

Section 9.11.22

(A) *Utility grid, large solar energy facility (solar farm).* The purpose of this subsection is to establish minimum requirements and regulations for the siting, installation, operation, repair, decommissioning, and removal of utility grid, large solar energy facilities (hereafter referred to as solar farms), as defined in (§ Zoning Ordinance) while promoting the safe, effective, and efficient use of such energy facilities as a conditional use in specified zoning districts. The following requirements shall apply to all solar farms:

(1) *Location.* All solar farms are limited to the Agricultural (AG), Limited Industrial (L-I), and General Industrial (G-1) districts.

(2) *Regulations and design standards.* All solar farms shall comply with the following minimum regulations and design standards.

(a) *Design standards.*

1. *Minimum lot size.* No solar farm shall be erected on any zoning lot less than 20 acres in size, unless recommended by the township planning commission and approved by the township board, in which case the minimum lot size shall be not less than 10 acres.

2. *Maximum height.* The maximum height for a solar panel shall be 14 feet, unless otherwise recommended by the township planning commission and approved by the township board. The maximum height of a power switchyard (as defined in § Zoning Ordinance) shall not exceed the minimum height needed to tie into electric transmission lines. The height of all other buildings and accessory structures shall comply with the maximum building height requirements of the applicable zoning district in which the solar farm is located, as listed in Article 3, page 16 of the zoning ordinance. The height of required lightning rods attached to the power switchyard or solar farm related equipment shall not be subject to the foregoing height limitations. The height of lightning rods shall be limited to that height necessary to protect the power switchyard and solar farm equipment from lightning.

3. *Setbacks.* Solar farm facilities and related structures and components shall be set back a minimum of 30 feet from all lot lines. In addition, solar farm solar arrays and other structures must be located at least 300 feet from the road right-of-way along US-127 and M-50; 150 feet from the road right-of-way along all other roadways, public and private; and 150 feet from any lot line adjacent to all existing Rural Residential (RR), Single-Family Residential (R-1), Multiple-Family Residential (RM), and Manufactured Housing Park (MHP) district land and any lot line adjacent to an existing residence at the time the solar farm is granted conditional use approval, unless the zoning lot is comprised of a portion of the lot containing the residence. Additional setbacks may be required to mitigate noise and glare impacts or to provide for designated road or utility corridors, as identified through the review process.

4. *Safety/access.*

a. Security fencing shall be installed around the solar farm as follows: fencing to be a minimum of 6 feet and a maximum of 8 feet in height; fencing to be located inside the perimeter of screening, if any. Additional height may be required. All fencing

shall comply with fencing requirements of the township zoning ordinance. Knox boxes and keys shall be provided at locked entrances for emergency personnel access.

b. Appropriate warning signage shall be placed at the entrance and perimeter of the solar farm.

5. *Noise.* No component of any solar farm shall produce noise that exceeds any of the following limitations. Adequate setbacks shall be provided to comply with these limitations:

a. 60 dBA, as measured at the lot lines of the project boundary, or 50 dBA, as measured at the property line of any adjacent Rural Residential (RR), Single-Family Residential (R-1), Multiple-Family Residential (RM), and Manufactured Housing Park (MHP) district zoned land in existence at the time the solar farm is granted conditional use approval.

b. 45 dBA, as measured at any neighboring residence in existence at the time the solar farm is granted conditional use approval, between the hours of 9:00 p.m. and 7:00 a.m.

6. *Visual appearance.*

a. Solar farm buildings and accessory structures shall, to the extent reasonably possible, use materials, colors, and textures that will blend the solar farm into the existing environment.

b. The perimeter of solar farm facilities shall also be screened and buffered by installing evergreen vegetative plantings whenever existing natural forest vegetation does not otherwise continuously obscure the solar farm's entire lot perimeter from adjacent parcels, subject to the following requirements:

i. Unless screened and buffered at all times by natural forest vegetation having a substantially similar obscuring effect of an evergreen vegetative buffer installed pursuant to this subsection, a continuous evergreen vegetative buffer shall be installed and maintained at all times at the perimeter of all solar farms.

ii. The evergreen vegetative buffer shall be composed of evergreen trees or shrubs that at planting shall be a minimum of 6 feet in height. The evergreen trees or shrubs shall be spaced no more than 10 feet apart on center (from the central trunk of 1 plant to the central trunk of the next plant). Within five years of planting, required evergreen vegetative screening shall be no less than 15 feet tall.

iii. Failure to continuously maintain the required evergreen vegetative buffer shall constitute a violation of this code and sufficient grounds for revocation of any conditional use permit previously granted.

iv. An alternate screening method may be considered for approval by the planning commission as long as it has a substantially similar obscuring effect of an evergreen buffer.

