other procedures as determined necessary by Saline Township to provide for the safety of occupants, neighboring properties, and emergency responders.
- viii. 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.

7. Standards for Type 2 Battery Energy Storage Systems

- a. **Setbacks.** Type 2 Battery Energy Storage Systems shall be set back at least 300 hundred feet from road right-of-way lines and all property lines.
- b. **Height.** Type 2 Battery Energy Storage enclosures shall comply with the building height limitations for principal structures of the underlying zoning district.
- c. **Lighting.** Lighting of the battery energy storage systems shall be limited to that minimally required for safety and operational purposes and shall be reasonably shielded and downcast from abutting properties.
- d. **Signs**

- i. Type 2 Battery Energy Storage Facilities shall post signs in compliance with ANSI Z535 and shall include 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 battery energy storage systems, and 24-hour emergency contact information, including reach-back phone number. As required by the 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.
 - ii. Additional signs may be permitted subject to the requirements of Article 9 of the Zoning Ordinance.
- e. **Fencing Requirements.** Type 2 Battery Energy Storage Systems, including all mechanical equipment, shall be enclosed by a 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. A minimum of 24 feet of clearance shall be maintained on both sides of the perimeter fence in order to provide emergency vehicle access.
- f. **Containment.** Type 2 Battery Energy Storage Systems shall include containment systems to prevent chemicals, fire suppressant agents, or similar hazards from contaminating surface water, groundwater, and soil, and to minimize the risk of human exposure.
- g. **Vegetation and tree-cutting.** Areas within 50 feet on each side of Type 2 Battery Energy Storage Systems shall be cleared of combustible vegetation and other combustible growth. Single specimens of trees, shrubbery, or cultivated ground cover such as green grass, ivy, succulents, 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. Removal of trees should be minimized to the extent possible.
- h. **Screening and Noise Barriers.** Type 2 Battery Energy Storage Systems shall use architectural features, earth berms, landscaping, or other screening methods that will visually screen the BESS from adjacent properties and function as a sound barrier. These elements shall be designed to harmonize the BESS installation with the surrounding area, but shall not interfere with ventilation or exhaust ports.
- i. **Utility Connections.** Utility connections and/or connection transmission lines shall not require a separate land use approval, but connection/transmission lines may be either determined and approved at the time of a BESS special land use approval process, or, if not finalized at the time of such approval, such lines may be approved by way of site plan approval, so long as such lines connect to an approved BESS project.

- j. **Maximum Ground Floor Coverage:** For purposes of density and/or Maximum Ground Floor Coverage, Outdoor Installations shall be exempt from such calculation, although any Dedicated-Use Building shall be included in such calculation.

8. Issuance and Compliance with Permit.

- a. Construction of an approved Type 2 Battery Energy Storage System shall not begin until the permit holder has completed the following:
 - i. Submitted the funds for site decommissioning and stabilization in the full amount specified in the approved decommissioning plan in a form acceptable to the Township (bond, parent company guarantee, or an irrevocable letter of credit, but excluding cash).
 - ii. Executed a development agreement, in a form approved by the Township, specifying all the terms and understandings relative to the construction and operation of the Type 2 BESS facility, the permit holder’s responsibilities according to this Ordinance, and the conditions of the special use permit. Development agreements following the approval of Type 2 BESS facilities shall be at the Township’s discretion. All costs incurred by the Township, including attorney fees, in drafting and approving the development agreement shall be paid by the permit holder. The content of the agreement shall outline the specifics of the proposed Type 2 BESS facility, but shall at a minimum provide the following terms:
 - a. A survey of the acreage involved in the proposed development.
 - b. A description of the ownership of the subject property.
 - c. General description the BESS facility and all associated site improvements.
 - d. The anticipated life of the BESS.
 - e. Mechanisms to ensure the continued maintenance of the BESS facility, and that maintenance is assured by means satisfactory to the Township.
 - f. The method of ensuring that funds will be available for site decommissioning and stabilization in the amount determined after each annual review as required by this Ordinance.
 - g. Requirements that the applicant maintain insurance coverage during development in amounts established by the Township,

naming the Township as an additional insured, and required insurance provisions after the development is completed.

- h. The approved site plan and special use permit shall be incorporated by reference and attached as an exhibit.
 - i. Description of the timing to complete the development of the facility. If the facility is to be developed in phases, a timeline to complete the construction of each phase.
 - j. 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.
- b.** Construction of an approved Type 2 Battery Energy Storage System must begin within five (5) years after approval is granted. The Township Board may extend this timeline at the request of the applicant without requiring a new application.
 - c.** Approved Type 2 Battery Energy Storage Systems shall remain in compliance at all times with the standards identified for approval of the special use permit and all documentation submitted with and affirmations made in the application, including, but not limited to, the site plan, decommissioning plan, fire response plan, and emergency plan. No changes may be made to the permit by the Type 2 BESS owner/operator without the written agreement of the Township. The Type 2 BESS must further comply with all local ordinances, state and federal laws and regulations except as otherwise provided in Section MCL 460.1231. The Township shall not revoke a permit except for material noncompliance with the special use permit by the owner/operator.
 - d.** A review of the amount of the decommissioning fund based on inflation, salvage value, and current removal costs shall be completed every year, for the life of the project, and approved by the Township Board.
 - e.** Approved Type 2 Battery Energy Storage System special use permits may be transferred to another owner/operator upon the filing with the Township of an attestation by the transferee that it accepts the terms of the permit and acknowledges that it is subject to this Ordinance.
 - f.** The permit holder shall enter into a host community agreement with the Township within 90 days after issuance of the permit. The host community agreement shall require that, upon commencement of any operation, the energy facility owner must pay the Township \$2,000.00 per megawatt of nameplate capacity located within the Township. The payment shall be used as determined by the Township for police, fire, public safety, or other infrastructure, or for other projects as agreed to by the Township and the permit holder within said 90 days.

9. Performance guarantees.

A corrective action plan shall be developed for any open or continuing issues that are allowed to be continued after commissioning. A report describing the results of the system commissioning and including the results of the initial acceptance testing required in the Fire Code and Building Code shall be provided to the Zoning Inspector prior to final inspection and approval and maintained at an approved on-site location.

10. Changes to Approved Type 2 Battery Energy Storage Systems

Minor changes to an approved Type 2 BESS may be reviewed and approved by the Township Zoning Inspector or their designee. The Township Zoning Inspector may, at their discretion, determine that a proposed amendment constitutes a major change that requires a new special use approval by the Planning Commission. The following changes shall be considered minor:

- a. Technical changes to the following application documents:
 - i. Construction documents
 - ii. Fire Safety Compliance Plan
 - iii. Operation and Maintenance Manual
 - iv. Emergency Operations Plan
- b. Modifications to, retrofits or replacements of an existing battery energy storage system that do not substantially increase the total battery energy storage system designed discharge duration, power rating, or increase the system lot coverage.

G. Enforcement

Any violation of this Section shall be subject to the same enforcement requirements, including the civil and criminal penalties, provided for in the Saline Township Code of Ordinances.

H. Severability

The invalidity or unenforceability of any section, subsection, paragraph, sentence, clause, provision, or phrase of the aforementioned sections, as declared by the valid judgment of any court of competent jurisdiction to be unconstitutional, shall not affect the validity or enforceability of any other section, subsection, paragraph, sentence, clause, provision, or phrase, which shall remain in full force and effect.