v. If the solar farm is not visible from any road and if the solar farm is not visible from any existing residence, the screening requirements may be modified at the discretion of the planning commission.

c. Lighting of the solar farm shall be limited to the minimum necessary, supplied with down lighting, and in no case shall any illumination from such lighting extend beyond the perimeter of the solar farm. A photometric study may be used to make this determination.

d. No solar farm shall produce glare that would constitute a nuisance to occupants of neighboring properties or to persons traveling neighboring roads. Upon written notice from the zoning administrator, ordinance officer, or such other person designated by the township board to the owners of the solar farm that glare from the solar farm is causing a nuisance to occupants of neighboring property or to persons traveling neighboring roads, the owner of the solar farm shall have a reasonable time (not to exceed 90 consecutive days) from the date of such notice to remediate such glare. The zoning administrator may extend the allowed time for compliance.

7. *Medium voltage cable.* All power transmission and control lines (as defined in Article 15, Section 15.1) within the project boundary shall be installed underground unless determined otherwise by the planning commission because of severe environmental constraints (e.g., wetlands, cliffs, hard bedrock), and except for power switchyards (as defined in the township zoning ordinance) or area within a substation. All electrical interconnections and distribution components must comply with all applicable codes and public utility requirements.

(b) *Local, state and federal permits.* A solar farm shall be required to obtain all necessary permits from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and any applicable municipal, county, state, or federal permits.

(c) *Agreements/easements.* If the lot on which the project is proposed is to be leased, rather than owned, by the owner of the solar farm, all property within the project boundary must be included in a recorded easement(s), lease(s), or consent agreement(s) specifying the applicable uses for the duration of the project. All necessary leases, easements, or other agreements between the owner of the solar farm and property owners must be in place prior to commencing construction, unless specified otherwise by the conditional use permit.

(3) *Permit applications.*

(a) An application for a conditional use permit to establish a solar farm must include a complete description of the project and documentation to sufficiently demonstrate that the requirements set forth in Article 9 of the township zoning ordinance will be met. Supporting documentation for addressing the review criteria of the township zoning ordinance is also to be provided. The planning commission and township board may require any information reasonably necessary to determine compliance with this code. The application must also be accompanied by detailed site plans drawn to scale and dimensioned and certified by a registered engineer licensed in the State of Michigan, displaying the following information:

1. All lot lines and dimensions, including a legal description of each lot or parcel comprising the solar farm;
2. Names of owners of each lot or parcel within Napoleon Township that is proposed to be within the solar farm;
3. Vicinity map showing the location of all surrounding land uses;

4. Location and height of all proposed solar array(s), buildings, structures, electrical tie lines and transmission lines, security fencing, and all above-ground structures and utilities associated with a solar farm;

5. Horizontal and vertical (elevation) to scale drawings with dimensions that show the location of the proposed solar array(s), buildings, structures, electrical tie lines and transmission lines, security fencing and all above ground structures and utilities on the property;

6. Location of all existing and proposed overhead and underground electrical transmission or distribution lines within the solar farm and within 1,000 feet of the outside perimeter of the solar farm;

7. Proposed setbacks from the solar array(s) to all existing and proposed structures within the solar farm;

8. Land elevations for the solar array(s) location and the relationship to the land elevations of all existing and proposed structures within the solar farm;

9. Access driveways within and to the solar farm, together with a detailed narrative regarding dimensions, composition, and maintenance of each proposed driveway. All access drives shall be subject to Jackson County Department of Transportation approval, and shall be planned so as to minimize the use of lands for that purpose;

10. Planned security measures to prevent unauthorized trespass and access and to warn of potential dangers during the construction, operation, removal, maintenance or repair of the solar farm;

11. A written description of the maintenance program to be used for the solar array(s) and other components of the solar farm, including decommissioning and removal when determined by the township to be obsolete, uneconomic, or abandoned. The description shall include maintenance schedules, types of maintenance to be performed, and decommissioning and removal procedures and schedules if the solar farm becomes obsolete, uneconomic or abandoned;

12. A copy of the manufacturer's safety measures;

13. Planned lighting protection measures; and

14. Additional detail(s) and information as required by the conditional use permit requirements of the township zoning ordinance, or as required by the Planning Commission.

(b) It is preferred that any related conditional use permit applications for substations or new transmission lines be considered in conjunction with the conditional use permit application for the solar farm; however, if the details of those improvements are not available at the time of application for the solar farm, they may be considered later, through subsequent conditional use permit review. At a minimum, the intended route for connecting to the power grid and the alternative locations of any substation shall be disclosed with the application for the solar farm.

(c) Due to the complexity of solar farm projects, the township may require a development agreement or other appropriate instrument to address taxing, property

assessment, decommissioning bond, and other related issues not addressed by this subsection. A development agreement may be required as a condition of the permit, and must be approved by the Township Board prior to commencing construction.

(4) *Provisions for conditional use permit review.* In addition to the standards set forth for conditional use approval in Article 9 of the township zoning ordinance, additional consideration shall be given to the following:

(a) *Project rationale.* Project rationale, including estimated construction schedule, project life, phasing, and likely buyers or markets for the generated energy.

(b) *Siting considerations.* Siting considerations, such as avoiding areas/locations with a high potential for biological conflict such as areas of environmental concern, parks, trails, special management areas or important wildlife habitat or corridors; avoiding visual corridors that are prominent scenic viewsheds; avoiding areas of erodible slopes and soils, where concerns for water quality, landslide, severe erosion, or high storm runoff potential have been identified; and, avoiding known sensitive historical, cultural or archeological resources.

(c) *Wildlife habitat areas and migration patterns.* Specifically include information on any use of the site by endangered or threatened species and whether the project is in a biologically significant area. If threatened or endangered species exist in the area, consultation with the Michigan Department of Natural Resources and Michigan Department of Environment, Great Lakes and Energy will be necessary.

(d) *Environmental analysis.* The township planning commission may require an analysis of impacts to historic, cultural and archaeological resources; soil erosion (water and wind); flora; and water quality and water supply in the area when there is reason to believe that adverse impacts to such may occur.

(e) *Hazardous waste.* As applicable, the application must include plans for the spill prevention, clean-up, and disposal of fuels, oils, and hazardous wastes.

(f) *Transportation plan for construction and operation phases.* Proof of an agreement with the Jackson County Department of Transportation and the Michigan Department of Transportation (if applicable) regarding any construction phase of the project is required.

(g) *Public safety.* Identify and address any known or suspected potential hazards to adjacent properties, public roadways, communities, aviation, and the like that may be created by the project.

(h) *Decommissioning plan.* Describe the decommissioning and final land reclamation plan to be followed after the anticipated useful life, or abandonment, or termination of the project, including evidence of proposed commitments with affected parties (i.e., township, any lessor or property owner, etc.) that ensure proper final reclamation of the solar farm. Among other things, revegetation and road repair activities should be addressed in the plan. Under this plan, all structures and facilities shall be removed, including any structures below-grade, and removed offsite for disposal. No concrete, piping and other materials may be left in place. The ground must be restored to its original condition within 180 consecutive days.

(5) *Application escrow account.* An escrow account shall be deposited with the township by the applicant when the applicant applies for a conditional use permit for a solar farm. The monetary amount deposited by the applicant in escrow with the township shall be the amount estimated by the township to cover all reasonable costs and expenses associated with the conditional use permit review and approval process, which costs shall include, but are not limited to, reasonable fees of the Township Attorney, Township Planner and Township Engineer, as well as costs for any reports or studies that are reasonably related to the zoning review process for the application. Such escrow amount shall be in addition to any filing or application fees established by resolution. At any point during the review process, the township may require that the applicant place additional funds into escrow with the township if the existing escrow amount deposited by the applicant is deemed insufficient by the township. If the escrow account needs replenishing and the applicant refuses to do so promptly, the review process shall cease unless and until the applicant makes the required additional escrow deposit.

(6) *Decommissioning escrow account.* If a conditional use permit is approved pursuant to this subsection, the township shall require security in the form of a cash deposit, or surety bond acceptable to the township, which will be furnished to the township in order to ensure full compliance with this subsection and all conditions of approval. When determining the amount of each required security, the township may also require an annual escalator or increase based on the Consumer Price Index (or the equivalent or its successor). Such financial guarantee shall be deposited or filed with the Township Clerk after a conditional use permit has been approved but before construction commences on the solar farm. At a minimum, the financial security shall be in an amount determined by the township to be reasonably sufficient to restore the property to its previous condition prior to construction and operation of the solar farm. Such financial security shall be kept in full force and effect during the entire time that the solar farm exists or is in place, and such financial security shall be irrevocable and non-cancelable.

(7) *Code compliance.* Construction of a solar farm shall comply with the National Electric Safety Code and any applicable Michigan construction codes as a condition of any conditional use permit under this subsection.

(8) *Certified solar array components.* Components of a solar farm shall be approved by the Institute of Electrical and Electronics Engineers (IEEE), Solar Rating and Certification Corporation (SRCC), Electronic Testing Laboratories (ETL), or other similar certification organization acceptable to the township.

(9) *Solar access.* The township makes no assurance of solar access other than the provisions contained within this subsection. The applicant may provide evidence of covenants, easements, or similar documentation for abutting property owners providing access to solar energy for the operation of a solar farm.

Penalties for noncompliance, see Article 12, Section 12.5.4.